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

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Volume 17, Number 1 May 1984
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Director, Radiologic Sciences ....................... M. J. Edwards
Director, Respiratory Therapy ....................... J. Stephen Lytle
## SUMMER SEMESTER 1984

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<th>Event Description</th>
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<tr>
<td>JANUARY 30</td>
<td>Last Day for receipt of applications and required supporting documents from International Students</td>
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<tr>
<td>MARCH 26</td>
<td>Last day for receipt of regular undergraduate and graduate applications and required supporting materials</td>
</tr>
<tr>
<td>APRIL 9</td>
<td>Last day for receipt of readmission applications</td>
</tr>
<tr>
<td>MAY 1-3</td>
<td>Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised</td>
</tr>
<tr>
<td>MAY 2</td>
<td>Advisement of current and former students not pre-advised</td>
</tr>
<tr>
<td>MAY 3</td>
<td>*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.</td>
</tr>
<tr>
<td>MAY 4</td>
<td>Registration deadline for CLAST to be given June 2, 1984 at designated locations</td>
</tr>
<tr>
<td>MAY 7</td>
<td>Classes begin for Summer Semester</td>
</tr>
<tr>
<td>MAY 10</td>
<td>Last day to adjust class schedule (end of Add/Drop).</td>
</tr>
<tr>
<td>MAY 10</td>
<td>Last Day to submit Grade Forgiveness Request.</td>
</tr>
<tr>
<td>MAY 10</td>
<td>Last day for late registration (late registration runs concurrently with Add/Drop). A $25 late fee will be assessed.</td>
</tr>
<tr>
<td>MAY 10</td>
<td>Last day for refund.</td>
</tr>
<tr>
<td>MAY 11</td>
<td>Only day to submit audit request</td>
</tr>
<tr>
<td>MAY 18</td>
<td>Last day to apply for graduation for those completing requirements end of Summer Semester</td>
</tr>
<tr>
<td>MAY 28</td>
<td>Memorial Day Holiday (University-wide)</td>
</tr>
<tr>
<td>MAY 29</td>
<td>Classes resume</td>
</tr>
<tr>
<td>JUNE 4</td>
<td>Last day for removing temporary student status</td>
</tr>
<tr>
<td>JUNE 9</td>
<td>Graduate record exam (at designated examination centers).</td>
</tr>
<tr>
<td></td>
<td>Registration for examination must be made 4 weeks prior to this date.</td>
</tr>
<tr>
<td>JUNE 15</td>
<td>Deadline for withdrawal. Last day to withdraw from a course or the University.</td>
</tr>
<tr>
<td>JULY 4</td>
<td>Independence Day Holiday (University-wide)</td>
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<tr>
<td>JULY 5</td>
<td>Classes resume</td>
</tr>
<tr>
<td>JULY 13</td>
<td>Last day to remove an &quot;I&quot; earned last semester</td>
</tr>
<tr>
<td>JULY 27</td>
<td>Classes end for Summer Semester. Final exam given at discretion of instructor.</td>
</tr>
<tr>
<td>JULY 30 (NOON)</td>
<td>Grades due in Registrar's Office</td>
</tr>
<tr>
<td></td>
<td>*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses. AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.</td>
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### Calendar

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</table>
SUMMER “A” TERM 1984

JANUARY 30
Last day for receipt of applications and required supporting documents from International Students

MARCH 26
Last day for receipt of regular undergraduate and graduate applications and required supporting materials

APRIL 9
Last day for receipt of readmission applications

MAY 1-3
Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised

MAY 2
Advisement of current and former students not pre-advised

MAY 3
*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.

MAY 4
Registration deadline for CLAST to be given June 2, 1984 at designated locations.

MAY 7
Classes begin for Summer “A” Term

MAY 10
Last day to adjust class schedule (end of Add/Drop).

MAY 10
Last day to submit Grade Forgiveness Request

MAY 10
Last day for late registration (late registration runs concurrently with Add/Drop). A $25 late fee will be assessed.

MAY 10
Last day for refund.

MAY 11
Only day to submit audit request

MAY 18
Last day to apply for graduation for those completing requirements end of Summer Semester

MAY 25
Deadline for withdrawal. Last day to withdraw from a course or the University.

MAY 28
Memorial Day Holiday (University-wide)

MAY 29
Classes resume

MAY 29
Last day for removing temporary student status

JUNE 15
End of Summer “A” Term, classes and exams

JUNE 18 (NOON)
Grades due in Registrar's Office

*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses.

AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.

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## SUMMER "B" TERM 1984

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<th>Date</th>
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<td>Last day for receipt of regular undergraduate and graduate applications and required supporting materials</td>
</tr>
<tr>
<td>MAY 21</td>
<td>Last day for receipt of readmission applications</td>
</tr>
<tr>
<td>JUNE 12-14</td>
<td>Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised</td>
</tr>
<tr>
<td>JUNE 14</td>
<td>Advisement of current and former students not pre-advised</td>
</tr>
<tr>
<td>JUNE 14</td>
<td>*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment.</td>
</tr>
<tr>
<td>JUNE 18</td>
<td>Classes begin for Summer &quot;B&quot; Term</td>
</tr>
<tr>
<td>JUNE 20</td>
<td>Last day to adjust class schedule (end of Add/Drop).</td>
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<td>Only day to submit audit request</td>
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<td>JULY 4</td>
<td>Independence Day Holiday (University-wide)</td>
</tr>
<tr>
<td>JULY 5</td>
<td>Classes resume</td>
</tr>
<tr>
<td>JULY 6</td>
<td>Deadline for withdrawal for Summer &quot;B&quot; Term students only. Last day to withdraw from a course or the University.</td>
</tr>
<tr>
<td>JULY 16</td>
<td>Last day for removing temporary student status</td>
</tr>
<tr>
<td>JULY 27</td>
<td>End of Summer &quot;B&quot; Term, classes and exams</td>
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<tr>
<td>JULY 30 (NOON)</td>
<td>Grades due in Registrar's Office</td>
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*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses. AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.*

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<td>24 25 26 27 28 29 30</td>
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</table>
### FALL SEMESTER 1984

**APRIL 30**
Last day for receipt of applications and required supporting documents from International Students

**JUNE 15**
Last day for receipt of applications and available supporting documents from beginning freshmen and other freshmen and sophomore transfers. (Students with less than 60 semester hours)

**MAY 4**
Registration deadline for CLAST to be given June 2, 1984 at designated locations.

**JULY 13**
Last day for receipt of application for junior and senior undergraduate and graduate applications and required supporting materials.

**JULY 13**
Last day for receipt of readmission applications

**AUGUST 13**
Academic year begins

**AUGUST 13-15**
Orientation and advisement for new freshmen and transfer students not pre-advised

**AUGUST 13-15**
Advisement of current and former students not pre-advised

**AUGUST 13-16**
*Registration by appointment for the following student classifications: Graduate, current undergraduate, readmitted undergraduate, new undergraduate and post-baccalaureate. Faculty and staff will register following the above appointments. Registration will close after the last appointment.

**AUGUST 20**
Classes begin for Fall Semester

**AUGUST 24**
Last day to adjust class schedule (end of Add/Drop)

**AUGUST 24**
Last day to submit Grade Forgiveness Request

**AUGUST 24**
Last day for late registration (late registration runs concurrently with Add/Drop). A $25 late fee will be assessed.

**AUGUST 24**
Last day for refund

**AUGUST 27**
Only day to submit audit request

**AUGUST 31**
Last day to apply for graduation for those completing requirements end of Fall Semester

**AUGUST 31**
Registration deadline for CLAST to be given September 29, 1984 at designated locations.

**SEPTEMBER 3**
Labor Day Holiday (University-wide)

**SEPTEMBER 4**
Classes resume

**SEPTEMBER 18**
Last day for removing temporary student status

**OCTOBER 12**
Deadline for withdrawal. Last day to withdraw from a course or the University.

**OCTOBER 13**
Graduate Record Exam (at designated examination centers). Registration for examination must be made 4 weeks prior to this date.

### Calendar

<table>
<thead>
<tr>
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<th><strong>AUGUST 1984</strong></th>
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OCTOBER 26  Homecoming Celebration. Classes dismissed 12:00 noon to 3:00 p.m.

NOVEMBER 12  Veterans’ Day Holiday (University-wide)
NOVEMBER 13  Classes resume
NOVEMBER 16  Last day to remove an “I” earned last semester
NOVEMBER 22-23  Thanksgiving Holidays (University-wide)
NOVEMBER 26  Classes Resume
DECEMBER 7  Classes end for Fall Semester
DECEMBER 8  Graduate Record Exam (at designated examination centers).

Registration for examination must be made 4 weeks prior to this date.

DECEMBER 10-15 (NOON)  Final Examination period
DECEMBER 14  Commencement
DECEMBER 17 (NOON)  Grades due in Registrar’s Office
DECEMBER 17  Christmas Holidays begin (students)

*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses.

AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.

<table>
<thead>
<tr>
<th>NOVEMBER 1984</th>
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15
SPRING SEMESTER 1985

SEPTEMBER 28  Last day for receipt of applications and required supporting documents from International Students

NOVEMBER 16  Last day for receipt of regular undergraduate and graduate applications and required supporting materials

DECEMBER 3  Last day for receipt of readmission applications

JANUARY 2-4  Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised

JANUARY 3-4  *Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.

JANUARY 7  Classes begin for Spring Semester

JANUARY 11  Last day to adjust class schedule (end of Add/Drop)

JANUARY 11  Last day to submit Grade Forgiveness Request

JANUARY 11  Last day for late registration (late registration runs concurrently with Add/Drop). A $25 late fee will be assessed.

JANUARY 11  Last day for refund

JANUARY 14  Only day to submit audit request

JANUARY 15  Martin Luther King Day. Classes dismissed 11:00 a.m. to 1:00 p.m.

JANUARY 18  Last day to apply for graduation for those completing requirements end of Spring Semester

FEBRUARY 1  Last day for removing temporary student status

FEBRUARY 2  Graduate Record Exam (at designated examination centers). Registration for examination must be made 4 weeks prior to this date.

FEBRUARY 8  Registration deadline for CLAST to be given March 9, 1985 at designated locations.

MARCH 1  Deadline for withdrawal. Last day to withdraw from a course or the University.

MARCH 11-15  Spring Holidays

MARCH 18  Classes resume

APRIL 12  Last day for removing an “I” earned last semester

APRIL 13  Graduate Record Exam (at designated examination centers). Registration for examination must be made 4 weeks prior to this date.

APRIL 26  Classes end for Spring Semester

APRIL 29-MAY 4  Final Examination period (special exams may be scheduled May 3-4 NOON)

MAY 3  Commencement

MAY 6  Academic year ends

MAY 6 (NOON)  Grades due in Registrar’s Office

*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses. AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.
SUMMER SEMESTER 1985

JANUARY 28  Last day for receipt of applications and required supporting documents from International Students

MARCH 29  Last day for receipt of regular undergraduate and graduate applications and required supporting materials

APRIL 12  Last day for receipt of readmission applications

MAY 7-9  Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised

MAY 8  Advisement for current and former students not pre-advised

MAY 9-10  *Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.

MAY 3  Registration deadline for CLAST to be given June 1, 1985 at designated locations.

MAY 13  Classes begin for Summer Semester

MAY 15  Last day to adjust class schedule (end of Add/Drop)

MAY 15  Last day to submit Grade Forgiveness Request

MAY 15  Last day for late registration (late registration runs concurrently with Add/Drop). A $25 late fee will be assessed.

MAY 15  Last day for refund

MAY 16  Only day to submit audit request

MAY 17  Last day to apply for graduation for those completing requirements end of Summer Semester

MAY 27  Memorial Day Holiday (University-wide)

MAY 28  Classes resume

JUNE 7  Last day for removing temporary student status

JUNE 8  Graduate Record Exam (General Only) at designated examination centers. Registration for examination must be made 4 weeks prior to this date.

JUNE 21  Deadline for withdrawal. Last day to withdraw from a course or the University.

JULY 4  Independence Day Holiday (University-wide)

JULY 5  Classes resume

JULY 12  Last day for removing an "I" earned last semester

AUGUST 2  Classes end for Summer Semester. Final exam given at discretion of instructor.

AUGUST 5 (NOON)  Grades due in Registrar's Office

*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses. AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.
# SUMMER “A” TERM 1985

| JANUARY 28 | Last day for receipt of applications and required supporting documents from International Students |
| MARCH 29 | Last day for receipt of regular undergraduate and graduate applications and required supporting materials |
| APRIL 12 | Last day for receipt of readmission applications |
| MAY 3 | Registration deadline for CLAST to be given June 1, 1985 at designated locations. |
| MAY 7-9 | Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised |
| MAY 8 | Advisement for current and former students not pre-advised |
| MAY 9-10 | *Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments. |
| MAY 13 | Classes begin for Summer “A” Term |
| MAY 15 | Last day to adjust class schedule (end of Add/Drop). |
| MAY 15 | Last day to submit Grade Forgiveness Request |
| MAY 16 | Last day for late registration (late registration runs concurrently with Add/Drop). A $25 late fee will be assessed. |
| MAY 15 | Last day for refund |
| MAY 16 | Only day to submit audit request |
| MAY 17 | Last day to apply for graduation for those completing requirements end of Summer Semester |
| MAY 27 | Memorial Day Holiday (University-wide) |
| MAY 28 | Classes resume |
| MAY 31 | Deadline for withdrawal. Last day to withdraw from a course or the University. |
| JUNE 3 | Last day for removing temporary student status |
| JUNE 21 | End of Summer “A” Term, classes and exams |
| JUNE 24 (NOON) | Grades due in Registrar’s Office |

*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses. AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.*

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<th>APRIL 1985</th>
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SUMMER "B" TERM 1985

<table>
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<tr>
<th>Date</th>
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<tr>
<td>MARCH 18</td>
<td>Last day for receipt of applications and required supporting documents from International Students</td>
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<tr>
<td>MAY 6</td>
<td>Last day for receipt of regular undergraduate and graduate applications and required supporting materials</td>
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<tr>
<td>MAY 28</td>
<td>Last day for receipt of readmission applications</td>
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<td>JUNE 18-19</td>
<td>Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised</td>
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<td>JUNE 19</td>
<td>Advisement of current and former students not pre-advised</td>
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<tr>
<td>JUNE 20</td>
<td>*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment.</td>
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<td>JUNE 24</td>
<td>Classes begin for Summer “B” Term</td>
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<td>JUNE 26</td>
<td>Last day to adjust class schedule (end of Add/Drop).</td>
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<tr>
<td>JUNE 26</td>
<td>Last day to submit Grade Forgiveness Request</td>
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<tr>
<td>JUNE 26</td>
<td>Last day for late registration (late registration runs concurrently with Add/Drop). A $25 late fee will be assessed.</td>
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<td>JUNE 26</td>
<td>Last day for refund</td>
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<td>JUNE 27</td>
<td>Only day to submit audit request</td>
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<td>JULY 4</td>
<td>Independence Day Holiday (University-wide)</td>
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<td>JULY 5</td>
<td>Classes resume</td>
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<tr>
<td>JULY 12</td>
<td>Deadline for withdrawal for Summer “B” Term students only. Last day to withdraw from a course or the University.</td>
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<tr>
<td>JULY 12</td>
<td>Last day to remove an “I” earned last semester</td>
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<tr>
<td>JULY 19</td>
<td>Last day for removing temporary student status</td>
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<td>AUGUST 2</td>
<td>End of Summer “B” Term, classes and exams</td>
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<td>AUGUST 5 (NOON)</td>
<td>Grades due in Registrar’s Office</td>
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*Area Campus (Brevard, Daytona Beach, and South Orlando) Registration and Add/Drop dates precede registration and vary with individual area campuses. AREA CAMPUS STUDENTS MUST CONTACT DIRECTORS OF THE APPROPRIATE CAMPUS FOR ADVISEMENT AND REGISTRATION INSTRUCTIONS.
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 serves the people of Florida by providing undergraduate and graduate education in most general areas of study and in specifically selected technological and professional disciplines.

Baccalaureate degree programs are offered in arts and sciences, business administration, education, engineering, health, and liberal studies. Master's degree programs are approved in several areas of the University. Doctoral programs are available in education through an agreement with Florida Atlantic University and in engineering through an agreement with the University of Florida.

In addition to offering a broad academic program on campus, UCF offers off-campus credit courses in locations throughout Central Florida. Off-campus credit courses are listed in the semester class schedule published by the University and are generally taught by regular faculty members. Non-credit conferences, institutes, seminars, workshops and short courses are scheduled both on and off campus to meet the educational needs of business, government, professional, and other groups from throughout Florida and the nation.

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

The University of Central Florida, in order to serve the community better, 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.

EAST CENTRAL FLORIDA AREA
UCF is located in the East Central Florida region with a population estimated at 1.3 million. The area is well endowed with a rich heritage of cultural, educational, industrial, and recreational activities. Cultural activities include a symphony orchestra, civic theatre, dinner theatres, art galleries, and museums. The beauty of the Orlando area is evidenced through its numerous parks and flower gardens. In addition to UCF, educational needs of the area are served through quality public school systems, public community colleges, and several privately supported colleges and schools. Recreational opportunities abound in the Orlando area.

THE CAMPUS
The campus of UCF, located 13 miles east of downtown Orlando, consists of 1227 acres of land; much of which is covered with pine, palm, cypress, cedar, and oak trees. Lake Claire, covering 40 acres and Lake Lee, covering 14 acres, contribute to the natural
beauty of the campus. Since campus construction began in 1966, approximately $75 million has been invested in facilities and equipment including the library, classroom buildings, laboratories, residence halls, and student facilities. The childcare center was built with funds contributed through the Edyth Bush Charitable Foundation of Winter Park and UCF Student Government. Recreational facilities include lighted tennis and handball courts, a flag football-soccer field, a swimming pool, a golf driving range with putting greens, volleyball courts, and a baseball field. The campus currently serves approximately 15,600 students.

Residence halls can accommodate up to 900 students on campus. There are single, double, and triple room arrangements, but most of them are for double room assignments. Four halls built for the opening of classes in 1968 house up to 432 students in suite arrangements. Each suite consists of double bedrooms (a limited number of singles), common living room area and a bath. Three additional halls completed in 1982 were basically designed as large double bedrooms with two bedrooms sharing an adjoining bath. A limited number of these rooms have been furnished to accommodate three students. All halls have central heat and air conditioning with limited maid service. There are laundry facilities, vending machines and common social/study lounges for resident students. About half of the resident facilities are reserved for women and half for men. For more detailed information please write to Director of Housing and Residence Life, University of Central Florida, P.O. Box 25000, Orlando, FL 32816.

UCF AREA CAMPUSES

In addition to the academic programs offered on the main campus in Orlando, Florida, the University of Central Florida offers a number of upper division programs and graduate level courses at Area Campuses in Cocoa and Daytona Beach as well as at a campus located in the southern part of Orlando. (See following sections on Brevard, Daytona Beach and South Orlando Campuses.)

UCF BREVARD CAMPUS
Director: Robert W. Westrick
BCC/UCF Lifelong Learning Center
1519 Clearlake Road
Cocoa, FL 32922
(305) 632-4127
The Brevard Campus of the University of Central Florida is located in Cocoa on the campus of Brevard Community College. The new $4.8 million facility called the "BCC/UCF Lifelong Learning Center" serves as the base for U.C.F. operations in Brevard County. Degree programs provided at this campus are closely linked to those offered by Brevard Community College. The community college delivers the coursework of the Freshman and Sophomore levels which leads to the Associate Degree. The Brevard Campus of U.C.F. offers the Junior and Senior level classes which are requirements of the twelve baccalaureate degree programs presented. Graduate programs are offered in five areas of concentration.

For additional information contact the Brevard Campus Admissions Office.

UCF DAYTONA BEACH CAMPUS
Director: Harold E. Green
215 South Clyde Morris Boulevard
Daytona Beach, Florida 32014
(904) 255-7423

The University of Central Florida Daytona Beach Campus offers upper level baccalaureate degree programs for area students who have completed two years of college and graduate courses for students who have completed baccalaureate degrees in Education or Engineering. Baccalaureate degree programs are offered in Criminal Justice, General Business Administration, Elementary Education, Vocational/Technical Education, and Liberal Studies, plus partial degree programs in Accounting, Management, Marketing and Finance, and Nursing for Registered Nurses.
At the University of Central Florida South Orlando Campus students may choose upper or lower division required courses in all programs of study as well as courses in Vocational Education and Graduate Engineering. SOC is conveniently located and easily accessible; therefore, for some students it may be possible to reach SOC in less time than the main campus. Schedules are arranged to provide opportunity for full-time enrollment and are published in the student newspaper, the FUTURE. Students may register by phone in advance of each term.

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 postsecondary institution.

In addition to the regional accreditation agencies, there are a number of scientific, professional, and academic bodies conferring accreditation in specific disciplines and groups of disciplines. Currently, the following areas have been approved by the agencies indicated. Within the College of Arts and Sciences, Chemistry by the American Chemical Society and Social Work by the Council of Social Work Education. The College of Business Administration is accredited at the graduate and undergraduate level by the American Assembly of Collegiate Schools of Business (AACSB); In the College of Engineering the Civil, Engineering Mathematics and Computer Systems, Environmental, Electrical, Industrial, and Mechanical Engineering options are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). Design, Electronics, Environmental Control, and Operations Technology options are accredited by the Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET). Within the College of Health: Medical Record Administration by the Council on Allied Health Education Accreditation, Medical Technology by the Committee on Allied Health Education and Accreditation and the National Accrediting Agency for Clinical Laboratory Services, Nursing by the National League for Nursing (NLN), Radiologic Sciences by the Council on Allied Health Accreditation; and Respiratory Therapy by the American Registry of Respiratory Therapists (ARRT). All teacher education programs are fully accredited by the Florida State Department of Education.

UCF is listed in Transfer Credit Practices of Selected Educational Institutions with the highest level of credit acceptability. This handbook is published by the American Association of Collegiate Registrars and Admission Officers, and it lists the accept-
ability of transfer credits based upon the reporting institutions in the states, com-
monwealths, territories, and selected international institutions.

FLORIDA SOLAR ENERGY CENTER
UCF provides administrative support to the Florida Solar Energy Center, one of the largest renewable energy research centers in the United States. Located on 10 acres at Cape Canaveral, FSEC was created by the Florida Legislature in 1974 to advance research, development and analysis of solar technology. The Center has a highly qualified, multidisciplinary professional staff and comprehensive facilities for research and testing of photovoltaic cells, low energy building designs, solar collectors, and domestic hot water systems. The facility also has extensive technology transfer facilities, including an energy library and an auditorium for energy workshops.

FSEC major programs include research into photovoltaics (solar-generated electricity), alternative water heating systems, ocean thermal energy conversion, energy-efficient building design, natural lighting and ventilation and other energy conservation techniques.

UNIVERSITY OF CENTRAL FLORIDA FOUNDATION, INC.
Chartered in 1968, the UCF Foundation, Inc. is a non-profit, tax-exempt corporation receiving and disbursing private gifts for the betterment of the University as a whole.

Through the leadership of a 50-member Board of Directors, the Foundation encourages, solicits, receives, and administers private gifts and bequests of property and funds for scientific, educational and charitable purposes. All for the advancement of the University of Central Florida and its objectives.

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. For current submission guidelines, write to Director, UCF Press, English Dept., 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.

The goal of the UCF Press is to assist the university’s scholarly and creative activity by publishing works of the highest quality.

UNIVERSITY LIBRARIES
Director: Anne Marie Allison, LR 142, Phone 275-2564
Associate Director: Orlyn B. LaBrake, LR 138, Phone 275-2564

By Fall of 1984 the University Libraries will be housed in a new facility of 200,000 square feet. A collection of over 400,000 volumes with approximately 4,000 subscriptions (journals, newspapers and other serials) is available on open shelves for students and faculty. Cataloging and circulation records for this material are available in an on-line computer system, so that library users can determine whether or not the UCF Library owns a particular item as well as its whereabouts.

During the school term the library is open approximately 88 hours each week, including evenings and weekends, and a shortened schedule is maintained during vacation periods. A staff of professional librarians and support personnel is available to assist and advise those using the Library, its materials and services. Arrangements may be made for class or small group instruction. Interlibrary loan service is available to faculty, staff and students to obtain materials not available in the library’s collections.

Special services are provided for the handicapped. The microfiche catalog is made available to mobility-impaired students attending UCF and they may check out microfiche readers for home use. Using the microfiche catalog, students can deter-
mine the books they need, and a call to the library will bring books to them at a convenient location on campus. 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 utilize library resources.

There are small collections of about 2,000 books at the University's campuses in Daytona Beach and South Orlando. Subjects of the collections vary depending on the courses offered at each center. Copies of the Main Library's Card Catalog on microfiche are provided at each of the campuses. These catalogs and a courier service give the campuses access to the full collections of the main library. Students at the Brevard Campus receive a full range of library services from the Brevard Community College library.

INSTRUCTIONAL RESOURCES
Director: Robert L. Arnold, LR 107, Phone 275-2571
Associate Director: Evelyn K. Hoth
Associate Director: David W. Retherford

The primary purpose of Instructional Resources is to improve instruction. To meet both the academic and administrative needs of the University, Instructional Resources provides the faculty with graphic, photographic, radio and television production; a full range of audio visual and classroom support services; and a wide range of instructional development assistance and consultation. Instructional Resources also administers the Center for Faculty Development, the University Learning Center and the Listening Lab.

INTERCOLLEGIATE ATHLETICS
Programs in Intercollegiate Athletics are coordinated by varsity 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 II, Region 3 and participates in the Sunshine State Conference. Varsity athletic contests at the University of Central Florida are governed by the rules of play published by NCAA and all established eligibility standards are observed.

Our current varsity sports include baseball, basketball, cross country, golf, football, soccer, tennis and wrestling for men. The women's sports include basketball, cross country, golf, soccer, tennis and volleyball.

UNIVERSITY BOOKSTORE
The University Bookstore, located in the Student Services Building, is a complete "one stop" facility for students to secure textbooks, supplemental books, supplies, gifts, and other items of interest to UCF students.
STUDENT AFFAIRS

INTRODUCTION
We use the term "student affairs" collectively to refer to the 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-learning process through its programs and services. The Division, headed by a Vice President for Student Affairs, administers programs involving orientation, personal counseling, testing, housing, financial aid, health services, International student services, recreational services, cooperative education, placement, student organizations, veteran's affairs and other special activities. Students are invited to consult the staff of Student Affairs concerning any aspect of campus life.

ORIENTATION
The purpose of orientation at the University of Central Florida is to acquaint new students with the various academic curricula, to provide academic advisement, and to assist them in understanding college life. All new students will be given important information by members of the faculty, administration, and the student body which can assist them in the achievement of their personal academic goals. Information is mailed to students indicating the date, time and place for their orientation session. The Mathematics and English Placement Tests are given for those new students who are required to take them.

HOUSING POLICY
I. Regularly enrolled single students paying registration fees for a minimum of nine semester hours may apply for assignment to University residential units. Priority of assignment is given to current residents and new students admitted in good standing. Any single student applicant who has been admitted to the University may request a Housing application on which he/she requests on-campus Housing accommodations for a specific semester. Priority of room assignments is based on the date of receipt of the completed application in the Housing Office. Applicants should CAREFULLY READ the application before submitting it with the $150.00 prepayment to the Housing Office.

II. Housing contracts, when issued for Fall semester occupancy, serve as a two-semester obligation (Fall and Spring) between the applicant and the Housing Office. Housing contracts issued for the Summer semester are a one-semester (Summer Only) obligation.

III. Applicants have the option of choosing one of several meal plan programs available at the University. (NOTE: NO COOKING IS ALLOWED IN THE RESIDENCE HALLS).

Applications for University housing may be obtained by contacting the Department of Housing and Residence Life, P.O. Box 26000, U.C.F., Orlando, FL 32816.

INTERNATIONAL STUDENT SERVICES
The International Student Office serves as a clearing-house for international students affairs, and as a focal point for international student concerns. Its central role is to assist students from other lands in their adjustments to the changing lifestyle and study habits in order to achieve their educational goals and gain a meaningful living experience in the United States. A wide range of special services are, therefore, provided to UCF international students, such as, assistance in locating off-campus apartments and in banking, counseling on personal, financial, academic and cross-cultural communication matters, advisement in immigration and tax matters, promotion of social activities and community visits. Further information may be obtained from the International Student Office, Administration Building, Room 225. Telephone: (305) 275-2337.
OFFICE OF AREA CAMPUSES SERVICES, EVENING STUDENT SERVICES

The Office of Area Campus Services maintains contact with the directors of the area campuses in Brevard, Daytona Beach, and South Orlando as the official liaison between Student Affairs and the area campuses. The office ensures student services are provided and that communication between the main campus and area campuses is maintained.

The Evening Student Services Office is open Monday-Thursday evenings in Administration Building 282 from 5 p.m.-9 p.m. All students are encouraged to either visit the office or call 275-2177. Problems are resolved in the office or referred to the appropriate campus office for action.

STUDENT HEALTH SERVICES

The University is concerned with the physical and emotional health of the student as well as the promotion of individual and general health in the University community. A Student Health Service is maintained for routine and emergency health needs, to promote health education, and to protect the Student Body from communicable diseases. The Service is staffed by medical doctors and registered nurses when classes are in session. Medical care in the students' living quarters is not provided. Every health fee paying student is entitled to the benefits outlined in the Health Services brochure. Except for Workman’s Compensation cases, faculty and staff will be seen only for emergency first aid on a fee for service basis.

Blood is available for students, staff, faculty and their immediate families by notifying the Student Health Services of such need.

Medical records are confidential communications and will be treated as such in so far as the law permits.

In the event of an on-campus emergency, contact University Police for assistance to the Student Health Service.

Each student is urged to purchase health insurance available through the Student Government or private sources to defray expenses such as hospital care, outside physician coverage, supplemental Student Health Services coverage, etc.
STUDENT FINANCIAL AID
GENERAL INFORMATION

Student Financial Aid programs at the University of Central Florida are designed to provide assistance to students in the form of loans (long and short-term), grants, scholarships and part-time on-campus student employment.

The philosophy of the University is to assist students who, for the lack of financial assistance, would be unable to attend the University.

The application procedure varies according to the classification of the aid program; i.e., whether or not the program requires evidence of financial need. Please contact the Office of Financial Aid for additional information.

I. PROGRAMS BASED ON FINANCIAL NEED

Programs which DO HAVE FINANCIAL NEED as their prerequisite are:

- NATIONAL DIRECT STUDENT LOAN
- STUDENT REGENT FEE LOAN
- PELL GRANT (FORMERLY BASIC EDUCATIONAL OPPORTUNITY GRANT)
- FLORIDA STUDENT ASSISTANCE GRANT
- SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT
- FLORIDA COLLEGE CAREER WORK-STUDY PROGRAM (STATE OF FLORIDA)
- INSTITUTIONAL WORK-STUDY PROGRAM
- GUARANTEED STUDENT LOAN
- FLORIDA GUARANTEED STUDENT LOAN PROGRAM

To qualify for these programs, students must complete an Institutional Aid Application annually, as well as the College Scholarship Service Financial Needs Analysis or the American College Testing Form. Awards for these particular programs will be made beginning April 1, each year, and will continue until funds are exhausted.

II. PROGRAMS NOT EXCLUSIVELY BASED ON NEED

- OTHER PERSONAL SERVICES (part-time employment through individual departments)
- SHORT-TERM LOAN
- NON-FLORIDA TUITION WAIVERS (apply directly to the College)

III. SCHOLARSHIPS

Scholarships are awarded to individuals according to their academic achievement and their high probability of success in their chosen careers. Quite often financial need is used as an additional criterion.

Scholarships are available from community and industrial organizations, high schools and community colleges, the State of Florida, and the University. Students should pursue all possibilities on an individual basis.

IV. GRADUATE AID

Aid for graduate students through the Office of Student Financial Aid is limited to part-time employment and selected loan programs. Application for other aid should be made to the head of the department of the student’s major or the Dean of Graduate Studies.

V. AWARD NOTICE PROCEDURE

In programs requiring evidence of financial need, Financial Aid staff members will review the financial documents as well as the applications and make recommendations for the coming academic year.

An Official Award Notice is sent to each individual student eligible for an award. The Notice provides the dollar amount and the term the funds are to be disbursed. Each student will receive a white and yellow copy of the Official Award Notice. The white copy should be returned to the Office of Student Financial Aid and the yellow copy retained to be presented to the Cashier's Office in order to pick up the award check.

VI. FUND DISBURSEMENT

Funds are disbursed by the Cashier's Office, Administration Building, Room 110, on a semester basis upon presentation of a valid Registration/Fee State-
VII. ACADEMIC PROGRESS

State and Federal guidelines require that a student maintain academic progress to continue receiving financial aid. The University has stipulated the following requirements:

In most instances Financial Aid requires students to maintain a 2.0 GPA and complete at least half of their enrollment. If a student fails to meet these guidelines within an academic semester, he or she will be placed in a "warning status." If the incident is repeated in a consecutive term, the student's aid is subject to cancellation.

COOPERATIVE EDUCATION AND PLACEMENT

CAREER PLANNING AND PLACEMENT

Campus interviews and employment contacts are essential aspects of the Placement Center. The provision of these services requires the development of student personnel files and resumes, therefore, seniors are urged to register with the Placement Center two semesters prior to graduation.

All students are invited to take advantage of the career counseling services offered by the Center, and to avail themselves of full-time, off-campus, part-time, and summer employment opportunities. CHOICES, a computerized guidance system, is also available. This is a valuable tool to assist in making career decisions.

The cooperative program offers an educational strategy for baccalaureate or graduate degree-seeking students who wish to blend theory with practice by combining traditional campus education with study-related work experience.

Co-op students alternate semesters of classroom study with equal periods of paid employment in government, industry, or business. The work assignments provide qualified students an opportunity to gain career experience in their major fields of study on job locations that extend not only throughout Florida but also nationwide.

For further information contact Cooperative Education and Placement, University of Central Florida, Orlando, Florida 32816; Suite 124, Administration Building. Telephone (305) 275-2361 or (305) 275-2314.

UNIVERSITY COUNSELING AND TESTING CENTER

The University Counseling and Testing Center offers a professional staff of psychologists and counselors to assist students in educational, vocational and career counseling; and personal, social, relationship, marriage and family counseling. A full range of tests is available along with an occupational library.

The Center administers the national testing programs; GRE, LSAT, GMAT, MCAT. In addition, the Center administers the Math Placement exams and the College Level Academic Skills Test (CLAST). A variety of interest, aptitude, career, occupational, and personality assessments are also offered.

The Center presents special programs throughout the year, including encounter groups, relaxation and coping skills, marital enrichment, consciousness growth groups, race relations and RET groups, stress reduction and assertiveness training workshops. All Center services are free to UCF students.

ACADEMIC PEER ADVISEMENT

The Academic Peer Advisement Team consists of thirty-five outstanding sophomores, juniors, seniors and graduate students selected each spring to assist faculty with the academic advisement of entering freshmen for the academic year. The central office is located in the Counseling and Testing Center, Administration Building, Room 145, 275-2811.

STUDENT ACTIVITIES

Personal development may be enhanced through informed, experienced, dedicated participation in the University and community. 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, through student cooperation and with the assistance of student organizations, sponsors a variety of cultural and entertainment programs which will contribute to the student's social, cultural, recreational, and academic
development. Additionally, ample opportunity to become a member of occupational, professional, social, and honorary organizations is provided. It is the desire of the University to appeal to the interests of students and to provide opportunities for students to become acquainted with fellow students and faculty members through participation in student activities.

**STUDENT GOVERNMENT**

The purpose of the Student Government is to represent student opinion; advance the cause of students both socially and academically; promote communication, cooperation and understanding among students and to administer Activity and Service fees. Student Government represents students' needs and concern at the state and federal level.

Every student enrolled at the University of Central Florida is a member of Student Government. The interests of students are represented through three branches of government: the executive, legislative, and judicial branches. The executive branch is headed by an elected student body president and vice president; the student senate (legislative branch) is composed of representatives of every college; and the Judicial Council (judicial branch) protects the rights of the Student Body. In addition to these offices, there are many openings available for appointed offices or on Student Government committees. By active participation in Student Government, or by voicing opinions and ideas through representative legislators, a student may gain valuable experience in the democratic processes—its freedoms and responsibilities. Students interested in working with the Student Government may obtain information from the Student Government offices located in the Student Center. Student Government has many services available to students including discount movie and dinner theatre tickets, babysitting referral, consumer affairs, carpool, legal aid, and dental aid.

**STUDENT CENTER**

Student life at the University of Central Florida emanates from the Student Center. As the focal point for campus activity, 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.

Located within the Student Center are many student oriented offices including Student Government, Student Center and Student Organizations, the Program and Activities Council and Programming Department, Legal Services, Housing, Veteran's Affairs and Campus Ministries.

Other facilities include three food service operations, an auditorium, conference and meeting rooms, game room, information desk and lounges.

**OFFICE OF DEAN OF STUDENTS**

Students are urged to take advantage of the many services and educational programs available beyond the classroom. These services and programs are provided to facilitate learning and supplement academic instruction. The staff in the Dean of Students Office are available to help students in their attempts to become familiar with these services and activities and to become involved in educational experiences beyond the classroom. The Dean and Associate Dean plan and assist in the development of University programs which provide for the personal, social, and academic adjustment of students. They counsel students for personal, academic, financial and social problems, and as necessary refer students to specialized, professional services. The Deans are the primary contact for students seeking information or assistance in non-academic areas of university operations.

**HANDICAPPED STUDENT SERVICES**

The Office of Handicapped Student Services provides information and orientation to campus facilities and services, assistance with handicapped parking permits, counseling, referral to campus services, and assistance with registration for students who are handicapped.

Services are available to students whose disabilities include, but are not limited to, mobility impairment, visual impairment, hearing impairment, manual dexterity impairment, speech impairment, specific learning disability (such as dyslexia), epilep-
sy, diabetes, or mental or psychological disorder.

Students who have a disability or handicap which may or may not 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. This information will in no way be used to deny any rights to that student at the University of Central Florida.

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

A person using a TDD (Telecommunications Device for the Deaf) can secure information from Handicapped Student Services by phoning (305) 275-2116 (TDD calls only).

SPECIAL SERVICES

Services rendered under The Special Services Program are designed to assist students who have academic potential, but who may lack adequate secondary school preparation or who may have special circumstances hindering their academic success. Special Services also arranges for and provides academic, career and personal counseling. In addition, the Program renders referral to outside agencies that might help students resolve personal and other non-academic problems related to academic success. The goal of the Program is the retention and graduation of students who need this kind of support.

CREATIVE SCHOOL FOR CHILDREN—An Educational Research Center for Childhood Development

The school provides an educational program, including kindergarten, for children 2 through 5 years old. The daily program is planned and executed 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.

The school conducts a Summer Day Camp for Elementary School children during the summer semester.

CLASSROOM RESPONSIBILITY

Students are responsible for maintaining a classroom decorum appropriate to the educational environment. When the conduct of a student or group of students varies from acceptable standards to such an extent they interfere with 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.

When a person who is not enrolled is involved in an offense resulting in criminal charges, the circumstances of the case may be reviewed by the appropriate Student Affairs administrator to consider the eligibility for enrollment and the student’s standing within the University if enrolled.

CONFIDENTIALITY OF STUDENT RECORDS

The University policy which governs the confidentiality and access to a student’s record is provided in the student handbook, The Golden Rule. Copies of the policy may be obtained from the Office of Dean of Students.

OFFICE OF VETERANS’ AFFAIRS

The Office of Veterans' Affairs is a “one stop” center for students who are utilizing VA educational benefits in order to further their education. The Office has a professional staff augmented by student veterans to assist in providing information concerning entitlements, filing claims to the Veterans Administration, and certifying enroll-
ment at the University. The Office also provides counseling for personal and academic concerns as well as referral to various community agencies. Veterans and eligible dependents must be certified through the Office of Veterans' Affairs to receive VA educational benefits. The Office monitors the academic progress of all those receiving VA educational benefits.

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

**VETERANS' BENEFITS**

Veterans and eligible dependents who are entitled to VA educational benefits must make initial contact with the Office of Veterans' Affairs.

Undergraduates must carry at least twelve (12) semester hours for full-time VA benefits, nine (9) semester hours for three-fourths benefits, and six (6) semester hours for half-time benefits. Five (5) semester hours or less will be reimbursed at cost of tuition and fees only. Those students with a baccalaureate degree who are classified by the University as post baccalaureate must meet the same criteria as undergraduates. Veterans and eligible dependents who are fully accepted in a graduate degree-seeking program are required to carry six (6) semester hours in courses numbered 5000 and above for full-time benefits, four (4) to five (5) semester hours in courses numbered 5000 and above for three-fourths benefits, and three (3) semester hours in courses numbered 5000 and above for one-half time benefits.

Veterans and eligible dependents intending to dual enroll at UCF and at another institution have the option to receive VA benefits, but must first contact the Office of Veterans' Affairs. Veterans and eligible dependents who wish to pursue a double major or a minor may also receive VA benefits but must first make arrangements through the Office of Veterans' Affairs.

Veterans and eligible dependents on co-op status may choose to draw VA benefits for their period of eligibility as follows.

1. **The Institutional**
   - Those selecting educational assistance in this program receive their VA benefits monthly during on-campus enrollment semesters. VA benefit eligibility ceases during off-campus co-op semesters unless concurrent credit hour enrollment is maintained.

2. **The Cooperative**
   - Those choosing this program receive VA educational assistance at the co-op rate. This rate does not extend eligibility time, and pays approximately 80 percent of the entitled monthly VA benefits during both on-campus enrollment semesters and off-campus co-op semesters without concurrent credit hour enrollment. In this program, enrollment for at least 12 credit hours during on-campus semesters is required.

**RECREATIONAL SERVICES**

Recreational Services offers a variety of sports and recreational opportunities to students, faculty and staff members of the University. Included in the program are intramural sports leagues and tournaments, coed sports, organized recreation and fitness opportunities, unstructured open recreation and sports related events.

The sports activities range from the traditional flag football, basketball, soccer, golf and tennis to ultimate, super sports events, floor hockey, a Turkey Trot and a new series of competitive events at half-time of varsity athletic events called "Intermission Magic." For the fitness minded we have physical fitness classes, a Rec Milers Club and ample equipment which may be checked out and used on the University recreational facilities.

A handbook which provides full information, rules and regulations on all activities is available from the Office of Recreational Services located next to the pool.
ADMISSION PROCEDURES

APPLICATION DEADLINE

Students are encouraged to apply several months in advance, and applications will be accepted up to a year prior to the start of the term desired. The application deadline date for each term is approximately eight weeks prior to the start of the term. Please consult the catalog calendar for the exact date.

FLORIDA RESIDENCE

(1) For the purpose of assessing registration and tuition fees, a student shall be classified as a "Florida" or "non-Florida" student.

(a) A "Florida student" is a person who has domicile in and who shall have resided in the state of Florida for at least twelve (12) consecutive months immediately preceding the first day of classes of the academic term in which the student enrolls. In determining residency, the university may require evidence such as voter's registration, driver's license, automobile registration, location of bank accounts, rent receipts or any other relevant materials as evidence that the applicant has maintained continuous residency. Physical presence for the entire twelve-month period of a student with a long history or family history of Florida residence need not be required so long as the conduct of the student, taken in total, manifests an intention to make Florida his or her permanent dwelling place. If such student is a minor, it shall mean that the parent or parents, or legal guardian of the student shall have domicile in and have resided in the state of Florida for the period stated above. "Florida student" classification shall also be construed to include students who hold an immigration and Naturalization Form I-151, Resident Alien Registration Receipt Card, or Cuban Nationals or Vietnamese Refugees who are considered as Resident Aliens, provided such students meet the residency requirement stated above and comply with subsection (2) below. The burden of establishing facts which justify classification of a student as a resident and domiciliary entitled to "Florida student" registration rates is on the applicant for such classification.

(b) In applying this policy:

1. "Student" shall mean a person admitted to the institution, or a person allowed to register at the institution on a space available basis.

2. "Minor" shall mean a person who has not attained the age of 18 years, and whose disabilities of minority have not been removed by reason of marriage or by a court
of competent jurisdiction.

3. "Domicile" for fee paying purposes shall denote a person's true, fixed, and permanent home and place of habitation. It is the place where the applicant lives and remains and to which he expects to return when he leaves, without intent to establish domicile elsewhere.

4. "Parent" shall mean a minor's father or mother, or if one parent has custody of a minor applicant, it is the parent having court assigned financial responsibility for the education of the student; or if there is a court appointed guardian or legal custodian of the minor applicant, it shall mean the guardian or legal custodian.

5. The term "dependent student," as used in this rule is the same as a dependent as defined in sections 151 (e) (1) (2) (3) and (4) of the Internal Revenue Code of 1954. A copy of these provisions in the Internal Revenue Code of 1954 is incorporated in this rule by reference.

6. A "non-Florida" student is a person not meeting the requirements of subsection (a) above.

(2) In all applications for admission or registration at the institution on a space available basis, a Florida applicant, if a minor, the parent or legal guardian of the minor applicant, shall make and file with such application a written statement, under oath, that the applicant is a bona fide citizen, resident, and domiciliary of the state of Florida, entitled as such to classification as a "Florida student" under the terms and conditions prescribed for citizens, residents, and domiciliaries of the state of Florida. All claims to "Florida student" classification must be supported by evidence as stated in 6C-7.05(1) if requested by the registering authority.

(3) A "non-Florida student" or, if a minor, his parent or guardian, after having been a resident and domiciliary of Florida for twelve (12) consecutive months, may apply for and be granted reclassification prior to the first day of classes of any subsequent term; provided, however, that those students who are non-resident aliens or who are in the United States on a non-immigration visa will not be entitled to reclassification. An applicant for reclassification as a "Florida student" shall comply with provisions of subsection (2) above. An applicant who has been classified as a "non-Florida student" at time of original enrollment shall furnish evidence as stated in 6C-7.05(1) to the satisfaction of the registering authority that the applicant has maintained continuous residency in the state for the twelve months required to establish residence for tuition purposes. In absence of such evidence, the applicant shall not be reclassified as a "Florida student." In addition, the application for reclassification must be accompanied by a certified copy of a declaration of intent to establish legal domicile in the state, which intent must have been filed with the Clerk of the Circuit Court, as provided by Section 222.17, Florida Statutes. If the request for reclassification and the necessary documentation is not received by the registrar prior to the last day of registration for the term in which the student intends to be reclassified, the student will not be reclassified for that term.

(4) Unless evidence to the contrary appears, it shall be presumed by the registering authority of the institution at which a student is registering that:

(a) The spouse of any person who is classified or is eligible for classification as a "Florida student" is likewise, entitled to classification as a "Florida student." This provision will not apply in the case of students who are non-resident aliens or who are in the United States on a non-immigration visa.

(b) If an applicant's eligibility for classification as a "Florida student" is based on the residency of the spouse, the spouse shall make and file with the application a written statement under oath, that said person is the spouse of the applicant and a bona fide citizen, resident and domiciliary of the state of Florida, entitled as such to classification as a "Florida student."

(c) No person over the age of 18 years shall be deemed to have gained residence while attending any educational institution in this state as a full-time student, as such status is defined by the Board of Regents, in the absence of a clear demonstration that he has established domicile and residency in the state, as provided under subsection (3) above.

(d) Any "Florida student" who remains in the state, after his parent who was previously domiciled in Florida or stationed in Florida on military orders removes him/her from attendance at a school or schools in Florida shall be deemed "continuous." However, such students claiming continuous attendance must have been enrolled at a school, college or university in Florida for a normal academic year in each calendar year, or
the appropriate portion or portions thereof, from the beginning of the period for which continuous attendance is claimed. Such a student need not attend summer sessions or other such intersession beyond the normal academic year in order to render his attendance "continuous."

(5) Appeal from a determination denying Florida status to any applicant therefore may be initiated after appropriate administrative remedies are exhausted by the filing of a petition for review pursuant to Section 120.68 F.S. in the District Court of Appeal in the appellate district in which the institution maintains its headquarters or where a party resides.

(6) Any student granted status as a "Florida student," which status is based on sworn statement which is false shall, upon determination of such falsity, be subject to such disciplinary sanctions as may be imposed by the president of the university.

(7) Special Categories—The following categories shall be treated as Florida residents for tuition purposes if adequate documentation is provided:

(a) A member of the Armed Services of the United States who is stationed in Florida on active duty pursuant to military orders, the spouse and the dependent students.
(b) A veteran of the Armed Forces of the United States of America with twenty (20) or more years of active military service, including the spouse and dependent students of such veteran's immediate family, provided that the veteran is in Florida at time of retirement or moves to Florida within one year following retirement and files a declaration of Florida domicile.
(c) Full-time elementary, secondary, and community college faculty members under current teaching contracts in the state of Florida, and their spouses and dependent students.
(d) Full-time faculty, administrative and professional and career service employees of the University System and their spouses and dependent students.
(e) A student certified by his respective state for participation in the Academic Common Market Program of the Southern Regional Education Board who is enrolled in a program approved by the Florida Board of Regents.
(f) Florida domiciliaries living in the Panama Canal Zone who have not established domicile elsewhere, including the spouse and dependent students.
(g) Florida residents who had their residency in Florida interrupted by service in the U.S. armed forces, the Peace Corps or other similar volunteer organizations fostered by the United States government shall be deemed to have had residency in Florida during time of service in the aforementioned organizations.

(8) Reciprocal Agreements. The Board of Regents may enter into agreements with appropriate agencies and institutions of higher education in other states and foreign countries providing for the reciprocal exchange of students enrolled and prospective in higher educational institutions to facilitate utilisations of public higher educational institutions in this State and other states or countries. Such agreements may include provisions for waiver or reduction of non-resident tuition for designated categories of students who may include contractual payments to such other state or country, subject to the availability of appropriations. Such agreements shall have as their purpose the mutual improvement of educational advantages for residents of this State and such other states or countries with whom agreements may be made. Specific Authority 240.042 (2) (9), 240.052 (1) FS. Law Implemented 240.042 (1), (2) (a), (h), 240.052 (1), (2) (a), (b), (3), and 120.53 (1) (a) FS. History—Formerly 60-2.51, 11-18-70. Amended 8-20-71, 6-5-73, 3-4-74.

RECORDS DEADLINE—Supporting Documents

All supporting admissions documents (e.g., transcripts and test scores not recorded on official transcripts) should be received by the Admissions Office no later than 15 days preceding the first day of classes. In some cases applicants may be allowed to register on a temporary basis (without all records) assuming it can be determined from available records or consultation with the students that they appear admissible.

RECORDS—Validity of Documents

All supporting admissions documents must be received directly from the issuing institution or testing agency and 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. Actions for this type of offense will be handled by the Dean of Students' Office.

MEDICAL HISTORY REPORT

All new students must furnish Medical History Reports on the approved University health form before registration will be allowed. The Medical History Report form will be mailed to the applicant with receipt for the Application for Admission.

ADMISSION REQUIREMENTS

The following classes of applicants are eligible for consideration as candidates for admission to credit courses. It should be understood, however, that minimum requirements are given and that admission to the university is a selective process. While the satisfaction of minimum requirements does not automatically guarantee admission, students who meet them are normally admitted. The state universities in Florida are allowed to admit a limited number of beginning freshmen as exceptions to normal admission requirements. The Board of Regents regulations state that "no more than 10% of the projected freshman class may be admitted as exceptions." UCF admits students under this provision if there is evidence indicating a reasonable probability that the applicant can satisfactorily complete a program for which he or she is seeking admission.

Undergraduate applicants whose native language is not English must submit a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Graduate applicants should consult the Graduate Catalog.

Certain undergraduate programs at UCF are limited access and, therefore, have additional requirements listed in appropriate college sections.
FRESHMAN APPLICANTS (First College Attended)
Eligibility is subject to satisfactory receipt and review of all items requested in the admissions process. 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.

<table>
<thead>
<tr>
<th>Area</th>
<th>1984-85</th>
<th>1986 or After</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>3(^{1})</td>
<td>4(^{2})</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3(^{3})</td>
<td>4(^{4})</td>
</tr>
<tr>
<td>Natural Science(^{5})</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Social Science(^{6})</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Electives(^{7})</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Academic Units</strong></td>
<td>14</td>
<td>16</td>
</tr>
</tbody>
</table>

1. Two units in English must include substantial writing requirements.
2. Three units in English must include substantial writing requirements.
3. Including Algebra I, Geometry, and Algebra II.
4. Including Algebra I, Geometry, Algebra II and one unit from the following: Trigonometry, Solid Geometry, Analytic Geometry, or Calculus.
5. One unit in Natural Science must include substantial laboratory requirements.
6. Courses to be selected from History, Civics, Political Science, Economics, Sociology and Psychology.
7. Courses to be selected from Computer Science, Foreign Languages, English, Literature, Mathematics, Natural Sciences and Social Sciences.

Students eligible to apply for admission to the University are:

1. **Graduates of regionally accredited high schools** who have a "2.6" average or above (as computed by the University) for all academic subjects taken in ninth through twelfth grades and a minimum test score of 900 (minimum of 400 on either sub-score on the SAT or 21 (minimum of 20 on the English sub-score and 19 on the Math sub-score) on the ACT. Students with a "B" average will normally be admitted even if the test score falls below the above minimums if they have been in a college preparatory high school curriculum.

2. **Graduates Possessing State High School Equivalency Diplomas** based upon General Education Development testing and who have acceptable high school records for the portion attended and have a minimum score of 900 (minimum of 400 on either sub-score on the SAT or 21 (minimum of 20 on the English sub-score and 19 on the Math sub-score) on the ACT.

**Graduates Who Otherwise Meet Requirements in Category One Above, But Who Were Graduated from a Regionally Unaccredited High School** will be considered individually and may be admitted on a "provisional" basis. By obtaining a 2.0 GPA (C average) or better at the end of the first term of attendance, the provisional status will be removed. Earning less than a "C" average for the first term would result in disqualification.

**Graduates Who Do Not Meet These Entrance Requirements And Are Considered Borderline Admission Cases** are referred to the University Admissions and Standards Committee for review. It may be recommended that a student attend a Florida community College before reapplying to UCF.

**ACCREDITATION**
For the purposes of this Bulletin "Accredited Institutions" means those institutions accredited by the six regional associations, vis:
- 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 by UCF.

ENROLLMENT AS AN UPPER DIVISION STUDENT
Effective Fall Semester 1983, classification as an upper division student at the University of Central Florida requires that the student must have completed

1. at least 60 semester hours of academic work
2. the requirements in English and mathematics specified by the Gordon Rule (see page 44 and
3. the College Level Academic Skills Test (CLAST) (see page 45).

DEFINITION OF LIMITED ACCESS PROGRAMS
A limited access program utilizes selective admissions to limit program enrollment. Limited access status is justified where student demand exceeds available resources (student-faculty ratios, instructional facilities, equipment or specific accrediting requirements). Criteria for selective admissions include indicators of ability, performance, creativity or talent to complete required work within the program and do not discriminate against community college transfers with Associate of Arts degrees from Florida community colleges. 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.

COLLEGE TRANSFER APPLICANTS
An undergraduate student transferring from an accredited college or university with 2 years (90 quarter hours or 60 semester hours and/or an A.A. degree) of transferable credit must (1) have a minimum GPA of 2.0 ("C" Average) in all academic college work previously attempted, (2) be in good standing at the last institution attended, and (3) have a minimum GPA of 2.0 at the last institution attended. Refer to pages 44 and 52. Re: CLAST, Gordon Rule, Repeat Policy, and Transfer Courses.

Applicants with less than 2 years (90 quarter hours or 60 semester hours) of transferable college credit must normally meet the University's freshman entrance requirements (furnish high school records and satisfactory test scores) and (1) have a minimum 2.6 GPA (A=4 points) in all academic college work previously attempted, (2) be in good standing at the last institution attended, and (3) have a minimum GPA of 2.0 at the last institution attended.
- Credits in which an applicant has achieved a grade of "D" or better are transferable. Refer to page 41 for "D" grade transfer policy. All grades are included in transfer GPA.
- No credit will be awarded for college-level GED tests, for courses given without a grade, nor for courses carrying grades but not credit hours.

Completed military service school courses may be evaluated on the basis of the recommendations of the American Council of Education 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, and application for service school course should be made at the time of admission.

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 (See Undergraduate Degree Requirements, page 47 and Second Baccalaureate Degree, page 48). A baccalaureate degree or higher from another accredited four-year U.S. institution satisfies the Basic and Advanced General Education Program requirements.

Transfer students from Florida State Community Colleges or Universities may satisfy the Basic General Education Program requirements by completing prior to transfer, the general education program prescribed by the 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. In Florida public community colleges, the Associate of Arts Degree (AA) is the university transfer degree that normally guarantees the admission of new students. The Associate of Science
Degree is a two-year terminal degree which does not assure admission except for the AS in Engineering Technology which leads into our special upper division BET Degree Program; however, the A.S. degree does not certify the student as having completed General Education requirements.

1. Florida State Community College Transfers. Admission to the University is normally granted to any graduate of a Florida community college who has completed the Associate of Arts program and graduated with a 2.0 GPA ("C" average). UCF honors forgiveness if part of an AA degree.

2. Private Colleges and Out-of-State Institutions. The general education program credits of transfer applicants from private junior and senior colleges and out-of-state institutions will be evaluated on a course by course basis.

3. Unaccredited Colleges or Universities. 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 provisional, probationary and/or non-degree basis depending upon the applicant's record. "Validating" credit may be required before transfer of credit is considered.

All students must submit the necessary petition(s) to the college of the major in order to determine which courses will transfer with regard to degree progress at UCF. Each College has different petition procedures but generally the petitioning should be done during the second full term of the student's residency at UCF in order that the accepted transfer courses are clearly understood by the student and the faculty advisor early in the student's program.

Final determination regarding applicability of credits accepted in transfer toward the fulfillment of degree requirements resides with the College in which a student is enrolled.

The Admissions and Standards Committee membership is composed of representatives from all colleges of the university, 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 the applicants. A letter of explanation to the Director of Admissions is recommended establishing the basis for an appeal.

40
TRANSFER OF “D” GRADES
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 permanent record. Credits earned in courses transferred with "D" grades will count toward the credits required for the baccalaureate; however, it is at the discretion of the department or college of the University offering the major as to whether courses with "D" grades in the major may satisfy requirements in the major field.

SUBSTITUTION OF COURSES—General Education Program
A student who wishes to substitute a course taken elsewhere for a course required in the UCF General Education Program must complete a "Petition to Substitute Courses for the General Education Program" form. Forms may be obtained in college and departmental offices, or from the College of Undergraduate Studies. Completed petitions must be submitted to and approved by the Office of Undergraduate Studies. The following procedure should be followed:
1. A single petition should be prepared for all courses not taken at UCF, and for any UCF courses which are being requested to substitute for stated requirements of the General Education Program and which are not on the list of approved substitutions.
2. Transcripts or UCF Transfer Summary Reports should accompany all petitions.
3. Course descriptions should accompany all petitioned courses unless the petitioned course has the same prefix and number as the UCF equivalent and was taken at a State of Florida Community College or University in the SUS of Florida.
4. All petitions for substitution of credit for both Lower and Upper Division General Education requirements should be sent to the Dean of Undergraduate Studies.
5. Students transferring from one UCF college to another are not required to repeat for general education requirements.
6. Appeals of decisions should be directed to the Vice President for Academic Affairs.

To make a substitution for requirements in a major, the student should petition the department in which he/she is registered.

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

Readmission of a suspended (disqualified or excluded) student is never automatic. Students who have been disqualified or excluded must complete a readmission application. It is appropriate that the student write a letter of appeal to the Director of Admissions describing the particular circumstances since the time of disqualification or exclusion. When the Director of Admissions cannot make a favorable decision, cases will be referred to the Admissions and Standards Committee.

Any former student who withdrew with a cumulative or overall grade point average of less than 2.0 ("C") and who is considered readmissible, will be readmitted on academic probation.

REACTIVATION
A student who has submitted an application for admission to UCF but never attended may reactivate the original application by submitting a reactivation form within two years. The deadline date for reactivation is the same as the date for new applications for admission. (See calendar.)
TYPES OF STUDENTS

TEMPORARY STUDENTS

Any student who applied before the application deadline date and is permitted to register and attend classes without a complete admission file is granted a maximum of four weeks (first 20 class days), to furnish all required records. Incomplete records or records indicating ineligibility will result in cancellation of the student’s registration. No fees are refundable after the first week of classes.

TRANSIENT STUDENTS—CONCURRENT ENROLLMENT

**UCF Students.** A UCF degree-seeking student who wishes to earn credit at another college or university for transfer back into his degree program must obtain prior approval for specific courses from the Dean or Department Chairman of his respective college and the Registrar of UCF. Credit earned without this transient approval may not be accepted. Transient forms are available in the Records Office. Transient credit cannot be used to reduce the last 30 semester hour residency requirement.

**Students from Other Colleges or Universities.** Students in good standing with a 2.0 overall academic average in any accredited college or university and wishing to enroll for one term at UCF may be considered for admission as a transient. 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 form indicating the parent institution’s willingness to accept the credits and that the student is in good standing with a minimum “C” (2.0) grade point average is required to support the application for admission. This statement protects the student and serves as a basis for admission in lieu of transcripts. Transient forms are available in the Admissions Office.

AUDIT STUDENTS

In order to audit any course, permission of the instructor is required. A new applicant desiring only to audit a course must complete an application for admission and be accepted as a non-degree or regular student. Students may only register for audit on the day designated in the calendar. A student may change from credit to audit.

NON-DEGREE STUDENTS

An individual may enroll as a non-degree seeking student using a regular application form. Although such students do not have to meet all of the regular admission requirements of degree seekers, there must be some satisfactory basis for acceptance.

In order to change to degree-seeking status, a non-degree student must provide all academic records required of degree seekers, including testing. A student may establish a basis for changing to degree status by completing 15 semester hours of work here with a 2.0 UCF GPA or above. Such students should be cautioned that no more than 30 semester hours earned as a non-degree student can be counted towards a degree. Change of status is not automatic. Degree status must be applied for through the Admissions Office. The student’s total record will then be reviewed and a decision made.

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 Requirements Section of this Bulletin and graduate applicants to the Graduate Catalog. In addition, the following is required for admission:

1. International student applications and records required for admission must be received at least three months prior to the beginning of the desired term.

2. Only those students with an Associate of Arts degree from a Florida public community college 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 a foreign institution(s) must provide an official evaluation from the World Education Services, Inc. (evaluation application may be obtained from the Admissions Office or by writing WES, P.O. Box 745, Old Chelsea Station, New York, NY 10011).

3. 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 from a Florida public community college 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 additional requirements.

4. 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.
DEGREE REQUIREMENTS

Each student is responsible for reading and understanding the degree requirements as stated in the catalog under which he plans to graduate.

GENERAL EDUCATION PROGRAM

The General Education Program is designed to give students insight into the major areas of knowledge taught at the University. It further provides the opportunity for making a more meaningful choice in their majors and in selecting elective courses.

The General Education Program took effect with the 1981-82 academic year. Students who qualify to graduate under the former general education requirements (Environmental Studies Program) and who choose to use those requirements for graduation should consult previous catalogs which contain a description of that program.

All entering freshmen and some transfer students will be required to complete placement examinations in English, reading, and mathematics before enrolling in classes. The Office of Undergraduate Studies will notify each student of placement test sessions and will send a score report with course recommendations to each student and his or her advisor after the tests have been completed.

The General Education Program designates the specific courses which may be used to fulfill the General Education Program requirements, but a more advanced course in the same discipline may be substituted for GEP requirements with approval of the Office of Undergraduate Studies. Students should consult with an advisor and with the Office of Undergraduate Studies before substituting any course.

The Gordon Rule applies to students who first enroll in any college or university in January 1983 or thereafter.

At the University of Central Florida, the Gordon Rule requirements are automatically satisfied by the General Education Program.

The Gordon Rule requirement of 6 semester hours of coursework at the level of college algebra or higher is met by the Mathematical Foundations component of the GEP which requires 3 hours of college algebra or finite mathematics and 3 hours of statistics or computer science. In addition, any higher level mathematics, statistics, or computer science course can be used toward the Gordon Rule.

The requirement of 12 semester hours of coursework in which the student is asked to demonstrate writing skills is satisfied by 1) the 6 hours of English composition required in the Communications Foundation component of the General Education Program, and 2) one 6 hour sequence of Western Civilization, U. S. History, Western Humanities required in the Cultural and Historical Foundations component. American Literature I, English Literature I, and World Literature I are options in the Cultural and Historical Foundations Elective component of the GEP and may also be used to satisfy the Gordon Rule, as may any upper division course in literature or composition taught by the UCF English Department or any upper division history course taught by the UCF History Department.

Students who have received CLEP or AP credit for English and students who have taken history or humanities courses at another institution may find themselves in the position of having completed the GEP requirement but not the Gordon Rule. In this event, they should make up any deficit in the Gordon Rule by completing one of the English or history courses mentioned above.

Transfer work which seems appropriate to the Gordon Rule may be petitioned via the advisor through the Office of Undergraduate Studies.

Exemptions and waivers to the Gordon Rule are as follows:

(a) Any student satisfying College-Level Examination Program (CLEP) requirements in mathematics for post-admission exemptions of coursework shall be allowed to exempt three (3) hours of mathematics required by this rule.

(b) Any student who has satisfied CLEP requirements in mathematics and whose high school transcript shows successful completion of higher mathematics coursework, including college algebra, trigonometry and calculus, shall exempt the mathematics requirement of this rule.

(c) Any student who completes the first six (6) hours of the English coursework required by this rule with a grade point average of 4.0 may waive completion of the remaining six (6) hours until after entry into the upper division.

An undergraduate student who has not completed requirements for the Associate
of Arts degree and who wishes to transfer to another Florida state university can have his transcript stamped GENERAL EDUCATION REQUIREMENTS MET if he/she has completed UCF’s lower division requirements of the General Education Program with a GPA of 2.0 or better and has met the requirements of the Gordon Rule. UCF will accept a similar statement on transcripts received from Florida community colleges or other institutions in the State University System in lieu of completion of the University’s Basic General Education Program provided the requirements of the Gordon Rule are met.

The State of Florida has developed a test of college level communication and computation skills. The test is called the College Level Academic Skills Test (CLAST) and is designed to test the communication and computation skills that are judged by state university and community college faculty to be generally associated with successful performance and progression through the baccalaureate level. The test is required by Florida Statutes and rules of the Board of Education.

The CLAST is administered toward the end of the sophomore year to university and community college students, as well as to community college and university students who are completing Associate of Arts degree programs. It is also administered to community college students who are completing Associate of Science degree programs and are seeking admission to upper division programs in state universities in Florida. Students must take the test to be awarded the Associate of Arts degree or to be admitted to upper division status in state universities in Florida. The CLAST requirement also applies to students transferring to state universities in Florida from private colleges in Florida and from out of state colleges.

Effective August 1, 1984, the State Board of Education will establish minimum CLAST score standards for awarding the Associate of Arts degree, and for admission to upper division status in state universities in Florida. Prior to August 1, 1984, however, the use of CLAST scores is limited to student counseling and curriculum improvement.

Information about CLAST can be secured from the Office of Undergraduate Studies (AD210, 275-2691).
I. Lower Division (40 semester hours required)

A. Communication Foundations ........................................ 9
   1. *ENC 1101 English Composition I 3(3,0)
   2. *ENC 1102 English Composition II PR: ENC 1101 3(3,0)
   3. SPC 1014 Speech and Communications 3(3,0)

B. Cultural and Historical Foundations .................................. 9
   1. Take one of the following two semester sequences: ............ 6
      *EUH 2000 Western Civilization I 3(3,0)
      *EUH 2001 Western Civilization II 3(3,0)
      or
      *HUM 2211 Western Humanities I 3(3,0)
      *HUM 2230 Western Humanities II 3(3,0)
      or
      *AMH 2010 U.S. History: 1492-1877 3(3,0)
      *AMH 2020 U.S. History: 1865-present 3(3,0)
   2. Take one course from the following: ................................ 3
      ARH 2050 The History of Art I 3(3,0)
      ARH 2051 The History of Art II 3(3,0)
      MUL 2011 Enjoyment of Music 3(2,1)
      THE 1020 Theatre Survey 3(2,1)
      THE 2071 Cinema Survey 3(2,2)
      REL 2302 World Religion 3(3,0)
      PHI 2010 Introduction to Philosophy 3(3,0)
      *LIT 2110 World Literature I PR: ENC 1102 3(3,0)
      *AML 2011 American Literature I PR: ENC 1102 3(3,0)
      *ENL 2010 English Literature I PR: ENC 1102 3(3,0)

C. Mathematical Foundations .......................................... 6
   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 1202 Finite Mathematics 3(3,0)
   2. **COG 1100 Introduction to Computer Science 3(3,0)
      **STA 2014 Principles of Statistics 3(3,0)

D. Social Foundations .................................................. 9
   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 .................................................. 7
   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 1202 3(3,0)
      PHY 2050C College Physics PR: MAC 1104 or MGF 1202 4(3,3)
      CHM 1034 General Chemistry PR: MAC 1104 or MGF 1202 3(3,0)
   2. BSC 1020C Biological Principles 4(3,2)
      BSC 1030C Biology and Environment 4(3,2)
      GLY 1000 Geology & Its Applications 3(3,0)
      GEO 1200 Physical Geography 3(3,0)

II. UCF Enhancement Options ......................................... 8-9
   Select Option A or B:
   A. Foreign Languages—Any two sequential foreign language
      courses in one language (8 semester hours)
   B. Upper Division—9 semester hours outside the department
      of the major chosen from the list printed in each semester’s
      registration schedule. This requirement may also be satisfied
by completion of a minor in an area approved by the student's department or college.

• Satisfies 3 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 or any upper division history course taught by the UCF History Dept. satisfies 3 hours of the English composition requirement.

** Satisfies 3 hours of the Gordon Rule requirement in mathematics. In addition, any higher level course in mathematics, statistics, or computer science satisfies three hours of the mathematics requirement.

UNDERGRADUATE DEGREE REQUIREMENTS

The requirements for a major, including the University graduation requirements, must be met by each student who receives a degree from the University of Central Florida and an Intent to Graduate card must be completed in the Registrar's Office by the end of the second week of the term of graduation. The minimum bachelor degree requirements for all students are as follows:

- A minimum of 120 academic semester hours credit with at least a "C" average (2.0 GPA) for all course work attempted (both UCF and overall).
- A minimum of 60 semester hours of work taken for the bachelor's degree must be earned in a senior institution.
- A minimum of 48 semester hours of work taken for the bachelor's degree must be taken in 3000-level courses or above.
- A minimum of (and the last) 30 semester hours must be earned in residence at UCF. Credit by examination may not be used to satisfy this requirement.
- A maximum of 45 semester hours in any combination of extension, correspondence, CLEP, Time Shortened Degree and Armed Forces credits accepted by the University may be applied toward an undergraduate degree. The acceptance of credit for degree purposes is subject to review by the college standards committee and may differ from college to college. Additional semester hour credit may be granted by examination given at UCF.
- A minimum of sixty semester hours of University credit must be earned after CLEP credit has been awarded.
- Fulfillment of the CLAST and Gordon Rule requirements listed elsewhere in the catalog.

SUMMER ATTENDANCE REQUIRED. A student entering a university in the State University System after September 1, 1976 with fewer than 60 accepted semester hours of credit upon admission must earn 9 semester hours prior to graduation by attending one or more summer semesters at a university in the State University System. A student may secure a "Request for Waiver of mandatory Enrollment" form from the Office of Undergraduate Studies.

CHOICE OF CATALOG. A student has the option of fulfilling requirements for graduation under any single UCF catalog in force during his or her most recent period of continuous enrollment. Enrollment is noncontinuous when the student does not enroll during two or more consecutive semesters excluding summer terms. Enrollment during any part of the summer term is defined to be enrollment during the summer semester. The use of a combination of catalogs to fulfill degree requirements is not permitted. The university reserves the right to discontinue course offerings at any time. Students meeting graduation requirements outlined in an earlier catalog will be required, with prior approval by the dean, to substitute alternate courses for those no longer offered. Except for the foregoing, the Administrative and Academic Policies of the current catalog will be considered official for graduation. A Florida community college graduate may elect to use the UCF catalog in force at the beginning of his most recent continuous attendance at the community college provided his attendance continues uninterrupted including his transfer to UCF.

DOUBLE MAJORS

Any UCF student working toward a single baccalaureate degree who satisfies all requirements for two majors will be awarded one diploma although both majors will
be indicated on his permanent record. Majors under each degree are listed on page 62. For example, a student who satisfies all requirements for a major in Political Science and for a major in History would be awarded a single Bachelor of Arts degree with the two majors indicated on his permanent record. Similarly, if a student wishes to pursue two majors leading to different baccalaureate degrees (e.g., Psychology which leads to a Bachelor of Arts degree and Biology which leads to a Bachelor of Science degree), he must satisfy the requirements of both majors. Although both majors will be indicated on his permanent record, only one diploma will be awarded (e.g. B.A. in Psychology or B.S. in Biology, at the student’s option).

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 semester 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 an accredited U.S. institution are considered to have completed all General Education Program Requirements. Students who hold a degree from a non-accredited and/or a foreign institution may be required by the Dean of the College in which they are majoring to fulfill all or part of the UCF General Education Program requirements.

MINORS

Minors in a limited number of programs have been authorized for certification with baccalaureate degrees granted August 25, 1978, and thereafter. 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 DEGREE REQUIREMENTS

See the University of Central Florida Graduate Catalog.
ACADEMIC POLICIES AND PROCEDURES

ACADEMIC STANDING
Acceptable academic standing at the University is reserved for those students who achieve and retain a GPA of 2.0 (C) or higher. A student remains in good standing academically as long as he achieves normal academic progress required for graduation.

For the purpose of Financial Aid, Social Security, Military I.D. cards, bank loans, and good student discounts undergraduates must carry at least twelve (12) semester hours for full-time benefits and six (6) semester hours for half-time benefits. Graduate students must carry at least nine (9) semester hours for full-time benefits and five (5) semester hours for half-time benefits. (For Veterans admission benefits see page 33).

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 test 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 are as follows:
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 Veteran’s 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, transient and auditor).
TEMPORARY: A student who applied on time and is permitted to register and attend class pending completion of his admissions file.
TRANSIENT: (1) A student temporarily registered (for one semester) at the University of Central Florida with the approval of some other university or college where he is regularly enrolled, or (2) a UCF student temporarily in attendance at another university or college, with the approval of UCF.
NON-DEGREE: 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.
**ACADEMIC TERMS AND ACTIONS DEFINED**

All Academic Actions are shown on grade reports and transcripts.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Average</td>
<td>Grade Point Average on work attempted during any given semester.</td>
</tr>
<tr>
<td>UCF Average</td>
<td>Grade Point Average on all work attempted while in attendance at the University of Central Florida.</td>
</tr>
<tr>
<td>Overall Average</td>
<td>Grade Point Average on all work attempted since entering college, including work from all previously attended institutions.</td>
</tr>
<tr>
<td>Academic Warning</td>
<td>Some first-time-in-college applicants who do not meet University admission requirements may be admitted on Academic Warning. Earning less than a “C” average the first term will result in Academic Probation. A student may be on Academic Warning only once.</td>
</tr>
<tr>
<td>Action taken when a Student's UCF cumulative or overall GPA drops below 2.0. A student, also, may be admitted on Academic Probation. Academic Probation will continue until the current term, UCF cumulative and overall GPA reach 2.0 or better.</td>
<td></td>
</tr>
<tr>
<td>Disqualified (1st Suspension)</td>
<td>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. 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.</td>
</tr>
<tr>
<td>Exclusion (2nd Suspension)</td>
<td>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 the student making unsatisfactory progress of his 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.</td>
</tr>
<tr>
<td>Readmission</td>
<td>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 the student making unsatisfactory progress of his 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.</td>
</tr>
</tbody>
</table>

**EARNING CREDIT WHILE DISQUALIFIED OR EXCLUDED**

A student disqualified or excluded while a Freshman or Sophomore and who subsequently receives an A.A. degree with a “C” average (2.0 GPA) on all college work attempted from a Florida community college may be readmitted to the university with credit earned accepted in accordance with standard University policies.

A student who attends other colleges or universities following disqualification will be classified as a transfer student and his readmission will be based on his total educational record.
GRADING SYSTEM

The University will use 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:

GRADING SYSTEM

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
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
R—(followed by grade)
   —Subsequently repeated (no credit) ..................... 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, X, and I grades. The grade point average for graduation requirements is 2.0 (C) and will be computed on both the student’s total academic program and UCF program.

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. Two class hours of work (or four or more laboratory hours of work) per week are required to represent a semester hour of credit.

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.

ACADEMIC HONORS

I. President’s Honor Roll Certificate

   The President’s Honor Roll Certificate is awarded in recognition of scholastic honors to a regular undergraduate student who completes 12 or more hours, excluding pass-fail coursework, and maintains a 4.0 GPA for the given term or who completes 15 semester hours during any two consecutive terms at UCF with no more than 11 hours in any one term, excluding pass-fail work, and maintains a 4.0 GPA for the two terms.

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

II. Dean’s List

   The Dean’s List is compiled in recognition of scholastic honors for students who register for and complete at least 12 semester hours with a 3.4 GPA and no grade less than “C” during a term.

III. 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 a grade point average which is in the upper 15% of the range established by all students graduating in the same college during the previous two years
   B. Attain at least a 3.0 GPA including all college credits earned
   C. Honors awarded will be
      1. **Summa Cum Laude** for those students in the upper 5%
2. Magna Cum Laude for those students in the upper 10%, but not in the upper 5%
3. Cum Laude for those students in the upper 15%, but not in the upper 10%

Since records for the semester of graduation are incomplete at the time of graduation, that term is excluded in determining student 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.

GRADE FORGIVENESS POLICY

Effective Fall Semester, 1981, an undergraduate student may repeat a course and have the repeated grade computed in his/her GPA in place of the original grade. The following rules apply:

1. Grade forgiveness is limited to two courses.
2. UCF does not honor grade forgiveness granted at other institutions unless it is part of an AA degree transferred to UCF from a Florida public community college. In addition, a student may not exercise grade forgiveness by repeating at UCF a course which was initially taken elsewhere.
3. Because of the two course limit, a student who has repeated two or more courses at a Florida public community college and included those courses in the transfer of an AA may not use the grade forgiveness again at UCF. But, any other transfer student may exercise the policy for courses taken and repeated at UCF since any forgiveness he may have been granted elsewhere will not transfer to UCF.
4. Grade forgiveness is not retroactive and, therefore, may not be used for a course repeated before Fall 1981.
5. If, however, a student who repeated a course at UCF before Fall 1981 and did not use the previous forgiveness policy 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.
6. A student may enroll in a course for which he wishes to exercise grade forgiveness only with the permission of the chairman in whose department the course is offered.
7. Grade forgiveness awarded for repeated courses will not retroactively alter any previous academic action. This means, for example, that 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.

8. If a student withdraws from a course repeated under the Grade Forgiveness Policy or receives an incomplete in the course, the attempt will count as one of the two allowable attempts. However, the original grade will not be replaced with the "I" or the "W" received in the repeat attempt. The student may not petition a second time for the same course.

9. All grades will remain on the student’s official transcript. The original course grades will be annotated with a “T” to indicate that the course has subsequently been repeated, and the repeat course grade will be annotated 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 an incomplete.

10. 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.

11. 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.

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

1. Pick up a “Grade Forgiveness Request Form” from the Office of Records and Registration and complete it for each course he chooses to repeat.

2. Secure the signature of the chairman in whose department the course is offered.

3. If the course is a substitution for the original one (see 10 above), secure the signature of the dean of the college in which the course is offered.

4. The completed form must be turned in to the Office of Records and Registration immediately after registration and no later than the last day of Add/Drop. NOTE: This is one day earlier than the deadline stated in the original policy. No petitions will be accepted after the deadline.

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

ACADEMIC ETHICS POLICY
The faculty of the University of Central Florida are committed to a policy of honesty in academic affairs. Conduct for which students may be subject to administrative and/or disciplinary penalties up to and including suspension or expulsion include:

A. Dishonesty consisting of cheating of any kind with respect to examination, course assignments, or illegal possession of examination papers. Any student helping another to cheat is as guilty as the student assisted.

B. Plagiarism consisting of the deliberate use and appropriation of another’s work without any indication of the source and the passing off of such work as the student’s own. Any student who fails to give credit for ideas or materials taken from another is guilty of plagiarism.

PROCEDURE
In cases of cheating or plagiarism:

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

INCOMPLETE GRADE
A grade “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
clearly be completed in a short time following the close of regular classes. The Registrar's Office must be notified of the appropriate grade to be assigned no later than the date shown in the Academic Calendar of the term immediately following that in which the "I" was assigned. Failure to complete course requirements by that day may, at the discretion of the instructor, result in the assignment of an "F" grade. It is the student's responsibility to arrange with the instructor for the changing of the "I" grade to receive credit. Both the new grade and the letter "I" will appear on the student's permanent record. If the "I" grade is not changed by the established deadline, it becomes a part of the student's permanent record and no credit is given for the class. A student may register for a course in which an "I" was received, but no repeat "R" action will be made on his permanent record.

WITHDRAWAL POLICY—From a Course (After Add/Drop Period) or from the University

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

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. Students who need to petition for a medical withdrawal should contact the Office of Undergraduate Studies, ADM 210.

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

SCHEDULE CHANGES—Add/Drop Policy

Add: Students may add a course during the official Add/Drop Period (the first three to five days of each term—see calendar). After the add/drop period, no course may be added.

Drop: Students may drop a course during the official Add/Drop Period (the first three to five days of each term—see calendar). The fact that the student was enrolled in a class so dropped will not appear on the permanent record. Approval of the student's faculty advisor is necessary before any course change. For withdrawal after the add/drop period, consult the Withdrawal Policy.
OTHER RELATED INFORMATION

STUDENT CONSUMER INFORMATION

The University of Central Florida completes retention studies, validity studies, and student progress reports on a periodic basis. These studies and related information are available at the Reserve Desk in the Library.

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 second week of the term of graduation.

Upon completion of 100 undergraduate semester hours of course work, the student is notified to report to the Registrar's Office.

The following steps are required of a student who is near or in his/her 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 second 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 bulletin under which the student has indicated he wishes to graduate (following the rules stated on page 47) 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 registered as a transient student at another institution during the last semester before graduation must have received a waiver of the last 30 hour residence requirement, must complete all courses by the date of UCF’s graduation and must provide an official transcript of work taken no later than 5 days after the UCF graduation date.

REQUIREMENTS FOR TEACHER CERTIFICATION

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:

I. 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.

II. 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.

III. PROFESSIONAL PREPARATION

There are three means by which students can complete a program of Professional Preparation at UCF. They are:

1. 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.

2. The Program of Teacher Education (i.e. a major in the College of Education) test scores between the 20th and 40th percentiles for college bound students on the SAT or ACT, and credit in a special course EDF 3937-Special Topics: Teaching Skills Development.

3. The Basic Certification Program (i.e. a major in some other college) and admissability to the internship phase of the program.
IV. 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 internship approved by the State Board of Education.

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 (A.P.P.), the University Course Credit by Examination, and the TSD Program.

1. 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 the junior year in high school. To be considered for full-time Fall Semester Early Admission, applicants must have:
   a. Superior test scores (SAT 1100 or above, ACT-27 or above).
   c. A recommendation from the student's high school counselor.
   d. A letter of permission from parents or guardian.
   e. A campus interview to ascertain the student's maturity and ability to adjust to collegiate responsibilities.

Qualified students may dual-enroll 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.

2. 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. (See page 57)

3. Advanced Placement Program (A.P.P.)

Students who have participated in the Advanced Placement Program in high school and received a score of three (3), four (4) or five (5) on the national examinations will receive from 2 to 3 semester hours of college credit in each of the appropriate subject areas. Consult your high school guidance counselor or write to the Educational Testing Service, Princeton, New Jersey 08540, for additional information.

4. University Course 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 contact their advisor and the chairman 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 shall not be given for any course lower in content than courses in the same discipline (i.e., with the same rubric) in which a student is currently enrolled or which he/she has already completed. Permission to take an examination is approved by the chairman of the department and the dean of the college in which the course is

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offered. Standard forms requesting university credit by examination may be obtained from the Registrar's Office by presentation of an I.D. card.

*Excludes transient and non-degree students.

5. Time-Shortened Degree Program (TSD)

The University accepts a limited number of first-time-in-college students who have:

A. An SAT score of 1100 or higher with minimum subscores of 500 verbal and 550 math or ACT score of 27 or higher with minimum subscores of 24 English and 26 math.

B. A high school academic grade point average of "B" or better (10th-12th grades), and

C. A grade of "B" or better in selected high school courses.

Students desiring additional information should contact the Office of Academic Affairs.

UNIVERSITY OF CENTRAL FLORIDA

CLEP POLICY

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 CLEP credit is subject to the conditions listed below.

1. Credit may be awarded in the CLEP general examination area, CLEP general subtest area, or CLEP subject examination area provided the student:

   a. is not within 60 semester hours of graduation.
   b. has not previously received comparable college course credit in the CLEP examination area.
   c. does not receive comparable college credit in the CLEP examination area in the same semester the examination is taken or in a subsequent semester.
   d. has not previously completed nor received credit by UCF (transfer or otherwise) in a more advanced course in the examination area.
   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 two of the CLEP general examination subtest areas (Humanities and Social Science-History). Partial credit may be awarded to students who have course duplication in one subtest area but not in the other subtest area (e.g., a student has completed HUM 2211 but has not completed Introduction to Literature or a more advanced literature course). In such a situation the student 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 restrictions listed in item 1 also apply to partial credit.

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, the minimum passing scaled score, the courses and other CLEP examinations which duplicate the CLEP general examination, and the CLEP usage. Information can be secured from the University Counseling and Testing Center on CLEP subject examinations for which credit may be awarded.

It is important to note that a maximum of 45 semester hours in any combination of extension, correspondence, CLEP, Time-Shortened Degree, and Armed Forces Service School Credits will be accepted by the University for application toward an undergraduate degree. In addition, CLEP credit cannot be used to reduce a grade point deficiency. For example, a CLEP grade cannot be substituted for a grade awarded for a previously completed course. CLEP may not be used to fulfill the senior institution requirement.
<table>
<thead>
<tr>
<th>CLEP GENERAL EXAMINATION</th>
<th>Maximum Semester Hours</th>
<th>Minimum Passing Scaled Scores</th>
<th>Courses and Examinations which duplicate the general examination test area and conversely</th>
<th>CLEP Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>Subtest Areas</td>
<td>Gen Exam</td>
<td>Subtest</td>
<td>Total*</td>
</tr>
<tr>
<td>English Composition (with essay)*</td>
<td>6</td>
<td>English Comp. Study ENC 1010: Vocabulary Study ENC 1101: Composition I</td>
<td>CLEP Usage</td>
<td>610</td>
</tr>
<tr>
<td>Humanities*</td>
<td>Fine Arts</td>
<td>6</td>
<td>Intro to Art** Humanities MUL 2011: Enjoyment of Music</td>
<td>489*</td>
</tr>
<tr>
<td></td>
<td>Literature</td>
<td>3</td>
<td>LIT 2010: Intro. to Lit. **</td>
<td>49</td>
</tr>
<tr>
<td>Natural Science***</td>
<td>Biology</td>
<td>NA</td>
<td>BSC 1020C: Bio Principles ZOO 1020: Bio. of Man</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Physical Science</td>
<td>NA</td>
<td>Chem. &amp; Society** OCE 1012: Oceanography &amp; Space PSC 1312: Physical Sci</td>
<td>49</td>
</tr>
<tr>
<td>Social Science History*</td>
<td>Social Science</td>
<td>6</td>
<td>SYG 2000: General Soc. POS 2041: Am Nat Govt. ECO 2000: Econ. &amp; Man**</td>
<td>488*</td>
</tr>
</tbody>
</table>

*The minimum total score must be attained before sub-scores can be used for awarding credit.
**Not currently offered at the University of Central Florida.
***Students must complete General Education Science foundation laboratory requirement.
* Satisfactory completion of these examinations does not reduce the 24,000 word writing requirement.
A student's basic expenses at the University will be for tuition 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.

It is required that all University fees 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 the University of Central Florida students:

**General Fees and Costs**

**A. Application fees**
- Must be paid by U.S. check or money order (required with all applications for admission to the University and not refundable) ............ $15.00

**B. Registration Fees per semester for campus, centers, and continuing education courses.**
Minimum registration of one credit hour (at the level the student is classified) must be charged for students registering for zero hours (co-op student on work assignment, applicant for graduation during the semester that student is not registered, etc.)

### Summer Semester, 1984

<table>
<thead>
<tr>
<th>Course Level</th>
<th>Fla. Resident</th>
<th>Non-Fla. Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Division*</td>
<td>$14.10 per hr.</td>
<td>$55.10 per hr.</td>
</tr>
<tr>
<td>Upper Division*</td>
<td>17.10 per hr.</td>
<td>80.10 per hr.</td>
</tr>
<tr>
<td>Graduate*</td>
<td>38.10 per hr.</td>
<td>110.10 per hr.</td>
</tr>
<tr>
<td>Thesis*</td>
<td>41.10 per hr.</td>
<td>113.10 per hr.</td>
</tr>
</tbody>
</table>

### Fall and Spring Semesters 84-85

<table>
<thead>
<tr>
<th>Course Level</th>
<th>Fla. Resident</th>
<th>Non-Fla. Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Division*</td>
<td>$25.10 per hr.</td>
<td>$66.10 per hr.</td>
</tr>
<tr>
<td>Upper Division*</td>
<td>28.10 per hr.</td>
<td>91.10 per hr.</td>
</tr>
<tr>
<td>Graduate*</td>
<td>38.10 per hr.</td>
<td>110.10 per hr.</td>
</tr>
<tr>
<td>Thesis*</td>
<td>41.10 per hr.</td>
<td>113.10 per hr.</td>
</tr>
</tbody>
</table>

*Lower division courses are for those numbered 0-2999
Upper division courses are those numbered 3000-4999
Graduate courses are those numbered 5000-7999
Thesis is course number 6970-6973

**C. Room and Board (Food Service required of Freshmen in University residence halls) per semester**

<table>
<thead>
<tr>
<th></th>
<th>$1,034.00-$1,286.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charge for late payment</td>
<td>$25.00</td>
</tr>
</tbody>
</table>

**D. Books and supplies (estimated) per semester**

<table>
<thead>
<tr>
<th></th>
<th>$150.00</th>
</tr>
</thead>
</table>

**E. Late Registration Fee—not refundable (for students who register during late registration periods or who fail to pay full fees by the established deadline)**

<table>
<thead>
<tr>
<th></th>
<th>$25.00</th>
</tr>
</thead>
</table>

**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.**

- Fall & Spring Semesters .......... $18.00
- Summer Semester ................. $12.00

**G. Student Health Fee—not refundable (per semester)**
Assessed to all students except those enrolled exclusively in Continuing Education courses. This fee must also be waived for senior citizens, for employees under the fringe benefit plan and for Intern Participation holders. Students on training session under the Cooperative Education Program will be required to pay the Student Health Fee. 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 .......... $18.00
- Summer Semester ................. $12.00

**H. Intern Participation Holder**

|              | $3.76/hr. |

**I. I.D. Card replacement**

|              | $5.00 |

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CHECKS

The University cashier will accept personal checks for accounts due to the University. Each student is urged to make his own financial arrangements through his choice of commercial banks. For a nominal fee the University Bookstore will cash personal checks not exceeding $35.00. The University is required to collect a $5.00 Service Fee for any check, draft or order, which may be returned by the bank for any reason and future check cashing privileges will be denied.

REFUND OF FEES

A refund of fees, or reduction in fee liability for those students who have an authorized deferment, will be made under certain conditions upon presentation at the Student Accounts Office of 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.

A. A FULL REFUND will be made when:
   1. Withdrawal is made before the end of the add/drop period,
   2. The course is cancelled by the University, or
   3. A student is denied admission to an offered course by the University for whatever reason.

B. A partial refund (25% of the total fees paid less building and capital improvement fees) will be made when:
   1. 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).

C. Refunds up to 100% of tuition and registration fees will be made upon withdrawal from one or more courses when:
   1. Exceptional circumstances, as determined by the University, exist. Exceptional circumstances include, but are not limited to, sickness, death, involuntary call to military service or administrative errors created by the University.

TUITION FEE WAIVERS FOR STATE OF FLORIDA EMPLOYEES

State employees, faculty, and staff who utilize a tuition fee waiver for course work without payment of the registration fees must register on the day and time provided by the Registrar. Employees who register prior to the prescribed time and date will have an invalid fee waiver, and will be liable for all applicable fees on courses enrolled. It is the responsibility of the employee to register only on a space available basis, and this is only during the prescribed time as indicated above by the Registrar. In addition, the tuition fee waiver cannot be used for courses which require increased costs (as it does for such courses as Thesis, Dissertation, Directed Individual Study, etc).

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. It is the responsibility of the senior citizen, however to register only on a space available basis; and this is only during the last hour of the Add/Drop registration period prescribed by the Registrar. No academic credit shall be awarded, and the waiver cannot be used for courses which require increased costs. This would include, but not be limited to, Thesis, Dissertation, and Directed Individual Study.

APPEALS

Students who have been denied fee deferment, refund, waiver, etc. may make their appeal to the "Committee for Resolving Fee Payment Questions", by initiating a student petition (Form 41-561) which can be obtained from the Office of Undergraduate Studies, Student Affairs, University Cashier or Student Accounts Section of Finance & Accounting. The students must then submit their petition to Student Accounts, Room 112, Administration Building, and may appear (not mandatory) before the committee which meets once each week, time, date and place are subject to change.

PAST DUE ACCOUNTS

Any, and all, financial obligations to the University must be met by the student if
"good standing" is to be maintained. Failure to meet such 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 by the University Controller. All costs of collection, including attorney's fees shall be borne by the debtor.

INSTALLMENT FEE PAYMENT PLAN

The University has authority to accept student's registration and tuition fees on an installment basis. The plan requires the student to pay 50% of the total fee liability by the end of the Add-Drop period, and remaining fees no later than the beginning of the ninth week of classes. To be eligible however, the student's fee liability must be in excess of $100, net of any financial aid awards.

Loan forms are available in the office of Student Accounts, Room 112, Administration Building. There will be a service charge of $5.00 to cover handling costs.
ACADEMIC PROGRAMS

DEGREES OFFERED

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 Basic 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 completed the College Level Academic Skills Test.

The Associate of Arts degree is awarded only upon application. The application form may be obtained in the Registrar's Office and should be completed by the end of the fifth week in the semester in which the Associate of Arts degree is to be awarded.

An Associate of Arts degree will not be awarded after completion of the baccalaureate degree.

UNDERGRADUATE

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 major or areas of specialization as indicated:

College of Arts and Sciences

Bachelor of Arts (B.A.)
Major: Allied Legal Services, Anthropology, Art, Communication, Criminal Justice, Economics, English, Film (RTV), Foreign Languages (General), French, History, Humanities, Journalism, Music, Music Education, Philosophy, Political Science, Psychology, Public Administration, Radio-Television, Sociology, Spanish, Speech, Theatre

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

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

Bachelor of Social Work (B.S.W)
Major: Social Work

College of Business Administration

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

College of Education

Bachelor of Arts (B.A.)
Major: Elementary Education, Exceptional Child
Major: K-12—Art Education, Educational Media Specialist, Physical Education,
Major: Secondary Education—Business Education (comprehensive), English Language Arts, Foreign Language, Mathematics, Science Education, Social Science, Speech, Technical/Vocational

College of Engineering

Bachelor of Science in Engineering (B.S.E.)

Bachelor of Engineering Technology (B.E.T.)
College of Health
Bachelor of Arts (B.A.)
Major: Communicative Disorders
Bachelor of Science (B.S.)
Major: Medical Record Administration, Medical Technology, Radiologic Sciences, Respiratory Therapy
Bachelor of Science in Nursing (BSN)
Major: Nursing

Office of Undergraduate Studies
Bachelor of Arts (B.A.)
Major: Liberal Studies
Bachelor of Science (B.S.)
Major: Liberal Studies

GRADUATE
The University offers graduate degrees in the following colleges: (See Graduate Studies Catalog.)

College of Arts and Sciences
Doctor of Philosophy in Computer Science (Ph.D.)
Master of Arts (M.A.)
Applied Sociology
Communication
English
History
Political Science
Master of Public Administration (M.P.A.)
Master of Science (M.S.)
Biological Science
Clinical Psychology
Computer Science
Industrial Chemistry
Industrial Psychology
Mathematical Science
Microbiology
Statistical Computing

College of Business Administration
Master of Arts (M.A.)
Applied Economics
Master of Business Administration (M.B.A.)
Master of Science (M.S.)
Accountancy
Management

College of Education
Master of Arts (M.A.)
Master of Education (M.Ed.)
Administration and Supervision
Elementary Education including specializations in Exceptional Child, Reading Specialist
Guidance
School Psychology (M.S.)
K-12—Education Media Specialist, Music Education, Physical Education, Reading Specialist, Visual Arts Education
Secondary Education—Business Education, English Language Arts,
Foreign Languages, Mathematics, Science, Social Sciences,
Speech, Vocational Education
Educational Specialist (Ed.S.)
Doctor of Education (Ed.D.)

College of Engineering
Master of Science (M.S.)
Engineering
Master of Science in Engineering (M.S.E.)
Civil Engineering
Electrical Engineering
Engineering Mathematics and Computer Systems
Environmental Engineering
Industrial Engineering
Mechanical Engineering
Master of Science in Environmental Systems Management (M.S.E.S.M.)
Environmental Systems Management
Doctor of Philosophy in Engineering (Ph.D.)
Electrical Engineering
Engineering Mathematics and Computer Systems
Environmental Engineering
Industrial Engineering
Mechanical Engineering

College of Health
Master of Arts (M.A.)
Communicative Disorders
Master of Sciences (M.S.)
Health Sciences
Master of Public Health (M.P.H.)
Public Health

1The College of Education through cooperative programs offers work leading to Educational Specialist and Doctor of Education degrees from Florida Atlantic University and the University of Florida. Information about applications, admission and regulations are available from the College of Education.
# COLLEGE OF ARTS AND SCIENCES

## UNDERGRADUATE PROGRAMS

<table>
<thead>
<tr>
<th>Program</th>
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</thead>
<tbody>
<tr>
<td>Allied Legal Services (BA)</td>
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<tr>
<td>Anthropology (BA)</td>
</tr>
<tr>
<td>Art (BA)</td>
</tr>
<tr>
<td>Art (BFA)</td>
</tr>
<tr>
<td>Biological Science</td>
</tr>
<tr>
<td>Biology (BS)</td>
</tr>
<tr>
<td>Botany (BS)</td>
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<tr>
<td>Limnology (BS)</td>
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<tr>
<td>Microbiology (BS)</td>
</tr>
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<td>Zoology (BS)</td>
</tr>
<tr>
<td>Chemistry (BS)</td>
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<tr>
<td>Communication (BA)</td>
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<td>Computer Science (BS)</td>
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<td>Criminal Justice (BA)</td>
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<td>Economics (BA)</td>
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<tr>
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<td>Film (BA)</td>
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<td>Foreign Language Combination (BA)</td>
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<td>Forensic Science (BS)</td>
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<td>French (BA)</td>
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<td>Radio-Television (BA)</td>
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<td>Statistics (BS)</td>
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## GRADUATE PROGRAMS*

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<tbody>
<tr>
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<td>Biological Science (MS)</td>
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<tr>
<td>Chemistry, Industrial (MS)</td>
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<td>Communication (MA)</td>
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<td>Computer Science (MS)</td>
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<td>English (MA)</td>
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<td>Mathematical Science (MS)</td>
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<td>Microbiology (MS)</td>
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<td>Political Science (MA)</td>
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<td>Psychology, Clinical (MS)</td>
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<td>Psychology, Industrial (MS)</td>
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<tr>
<td>Public Administration (MPA)</td>
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<tr>
<td>Sociology, Applied (MA)</td>
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<tr>
<td>Statistical Computing (MS)</td>
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</tbody>
</table>

## OTHER PROGRAMS

<table>
<thead>
<tr>
<th>Program</th>
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<tbody>
<tr>
<td>Predental</td>
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<tr>
<td>Premedical</td>
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<tr>
<td>Preoptometry</td>
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<td>Prelaw</td>
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<td>Prepharmacy</td>
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<tr>
<td>Prepodiatry</td>
</tr>
<tr>
<td>Preveterinary</td>
</tr>
</tbody>
</table>

*See the Graduate Studies catalog for detailed descriptions of these programs.
The College of Arts and Sciences, the largest academic unit in the University, includes the following departments: Art, Biological Sciences, Chemistry, Communication, Computer Science, English, Foreign Language, History, Humanities, Philosophy and Religion, Mathematics, Music, Physics, Political Science, Psychology, Public Service Administration, Social Work, 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.

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
Preprofessional Coordinator: Dr. O.M. Berringer, PH 303, Phone 275-2292

The College of Arts and Sciences offers preprofessional programs in the health disciplines leading to further study in schools of dentistry, medicine, optometry, pharmacy, podiatry and veterinary medicine. They are administered through the Pre-Health Professions Advisement Office, located in the Dean’s Office. Other programs associated with the health-related professions (i.e., the allied health sciences) are administered through the College of Health.

Prelaw

There is no preferred pattern 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. 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.

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; etc.
Office of Academic Support and Information Services

Director: Dr. David Dees, HFA 208, Phone 275-2492

The Office of Academic Support and Information Services (OASIS) assists students in the College of Arts and Sciences in matters concerning College and University requirements and procedures. Petitions for the substitution of courses for requirements in the General Education Program and evaluation of CLEP and TSD credit are processed through this office for all students in the college. Questions concerning University and College academic policies affecting Arts and Sciences majors should be directed to the OASIS staff in HFA 208 or by calling 275-2492.

Proficiency Requirements

All students, both freshmen and transfer students, who enroll in the College of Arts and Sciences with a major in the Departments of English, Humanities, Philosophy and Religion, Music or Theatre are required to pass an English writing proficiency examination in order to graduate. This examination is given every semester and should be completed by transfer students before the last 30 semester hours of course work are begun and by four-year students during their sophomore year. Students must register with the English Department by the end of the second week of classes during the semester in which they plan to take the examination. Details of the nature of the test, time of testing, return of corrected tests, etc., may be obtained in the English Department.

INTERDISCIPLINARY MINOR PROGRAMS

Latin American Area Studies

The minor in Latin American Area Studies offers a broad interdisciplinary approach to the understanding of Latin America and its peoples. The minor requires the completion of 18 semester hours selected from courses listed in the General Latin American Foundation Areas. In addition, students must complete the introductory language sequence (or its equivalent) in French or Spanish. For information contact Professor Jose B. Fernandez, FA 551, phone 275-2224.

Russian Area Studies

An interdisciplinary minor in Russian Area Studies with a focus on the Soviet Union is offered through the cooperation of the Departments of Foreign Languages, History, Philosophy, Political Science and Sociology/Anthropology. For further information contact any of the above mentioned departments.

Afro-American Studies

The College of Arts and Sciences offers a minor in Afro-American Studies consisting of a minimum of 16 semester hours. Required courses: AMH 3570, LIN 4612, LIT 4354, SYD 3720. The student should be advised by the program advisor prior to registration.

Natural Science Majors Requirement

In addition to meeting all University requirements, the College requires that each degree program in the Departments of Biological Science, 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, each student 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 his major with a minimum of one course under a semester system (or two courses under a quarter system) in each discipline. At least one course in each discipline must contain a laboratory component. Some departments have identified a specific group of courses from which its majors may select in order to satisfy this requirement. In addition, some departments may have imposed additional criteria which must be met in order for their majors to satisfy this requirement. It is the student's responsibility to insure that both Departmental and College criteria have been met.

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

Program Planning

Although suggested curricula are available in most areas, each student will plan his program in consultation with a faculty advisor appointed by the chairman of the major department or by the Dean of the College of Arts and Sciences.
Canadian Studies Center
At the time of writing a multi-disciplinary Canadian Studies certificate is in the planning stage. Students interested in Canadian Studies are advised to consult Dr. Henry Kennedy at the Canadian Studies Centre, FA 421, Phone 275-2079.

German Studies Center
The development of a multidisciplinary German Studies Center is currently underway. For more information contact Dr. Joan Johnson-Freese, Phone 275-2088 or Finley Taylor, Foreign Languages Department, Phone 275-2472.

Foreign Study Centers
The State University System operates study centers in London, England and Florence, Italy during the fall and spring semesters. Students with 30 or more semester hours of credit and GPA's 2.0 or above in all State Universities are eligible to apply for one or both semesters. Faculty at the centers are drawn from all 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.

Classes at the Florence Center emphasize art history, Italian, 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 contact Dr. Thomas Greenhaw in the Department of History (London Program) phone 275-2224 or Dr. Robert Flick in the Department of Humanities, Philosophy and Religion (Florence Program), phone 275-2273.
DEPARTMENT OF ART
Chairman: C. Wellman, FA 523, Phone 275-2676
Faculty: Chavda, Eyfells, Gaudnek, Lotz, Rivers, Skoglund

The curriculum in Art provides thorough grounding in visual expression and an opportunity for specialized professional preparation in art history and in the studio areas of drawing, painting, printmaking, photography, graphic design, sculpture, and ceramics, and combination specializations in drawing-printmaking, sculpture-ceramics and photography-printmaking.

The Department of Art offers programs leading toward both the Bachelor of Arts (B.A.) degree and the Bachelor of Fine Arts (B.F.A.) degree. Visual Arts Forum Requirement: All majors in the Art Department are required to attend a minimum of 75% of the Visual Arts Forum events which are offered during the period of the student’s matriculation in the department. Attendance is taken at each of these events.

The University reserves the right to hold for exhibition purposes work done in classes.

Portfolio Requirements For Studio Majors:
A selective portfolio of work representing the student’s studio accomplishments in design and drawing will be required for faculty review at the end of the sophomore year or at the student’s completion of 12 semester (studio) hours.

The evaluation of this portfolio will decide if the student should advance further into the B.A. program.

MINOR
The Department of Art offers a minor consisting of a minimum of 24 semester hours. Required courses are: ARH 2050, 2051, ART 2201, 2202, 2300, and nine semester hours of Art Specialization at the 3000-4000 level.

BACHELOR OF ARTS: ART

Degree Requirements
1. University graduation requirements
(See pages 44-48)
2. Special college and/or department requirements
(See page 66)
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
A. Required Courses
   ARH 2050, 2051, ART 2201C, 2202C, Visual Arts Forum (attendance required)
   History of Art I, II
   Design Fundamentals I, II
   6 hours
   6 hours
   0 hours

B. Restricted Electives
1. Any one:
   ART 4634C, Special Problems in Film Design (3)
   PHI 3800, Aesthetics (3)
   THE 4072, Principles of Motion Picture (3)
   3-4 hours
2. Studio Courses
   Any two 3000 or 4000 level studio courses
   6 hours

C. Specialization
3000 and 4000 level courses in Art History
15 hours

D. Language and Comprehensive Examination
   A satisfactory grade in a comprehensive art history examination and two years of a foreign language at the college level.

Total Semester Hours in Art Courses or approved cognates 36-37
Total Semester Hours Required 120
69
II. Art (Studio Areas)

Studio Option

A. 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>
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<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 (Any Upper Division Course)</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

B. Area Specialization

(12) Upper Division Courses from:
- Drawing, Painting, Printmaking, Photography, Graphic Design, Sculpture, Ceramics.

C. Restricted Electives

(12) Upper Division Hours (minimum of 3 areas represented, all courses must be outside of the area of specialization)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Drawing</td>
<td>3330</td>
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<tr>
<td>Painting</td>
<td>3510</td>
</tr>
<tr>
<td>Printmaking</td>
<td>3400</td>
</tr>
<tr>
<td>Photography</td>
<td>3600</td>
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<tr>
<td>Graphic Design</td>
<td>4232</td>
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<tr>
<td>Sculpture</td>
<td>3701</td>
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<tr>
<td>Ceramics</td>
<td>3110</td>
</tr>
<tr>
<td>Fibers &amp; Fabrics</td>
<td>4130</td>
</tr>
<tr>
<td>Film Design</td>
<td>4634</td>
</tr>
<tr>
<td>Any U.D. ARH</td>
<td></td>
</tr>
<tr>
<td>Special Topics</td>
<td></td>
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</tbody>
</table>

D. Portfolio Requirement

For the B.A. degree a selective portfolio of work, representing the student's accomplishment in the major Studio Specialization and acceptable to the Studio Faculty, will be submitted during the final Senior semester.

Total Semester Hours in Art Courses or approved cognates: 40-43

Total Semester Hours Required: 120 hours

Areas of Studio Specialization: Ceramics, Drawing, Graphic Design, Painting, Photography, Printmaking, Sculpture.

BACHELOR OF FINE ARTS: ART

The B.F.A. degree is recommended for those students who intend to pursue work in the Arts at the graduate level. The procedure for admission to the B.F.A. degree program requires a formal application and portfolio submission by the student to the Department Chairman and the Studio Faculty no earlier than the first semester of the student's senior year (upon completion of 90 semester hours). After successfully petitioning for admission to the B.F.A. degree program, the student must complete no less than 30 semester hours at UCF, of which at least 12 semester hours must be in Art courses. A senior exhibition and/or portfolio, acceptable to the Art Faculty, is required for graduation.

Degree Requirements

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See page 66)

3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ARH 2050, 2051</td>
<td>History of Art I, II</td>
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<tr>
<td>ART 2201C, 2202C</td>
<td>Design Fundamentals I, II</td>
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<tr>
<td>ART 2300C, 2301C</td>
<td>Drawing Fundamentals I, II</td>
<td>6</td>
</tr>
<tr>
<td>ARH (Any Two Upper Division Courses)</td>
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<td>6</td>
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</tbody>
</table>

Area Specialization (15-21 semester hours) upper division courses from any one of the following: Drawing, Painting, Printmaking, Photography, Graphic Design, Sculpture (Fibers combined with Sculpture or Ceramics).

Combination specializations, involving any two of the above listed media, require 9 or 12 semester hours of upper division work in each half of the combination: a total of 21 semester hours is required for combination specializations.
4. Restricted Electives
(15 semester hours) upper division courses

Drawing 3330 (3), 3331 (3) Sculpture 3801 (3), 4703 (3)
Painting 3510 (3), 4530 (3) Ceramics 3110 (3), 4111 (3)
Printmaking 3400 (3), 4402 (3) Fibers & Fabrics 4130 (3),
Photography 3600 (3), 4604 (3) Film Design 4634 (4)
Graphic Design 4232 (3), 3280 (3) Any U.D. ARH --- (3)
Special Topics --- (3)

Minimum of 3 areas represented, all courses outside of the specialization.

5. Electives

Total Semester Hours in Art Courses or approved cognates 61-67 hours
Total Semester Hours Required 120 hours


DEPARTMENT OF BIOLOGICAL SCIENCES

Chairman: F. Snelson, BL 211, Phone 275-2141
Faculty: Berringer, Charba, Ehrhart, Ellis, Gennaro, Koevenig, Kuhn, Laird, Miller, Osborne, Stout, Sweet, Taylor, Vickers, Washington, White, Whittier, Wodzinski

The Department of Biological Sciences offers a Bachelor of Science in Biological Science with options in biology, botany, limnology, microbiology, and zoology, a minor in Biology, as well as the Master of Science in Biological Science and Microbiology. In an age when new discoveries are reported daily on both celestial and molecular levels, the study of living organisms has gained new importance among the sciences. Students in the life sciences find themselves in demand in teaching and many phases of research. The Core Curriculum required of all Biological Sciences majors provides a background in the chemical and mathematical sciences in addition to Biology, thus allowing career opportunities for graduates in areas outside their major. In addition, an increasing number of graduates are furthering their education in professional or graduate schools. Through the judicious selection of electives in consultation with a faculty advisor, a subspecialty, such as physiology, may be emphasized in one or more of the options outlined below.

MINOR

The Department of Biological Sciences offers a minor in Biology consisting of a minimum of 28 hours.

Required courses (18 hours): BOT 2010C, BSC 2010C, MCB 3013C, PCB 3063, PCB 3063L, and ZOO 2010C.

Restricted Electives (10 hours minimum): At least one course must be selected from each group:

Group I—Ecology: MCB 4603C or PCB 3043 and PCB 3043L.
Group II—Physiology: BOT 4503C, MCB 4404C, PCB 3023, or PCB 4723.
Group III—Electives: Any 3000 level or above course(s) designed for majors in Biological Sciences, exclusive of those listed in Groups I and II.

To be eligible for a minor in biology, a student must have a GPA of at least 2.0 in all biological science 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.

BACHELOR OF SCIENCE: BIOLOGICAL SCIENCE

Degree Requirements
1. University graduation requirements
(See pages 44-48)
2. Special college and/or department requirements
(See pages 66 and 71)

To be eligible for a major in any of the biological sciences, a student must have a GPA of at least 2.0 in all biological science courses subject to the following constraints: A. No CLEP or TSD credits may be used; B. No D grades from other institu-
tions will be accepted. In addition, a student may apply no more than 4 hours of independent study, directed research, or similar types of credit toward requirements in the major.

3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BOT 2010C</td>
<td>General Botany</td>
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<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
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<tr>
<td>CHM 2045, 2046</td>
<td>Chemistry Fundamentals I, II</td>
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<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
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<td>CHM 3210, 3211</td>
<td>Organic Chemistry I, II</td>
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<td>CHM 3211L</td>
<td>Organic Laboratory Techniques</td>
<td>2</td>
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<td>MCB 3013C</td>
<td>General Microbiology</td>
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<tr>
<td>MCB 4404C</td>
<td>Microbial Metabolism</td>
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<tr>
<td>PCB 3023</td>
<td>Cell Physiology</td>
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<tr>
<td>PCB 3043</td>
<td>Principles of Ecology/with Lab</td>
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<tr>
<td>PCB 3063</td>
<td>Genetics/with Lab</td>
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<tr>
<td>PHY 2050C, 2051C</td>
<td>College Physics I and II</td>
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<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
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<tr>
<td>ZOO 2010C</td>
<td>General Zoology</td>
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</tbody>
</table>

4. Restricted Electives

(See specialization requirement listed below.)

MATHEMATICS

A minimum of 6 semester hours in mathematics selected in consultation with the student's advisor or the successful completion of a course in college level calculus. Courses of a difficulty level less than college algebra (MAC 1104) may not be used to satisfy this requirement. 6 hours.

5. Electives

All restricted electives in the respective Areas of Specialization must be approved by the Student's faculty advisor.

Total Semester Hours Required 128
AREAS OF SPECIALIZATION
(Students desiring to specialize in the areas identified below shall include the following courses in completing degree requirements.)

1. Biology

Students must have at least one course with laboratory in plant science/botany and at least one course with laboratory in animal science.

Biology, Botany, Microbiology, or Zoology, to be selected with student’s advisor from courses number 3000 or above. Up to 6 hours of formal course work in chemistry, 3000-level or above, may also be applied.

Restricted

Electives

2. Botany

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT 4223C</td>
<td>Plant Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BOT 4303C</td>
<td>Plant Kingdom</td>
<td>5</td>
</tr>
<tr>
<td>BOT 4503C</td>
<td>Plant Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BOT 4713C</td>
<td>Plant Taxonomy</td>
<td>5</td>
</tr>
<tr>
<td>Restricted Electives</td>
<td>Biology, Botany, Chemistry, Microbiology, or Zoology, to be selected with student’s advisor.</td>
<td>6</td>
</tr>
</tbody>
</table>

3. Limnology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>COP 1110</td>
<td>Computer Programming</td>
<td>3</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 4880C</td>
<td>Fisheries Management</td>
<td>4</td>
</tr>
<tr>
<td>Restricted Electives</td>
<td>Biology, Botany, Chemistry, Computer Science, Microbiology, Physics, Statistics or Zoology courses numbered 3000 or above approved by the student’s advisor.</td>
<td>12</td>
</tr>
</tbody>
</table>

4. Microbiology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 4053, 4054</td>
<td>Biochemistry I, II</td>
<td>6</td>
</tr>
<tr>
<td>CHM 3121C</td>
<td>Analytical Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>MCB 3203C</td>
<td>Pathogenic Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>MCB 4114C</td>
<td>Microbial Systematics &amp; Diagnosis</td>
<td>4</td>
</tr>
<tr>
<td>MCB 4404C</td>
<td>Microbial Metabolism</td>
<td>4</td>
</tr>
<tr>
<td>MCB 4603C</td>
<td>Environmental Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>PCB 3223</td>
<td>Immunology &amp; Serology</td>
<td>4</td>
</tr>
</tbody>
</table>

5. Zoology

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCB 4723C</td>
<td>Animal Physiology</td>
<td>4</td>
</tr>
<tr>
<td>ZOO 3303C</td>
<td>Vertebrate Zoology</td>
<td>4</td>
</tr>
<tr>
<td>ZOO 3713C</td>
<td>Comparative Vertebrate Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>ZOO 4203C</td>
<td>Invertebrate Zoology</td>
<td>4</td>
</tr>
<tr>
<td>Restricted Electives</td>
<td>ZOO courses numbered 3000 or above approved by the student’s advisor.</td>
<td>8</td>
</tr>
</tbody>
</table>

DEPARTMENT OF CHEMISTRY

Chairman: G. Mattson, CH 117, Phone 275-2246
Faculty: Baker, Clausen, Cunningham, Gupton, Hampton, Hertel, Juge, Kujawa (Geology), Madsen, Mattson, 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,
MINOR

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

Required courses (21 semester hours): CHM 2045, 2046, 2046L, 3210, 3211, 3211L, and 3121C.

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

Group I: CHM 3212L, 4130C; BCH 4103L, CHS 3531
Group II: BCH 4053, 4054, CHM 3410, 3411, 4220, 4221, CHS 4110C, 4200

BACHELOR OF SCIENCE: CHEMISTRY

Degree Requirements

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See pages 66 and 74)

3. Required Courses

   CHM 2045, 2046 Chemistry Fundamentals I, II 7 hours
   CHM 2046L Chemistry Fundamentals Laboratory 1 hour
   CHM 3210, 3211 Organic Chemistry I, II 6 hours
   CHM 3211L, 3212L Organic Laboratory Techniques I, II 4 hours
   CHM 3121C Analytical Chemistry 5 hours
   CHM 3410, 3411 Physical Chemistry I, II 8 hours
   CHM 3411L Physical Chemistry Laboratory I 2 hours
   CHM 4610 Inorganic Chemistry 3 hours
   CHM 4130C Advanced Analytical Laboratory Technique 4 hours
   CHM 4912 Undergraduate Research 4 hours
   CHM 4932 Chemistry Seminar 1 hour
   ENC 3241 Science Report Writing 3 hours
   MAC 3311,3312,3313 Calculus with Analytic Geometry I,II,III 12 hours
   PHY 3048, 3048L, 3049, 3049L Physics for Engineers & Scientists 8 hours
   STA 3023 Statistical Methods I 3 hours

4. Restricted Electives

   a. Biological Sciences
      BSC 2010C General Biology 7 hours
      Approved electives restricted to those biological science courses not listed as designed for non-majors.

   b. Minimum of 3 hours
      COP 1110 Computer Programming 3 hours
      COP 2510 Programming I 3 hours
      COP 3215 Programming and Numerical Methods 3 hours

   c. Minimum of 3 hours
      PHY 3752C Physics of Scientific Instruments 4 hours
      CDA 4012 Computer Interfacing for Scientists 3 hours
      ETE 3663C Microprocessor Electronics 3 hours
      EEL 3341C Introduction to Digital Circuits 3 hours
      EEL 3342C Intro to Digital Circuits and Systems 4 hours

5. Electives

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

   Total Semester Hours Required 128

FORENSIC SCIENCE PROGRAM

Director: W.W. McGee, CH 221, Phone 275-2788

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. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See page 66)
3. Required Courses
   - BSC 2010C
   - CHM 2045, 2046
   - CHM 2046L
   - CHM 3210, 3211
   - CHM 3211L
   - CHM 3121C
   - CHS 3501
   - CHS 3505
   - CHS 3531
   - CHS 4591
   - COP 1110
   - ENC 3241
   - CHM 3410
   - CHM 4130
   - MAC 3253, 3254
   - PHY 2050C, 2051C
   - STA 3023

   - General Biology 4 hours
   - Chemistry Fundamentals I, II 7 hours
   - Chemistry Fundamentals Laboratory 1 hour
   - Organic Chemistry I, II 6 hours
   - Organic Laboratory Techniques I 2 hours
   - Analytical Chemistry 5 hours
   - Introduction to Forensic Science 3 hours
   - Forensic Microscopy 3 hours
   - Forensic Analysis of Controlled Substances 3 hours
   - Forensic Science Internship 6 hours
   - Computer Programming 3 hours
   - Science Report Writing 3 hours
   - Physical Chemistry 4 hours
   - Advanced Analytical Chemistry 4 hours
   - Applied Calculus I, II 6 hours
   - College Physics I, II 8 hours
   - Statistical Methods I 3 hours

4. Restricted Electives
   The intent of the restricted electives is to provide the major with an opportunity to select in consultation with his/her advisor, a minimum of 13 hours of coursework which will complement the student’s specialized program of study in the major field. These courses will include BOT 3010C, General Botany or MCB 3013C, General Microbiology, with the remainder normally selected from upper division courses on science or forensic science. Exceptions to these stipulations must be approved by the student’s advisor.

5. Electives
   - Total Semester Hours Required 120 hours

DEPARTMENT OF COMMUNICATION

Chairman: R. Buchanan, FA 534, Phone 275-2681
Faculty: Arnold, Butler, Davis, Decker-Amos, Fedler, Grasty, Hall, Hoglin, Hosokawa, Johnson, Kissel, Meeske, Morgan, O’Keefe, Pryor, Smith, Tanzl, Taylor, Wycoff

The Department of Communication offers Bachelor Degree programs in five specific areas:
1. Bachelor of Arts: Communication
2. Bachelor of Arts: Film
3. Bachelor of Arts: Journalism
4. Bachelor of Arts: Radio-Television
5. Bachelor of Arts: Speech

Two of the above degree programs have designated areas of specialization, allowing students the option of selecting the specialization track which most interests them. The two degree programs are:
1. Bachelor of Arts: Communication
   A. General Communication track
   B. Organizational Communication track
2. Bachelor of Arts: Journalism
   A. News-Editorial track
   B. Advertising-Public Relations track

An internship program is available to qualified students. Students should consult
with their advisors for specific details.

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

**Communication Proficiency:** Students will be required to attain a satisfactory score on a departmental English proficiency test encompassing grammar, punctuation, spelling and word usage. Additional information is available from faculty advisors.

**MINOR**

The Department of Communication offers the following minors consisting of a minimum of 16 semester hours in each minor.

1. Film
   Required Courses: FIL 3200 (4), FIL 4201 (4), FIL 3300 (4), Either RTV 3000 (3) or JOU 3600 (4).

2. General Communication
   COM 3311 (3) and 15 semester hours selected from the following courses:
   SPC 3425 (3), SPC 4440 (3), SPC 3445 (3), SPC 4540 (3), COM 3110 (3), COM 3120 (3).

3. Organizational Communication
   COM 3110 (3), SPC 3445 (3), SPC 3301 (3), SPC 3425 (3), SPC 4330 (3), COM 3120 (3).

4. Journalism: Advertising/Public Relations Sequence
   PUR 4000 (3), ADV 4000 (3), ADV 4101 (4), ADV 4003 (4), ADV/PUR practicum 4941 (3) or PUR 4800 (3).

5. Journalism: News Editorial Sequence
   JOU 3100 (4), JOU 3200 (4), JOU 3200L (0), MMC 4200 (3), MMC 4602 (4) or JOU 3003 (3), plus JOU elective (writing course) (3 hrs.).

6. Radio-TV
   RTV 3000 (3), RTV 4700 (3); Choose one—FIL 3200 (4), RTV 3210 (4); Choose one—RTV 3300 (5), RTV 3501 (4).

7. Speech Communication
   COM 3311 (3) and 15 semester hours selected from the following courses:
   ORI 3001 (3), SPC 3511 (3), SPC 3601 (3), SPC 3250 (3), SPC 3301 (3), SPC 4330 (3), SPC 3425 (3).

1 Prerequisite of Departmental English proficiency test required.
BACHELOR OF ARTS: COMMUNICATION

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 75)
3. Required Courses
   COM 3311 Communication as a Behavioral Science 3 hours
   SPC 4330 Nonverbal Communication 3 hours
   SPC 4540 Attitudes and Communication 3 hours
   SPC 3425 Group Interaction 3 hours
4. Restricted Electives
   (See Area of Specialization)
5. Electives
   (See Area of Specialization)

AREAS OF SPECIALIZATION
1. General Communication Track Requirements
   SPC 3301 Interpersonal Communication 3 hours
   SPC 3542 Persuasion 3 hours
   MMC 4200 Communication Law 3 hours
   Select one course from history:
   RTV 3000 Foundations of Broadcasting 3 hours
   JOU 3003 History of American Journalism 3 hours
   SPC 4633 Rhetoric of Social and Political Action 3 hours
   SPC 5200 Evolution of Communication Theory 3 hours
   Select 2 courses from motivation:
   PUR 4000 Public Relations 3 hours
   ADV 4000 Principles of Advertising 3 hours
   RTV 4402 Broadcast Criticism 3 hours
   SPC 3250 Speech and Human Relations 3 hours
   Select 2 courses from research:
   MMC 4609 Opinion and the Mass Media 4 hours
   SPC 4440 Group Dynamics 3 hours
   SPC 4350 Studies in Listening 3 hours
   COM 4912 Studies in Human Communication Research 3 hours
   COM 4463 Communication and Courtroom Advocacy 3 hours
   Students must select 9 hours of electives from Department of Communication.
2. Organizational Communication Track Requirements
   COM 3110 Business and Professional Communication 3 hours
   SPC 3445 Leadership 3 hours
   SPC 4440 Group Dynamics 3 hours
   SPC 4350 Studies in Listening 3 hours
   SPC 3301 Interpersonal Communication 3 hours
   COM 3120 Organizational Communication 3 hours
   PUR 4000 Public Relations 3 hours
   Students must select 12 hours of electives from Department of Communication.

1 Prerequisite of Departmental English proficiency test required.

BACHELOR OF ARTS: FILM

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 75)
3. Required Courses
   COM 3311 Communication as a Behavioral Science 3 hours
   RTV 3000 Foundations of Broadcasting 3 hours
   RTV 3200 Broadcast Techniques 4 hours
   THE 3251 History of Motion Picture 3 hours
   *JOU 3600 Photojournalism 4 hours
   FIL 3200 Film Production 4 hours

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4. Restricted Electives
Nine (9) hours from Communication Department
Internship credits can be applied only as general electives and not to
your major.

5. Electives

Total Semester Hours Required: 120 hours

*Prerequisite of Departmental English proficiency test required.

BACHELOR OF ARTS: JOURNALISM

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 75)
3. Required Courses
   COM 3311\(^1\)  Communication as a Behavioral Science  3 hours
   JOU 3100\(^1\)  News Reporting  4 hours
   MMC 4200  Legal Responsibilities of the Mass Media  3 hours
4. Restricted Electives
   (See Area of Specialization)
   Students must select and complete one of the areas of specialization
   listed below.
5. Electives
   (See Area of Specialization)
   Total Semester Hours Required: 120 hours

*Prerequisite of Departmental English proficiency test required.

AREAS OF SPECIALIZATION

1. Required Courses: News-Editorial Track
   JOU 3200\(^1\)  News Editing  4 hours
   JOU 3200L  News Editing Lab  0 hours
   JOU 4104\(^1\)  Public Affairs Reporting  4 hours
   MMC 4602  Contemporary Media Issues  3 hours
   JOU 3003  History of American Journalism  3 hours
   JOU 4300\(^1\)  Feature Writing  4 hours
   JOU 3600 or ADV 4000  3 hours
   JOU Internship  3 hours

   The journalism faculty strongly recommends that news-editorial majors work for
   the student newspaper. In addition, all news-editorial majors are required to obtain
   an off-campus internship with a commercial weekly or daily newspaper. Because they
   will need the skills taught in those classes during any internship, students should
   try to complete News Reporting, Public Affairs Reporting and Feature Writing before
   accepting an internship.

   The faculty also recommends that news-editorial majors select a minor outside the
   Department of Communication. Recommended minors include: Political Science,
   History, English, Economics, Sociology, Public Service Administration, or Business
   Administration, for example.

2. Required Courses: Advertising/Public Relations Track
   PUR 4000  Principles of Public Relations  3 hours
   ADV 4000  Principles of Advertising  3 hours
   ADV 4003  Ad Layout and Prep.  4 hours
   ADV 4101  Ad Copy and Campaigns  4 hours
   ADV 4103  Radio-TV Advertising  3 hours
   COM 3110  Business & Prof. Communication  3 hours
   VIC 3001  Photo Communication  3 hours
   ADV/PUR  Practicum (4941)  3-6 hours
   or
   PUR 4800  Public Relations Campaigns  3 hours
Recommended: Students in the ADV/PUR track may elect to do a second different internship for an additional 3 elective hours. Check with your advisor before registering for an internship.

1Prerequisite of Departmental English proficiency test required.

BACHELOR OF ARTS: RADIO-TELEVISION

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 75)
3. Required Courses
   - COM 3311 Communication as a Behavioral Science 3 hours
   - RTV 3200 Broadcast Techniques 4 hours
   - RTV 3000 Foundations of Broadcasting 3 hours
   - RTV 4403 R/TV and Society 3 hours
   - RTV 4700 Broadcast Regulations 3 hours
   - RTV 4800 Broadcast Management 3 hours
   - RTV 3300 Broadcast Journalism I 4 hours
   - RTV 3501 Broadcast Continuity and Programming I 4 hours
4. Restricted Electives:
   Production—Choose one course
   - RTV 3210 Radio Production 4 hours
   - RTV 3220 Television Production 4 hours
   - FIL 3200 Film Production 4 hours
5. Electives
   Student must select nine (9) additional hours from Communication Department offerings.

Total Semester Hours Required 120 hours

Recommended: Students are encouraged to work with WUCF radio to gain practical experience. In addition, students should arrange for an internship off campus with a radio or television station.

1Prerequisite of Departmental English proficiency test required.

BACHELOR OF ARTS: SPEECH

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 75)
3. Required Courses
   - COM 3311 Communication as a Behavioral Science 3 hours
   - SPC 3301 Interpersonal Communication 3 hours
   - SPC 3542 Persuasion: Motivation 3 hours
   - SPC 3425 Group Interaction 3 hours
   - SPC 3250 Speech and Human Relations 3 hours
   - SPC 3601 Platform Speaking 4 hours
   - SPC 4330 Non-verbal 3 hours
4. Restricted Electives:
   Select 6 from research area:
   - SPC 3445 Leadership 3 hours
   - SPC 4440 Group Dynamics 3 hours
   - SPC 4540 Attitudes and Communication 3 hours
   - SPC 4350 Listening 3 hours
   - COM 4918 Research Planning 3 hours
   - COM 4463 Communication and Courtroom Advocacy 3 hours
   Select 5-6 hours from Rhetoric:
   - SPC 4633 Rhetoric of Social and Political Action 3 hours

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5. Electives
Student must select six (6) additional hours from Communication Department offerings.

Total Semester Hours Required 120 hours

*Prerequisite of Departmental Proficiency Test required.

DEPARTMENT OF COMPUTER SCIENCE
Chairman: T. Frederick, CCII 218, Phone 275-2341
Faculty: Bassiouni, Brigham, Cottrell, Driscoll, Dutton, Gerber, Gomez, Guha, Hughes, Isner, Lang, Leeson, Mukherjee, Noll, Shalhoop, Srinidhi, Workman.

Limited Access Program. Computer Science is a limited access program for which there are specific eligibility requirements. Interested individuals should consult the department for information.

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) degree in Computer Science. In addition the department offers two minors: (1) Computer Science for Business Majors, and (2) 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 specialization in selected areas. In addition, the department conducts research in programming systems/languages, information systems, computer architecture, computational methods and other areas.

The department’s minicomputer laboratory includes: a DEC VAX 11/780 with 4MB memory, 56 ports, Autodial interface to Arpanet and the Computer Science network; DEC VAX 11/730; a Hewlett Packard 7580 drafting plotter, a Benson-Varian 9211 printer/plotter, 2 AED 512 color graphics terminals and a TEKTRONIX 4052 graphics terminal with accessories. Both UNIX and VMS operating systems are available along with PASCAL, C and FORTRAN. The department’s microcomputer laboratory includes the WICAT System 150 with ADA, 4 Zilog MCZ 1/30’s, CROMEMCO System 3, and fourteen APPLE and IBM personal computers with a full range of peripherals. Specialized research equipment includes a GENRAD/FUTUREDATA universal microprocessor development system network with emulators and evaluation boards for all major 16-bit architectures, a KONTRON universal prom burner and a TEKTRONIX logic analyzer. The department’s computer facilities are supported by three full time technical staff and an electronics laboratory. In addition, there is access to UNIVAC 1100, CDC CYBER, AMDAHL V6, HARRIS 800 and IBM 4341 machines located at various nodes in the State University System network.

In addition to the degree requirements for a B.S. in Computer Science listed below, the following standards are required by the department for graduation.

1. A minimum GPA of 2.00 in all non-Computer Science courses used to satisfy the requirements for the major in Computer Science.
2. A minimum GPA of 2.50 in computer science courses used to satisfy the requirements for the major in Computer Science.
3. The above requirements apply not only to the overall program, but also to the courses taken at UCF.

MINORS
The Department of Computer Science offers the following minors consisting of a minimum of 18 semester hours in each minor.

1. Computer Science for Business Majors
   Required courses (15 hours): CAP 3001, 3002, 3006, 3007, COP 3120.
   Restricted electives (3 hours minimum): ACG 5346, CIS 4112, 4323, COP 1110, 2510, 2511, 3402C, MAC 3233, 3311, 3312, 3313, MAN 4722, 4724, MAR 3613, STA 4102, 4163.

2. Computer Science
   Required courses (12 hours): COP 2510, 2511, 3402C, 3530.
Restricted electives (minimum 6 hours): CIS 4112, CNM 4110, COP 4124, COP 3404, 4550, 4620, COT 3000.

BACHELOR OF SCIENCE: COMPUTER SCIENCE

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements (Natural Science Major Requirements. See page 66)
   - Laboratory Course in Biological Sciences 4 hours
   - ENC 3241 Science Report Writing is required 3 hours
3. Required courses: Courses used to satisfy the requirements for the major can be counted only once in the major.
   - Computer Science
     - COP 2510 Programming I 3 hours
     - COP 2511 Programming II 3 hours
     - COP 3402C Assembly Language Programming 3 hours
     - COP 3404 Computer Systems Concepts/Programming 3 hours
     - COT 3000 Introduction to Discrete Structures 3 hours
     - COP 3530 Data Structures 3 hours
   - Mathematics and Statistics
     - 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
   - Physics and Engineering
     - 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
4. Restricted Electives
   - A minimum of 28 semester hours of courses as specified in one of the five areas of specialization.
5. Electives
   - The number of hours varies with the specialization.

Total Semester Hours Required 120 hours

AREAS OF SPECIALIZATION
1. General Computer Science. Students desiring to specialize in the area must complete a minimum of 28 hours as follows:
   - Group A (All courses listed)
     - CDA 4102 Introduction to Computer Architecture 3 hours
     - CNM 4110 Numerical Calculus 3 hours
     - COP 4550 Programming Languages I 3 hours
     - COP 4620 Programming Systems 3 hours
     - COT 4001 Discrete Computational Structures 3 hours
   - Group B (A minimum of 9 hours)
     - CAP 5722 Computer Graphics Systems I 3 hours
     - CDA 4142 Microcomputer Fundamentals 3 hours
     - CIS 4112 Databases 3 hours
     - COP 4124 COBOL Environment 3 hours
     - COP 5554 Programming Languages II 3 hours
     - MAC 3313 Calculus with Analytic Geometry III 4 hours
     - MAP 3302 Differential Equations I 3 hours
     - MAS 3113 Matrices 4 hours
     - MHF 3104 Boolean Algebra 3 hours
     - STA 4163 Statistical Methods II 3 hours
     - STA 4164 Statistical Methods III 3 hours
   - Group C
     - Courses taught by the Department of Computer Science numbered 4000 or higher.
2. Programming and Systems. Students desiring to specialize in the area must complete a minimum of 28 hours, as follows:
   - Group A (All courses listed.)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA 4102</td>
<td>Introduction to Computer Architecture</td>
<td>3</td>
</tr>
<tr>
<td>CIS 4112</td>
<td>Databases</td>
<td>3</td>
</tr>
<tr>
<td>COP 4550</td>
<td>Programming Languages I</td>
<td>3</td>
</tr>
<tr>
<td>COP 4620</td>
<td>Programming Systems</td>
<td>3</td>
</tr>
<tr>
<td>COT 4001</td>
<td>Discrete Computational Structures</td>
<td>3</td>
</tr>
<tr>
<td>Group B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAP 5722</td>
<td>Computer Graphics Systems I</td>
<td>3</td>
</tr>
<tr>
<td>CDA 4142</td>
<td>Microcomputer Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>CDA 4161</td>
<td>Programming for Large Scale Digital Systems</td>
<td>3</td>
</tr>
<tr>
<td>COP 4124</td>
<td>COBOL Environment</td>
<td>3</td>
</tr>
<tr>
<td>COP 5554</td>
<td>Programming Languages II</td>
<td>3</td>
</tr>
<tr>
<td>COP 5613</td>
<td>Operating System Design Principles</td>
<td>3</td>
</tr>
<tr>
<td>MAC 3313</td>
<td>Calculus with Analytic Geometry III</td>
<td>4</td>
</tr>
<tr>
<td>MAS 3113</td>
<td>Matrices</td>
<td>4</td>
</tr>
<tr>
<td>STA 4103</td>
<td>Comp. Proc. 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>Group C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Courses taught by the Department of Computer Science numbered 4000 or higher.
3. Scientific Applications Programming. Students desiring to specialize in the area must complete a minimum of 28 hours, as follows:

<table>
<thead>
<tr>
<th>Group A (All courses listed.)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CNM 4110</td>
<td>Numerical Calculus</td>
<td>3 hours</td>
</tr>
<tr>
<td>COT 4001</td>
<td>Discrete Computational Structures</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAC 3313</td>
<td>Calculus with Analytic Geometry III</td>
<td>4 hours</td>
</tr>
<tr>
<td>MAP 3302</td>
<td>Differential Equations I</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAS 3113</td>
<td>Matrices</td>
<td>4 hours</td>
</tr>
<tr>
<td>or MAS 3103</td>
<td>Linear Algebra</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group B (A minimum of 9 hours.)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAP 5722</td>
<td>Computer Graphics Systems I</td>
<td>3 hours</td>
</tr>
<tr>
<td>CDA 4102</td>
<td>Introduction to Computer Architecture</td>
<td>3 hours</td>
</tr>
<tr>
<td>CDA 4142</td>
<td>Microcomputer Fundamentals</td>
<td>3 hours</td>
</tr>
<tr>
<td>CNM 5142</td>
<td>Computational Methods/Linear Systems</td>
<td>3 hours</td>
</tr>
<tr>
<td>COP 4550</td>
<td>Programming Languages I</td>
<td>3 hours</td>
</tr>
<tr>
<td>COP 4620</td>
<td>Programming Systems</td>
<td>3 hours</td>
</tr>
<tr>
<td>MHF 3104</td>
<td>Boolean Algebra</td>
<td>3 hours</td>
</tr>
<tr>
<td>STA 4163</td>
<td>Statistical Methods II</td>
<td>3 hours</td>
</tr>
<tr>
<td>STA 4164</td>
<td>Statistical Methods III</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

Courses taught by the Department of Computer Science numbered 4000 or higher.

4. Business Applications Programming. Students desiring to specialize in the area must complete a minimum of 28 hours, as follows:

<table>
<thead>
<tr>
<th>Group A (All courses listed.)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CIS 4112</td>
<td>Databases</td>
<td>3 hours</td>
</tr>
<tr>
<td>CIS 4323</td>
<td>Data Processing Systems Analysis &amp; Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>CIS 4324</td>
<td>Data Processing Systems Implementation</td>
<td>3 hours</td>
</tr>
<tr>
<td>COP 4124</td>
<td>COBOL Environment</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group B (A minimum of 15 hours with at least 3 courses selected from [1] and at least 2 courses from [2].)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA 4102</td>
<td>Introduction to Computer Architecture</td>
<td>3 hours</td>
</tr>
<tr>
<td>CDA 4142</td>
<td>Microcomputer Fundamentals</td>
<td>3 hours</td>
</tr>
<tr>
<td>COP 4550</td>
<td>Programming Languages I</td>
<td>3 hours</td>
</tr>
<tr>
<td>COP 4620</td>
<td>Programming Systems</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAS 3113</td>
<td>Matrices</td>
<td>4 hours</td>
</tr>
<tr>
<td>STA 4102</td>
<td>Computer Processing Statistical Data</td>
<td>3 hours</td>
</tr>
<tr>
<td>STA 4163</td>
<td>Statistical Methods II</td>
<td>3 hours</td>
</tr>
<tr>
<td>STA 4164</td>
<td>Statistical Methods III</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

[1] CDA 4143 | Microprocessor Interfacing | 3 hours |
| COP 4624 | Programming Systems | 3 hours |

[2] ACG 3023 | Principles of Accounting | 6 hours |
| BUL 3111 | Legal Environment of Business | 3 hours |
| FIN 3403 | Business Finance | 3 hours |
| MAN 3025 | Management of Organizations | 3 hours |
| MAN 3301 | Personnel Management | 3 hours |
| MAR 3023 | Marketing | 3 hours |

Courses taught by the Department of Computer Science numbered 4000 or higher.

5. Computer Architecture. Students desiring to specialize in the area must complete a minimum of 28 hours as follows:

<table>
<thead>
<tr>
<th>Group A (All courses listed.)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA 4102</td>
<td>Introduction to Computer Architecture</td>
<td>3 hours</td>
</tr>
<tr>
<td>CDA 4142</td>
<td>Microcomputer Fundamentals</td>
<td>3 hours</td>
</tr>
<tr>
<td>CDA 4143</td>
<td>Microprocessor Interfacing</td>
<td>3 hours</td>
</tr>
<tr>
<td>CDA 4144</td>
<td>Microprocessor Applications</td>
<td>3 hours</td>
</tr>
<tr>
<td>COP 4620</td>
<td>Programming Systems</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group B (A minimum of 9 hours.)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAP 5722</td>
<td>Computer Graphics Systems I</td>
<td>3 hours</td>
</tr>
<tr>
<td>CDA 5106</td>
<td>Advanced Computer Architecture I</td>
<td>3 hours</td>
</tr>
</tbody>
</table>
The Bachelor of Arts Program is designed to permit flexibility in course selection to the Economics major not planning a career in business. Although all economics courses are offered and administered by the College of Business Administration, they are available to students majoring in economics in the College of Arts and Sciences. Successful completion of this program leads to the Bachelor of Arts degree with a major in Economics.

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See page 66)
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
      ECO 3702 International Economics 3 hours
      ECO 4224 Money: Issues and Analysis 3 hours
      ECO 4303 History of Economic Thought 3 hours
      ECO 4412 Economic Statistics and Econometrics 3 hours
      ECO 4504 Economics of the Public Sector 3 hours
      ECP 3203 Contemporary Labor Economics 3 hours
      ECP 3424 The Economics of Regulated Industries 3 hours
      ECP 3433 Transportation Economics 3 hours
      ECP 4403 Business, Government & Industrial Organization 3 hours
      ECP 4603 Urban and Regional Economic Problems 3 hours
      ECP 4703 Managerial Economics 3 hours
      ECS 4003 Comparative Economic Systems 3 hours
      ECS 4013 Economic Development 3 hours
   b. Twenty-seven hours of additional courses, including the completion of a minor from one of the following areas: Computer Science, Mathematics, Statistics, or the Social and Behavioral Sciences.
5. Electives

DEPARTMENT OF ENGLISH
Chairman: S. Omans, FA 432, Phone 275-2212
Faculty: Adicks, Barnes, Donnelly, Grove, Hemschemeyer, Higgins-Young, Jaffe, Jones, Marmaduke, McCown, Omans, Price, Rushin, Schiffhorst, Sommer, Umphrey, Wyatt
The UCF English Department is responsible for the effective teaching of literature in English, including World Literature, as well as expository, creative, and technical writing. It serves not only the special needs of those students concentrating in literature, writing, and linguistics, but also the broad needs of the University by offering courses in expository writing and literature to students from other departments.

MINOR
The Department of English offers two minors, one in English and one in Technical Writing and Editing. A minor in English requires 21 semester hours with no less than 12 semester hours completed at UCF. A minor in Technical Writing requires 22 semester hours.

English Minor, required courses: 12 semester hours selected from ENL 2010, 3021, AML 2011, 3020, ENL 3273, LIT 2110, 3120. The student must complete 9 additional semester hours of English courses chosen by the student.

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

BACHELOR OF ARTS: ENGLISH

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See page 66) Writing Proficiency Exam
3. Required courses
   Foundation (for all concentrations)
   (See also Literature Concentration, Writing Concentration or Linguistic Concentration below)
   LIT 3000  Literary Analysis  3 hours
   ENL 2010  English Literature I  3 hours
   ENL 3021  English Literature II  3 hours
   AML 2011  American Literature I  3 hours
   AML 3020  American Literature II  3 hours
   Choose any one of:
   LIT 2110  World Literature I  3 hours
   LIT 3120  World Literature II  3 hours
   ENL 3273  British Literature Since 1914  3 hours
   LIN 4100  History of the English Language  3 hours
   LIN 4341  Modern English Grammar  3 hours
4. Restricted Electives
   (See Literature Concentration, Writing Concentration or Linguistic Concentration below)
5. Electives
   To be selected primarily from upper level courses with the approval of the student's advisor.
6. Foreign Language Requirement
   Proficiency in one modern foreign language must be shown in one of the following ways: passing a proficiency exam; presenting four years of high school credit in one language; completing 12 semester hours in one language; completing 6 semester hours in one language (in which case an additional 6 semester hours of upper-level English courses are required).

Total Semester Hours Required 120 hours

AREA OF SPECIALIZATION
1. Literature. The following courses are required for this specialization.
   Foundation (as above)
   CRW 2000  Principles of Creative Writing  3 hours
   ENL 4311  Chaucer  3 hours
   ENL 4330  Shakespeare  3 hours
   Choose two of:
   ENL 5347  Age of Milton  3 hours
   ENL 5225, 5236  Age of Dryden & Pope  3 hours
   LIT 5366  Romantic Revolt  3 hours

85
Experience of Realism 3 hours
Choose three of:
AML 4321 Modern American Literature 3 hours
AML 4261 Literature of the South 3 hours
LIT 382 European Fiction Since 1900 3 hours
AML 4101 American Novel 3 hours
ENL 4373 Modern British Literature 3 hours
ENL 4101 English Novel 3 hours

2. Writing. Students desiring to specialize in the area should meet the requirements:
Foundation (as above)
CRW 2000 Principles of Creative Writing 3 hours
Choose one of:
CRW 2100 Introduction to Fiction Writing 3 hours
CRW 2300 Introduction to Verse Writing 3 hours
Choose four of:
CRW 3001 Creative Writing Workshop I 3 hours
CRW 3002 Creative Writing Workshop II 3 hours
CRW 3410 Writing Scripts 3 hours
ENC 3310 Writing Skills 3 hours
ENC 3311 Expository Writing 3 hours
ENC 3341 Magazine Writing 3 hours
ENC 3210 Business Report Writing 3 hours
ENC 3241 Science Report Writing 3 hours
Choose two of:
CRW 4940 Writing Practicum I 3 hours
CRW 4941 Writing Practicum II 3 hours
CRW 4906 Independent Study 3 hours
CRW 5932 Teaching Creative Writing 3 hours

3. Linguistics
Foundation (as above)
LIN 3010 Principles of Linguistics 3 hours
LIN 4100 History of the English Language 3 hours
LIN 4341 Modern English Grammar 3 hours
Choose five of:
LIN 5137 Linguistics 3 hours
LIN 3710 Foundations of Language 3 hours
LIN 4801 Language and Meaning 3 hours
PHI 4220 Philosophy of Language 3 hours
LIN 4202 Phonetics 3 hours
LIN 5705 Psycholinguistics 3 hours
SPC 4330 Non-Verbal Behavior 3 hours
LIN 4612 Black English 3 hours

DEPARTMENT OF FOREIGN LANGUAGES

Chairman: A. Payas, FA 436, Phone 275-2466
Faculty: Barsch, Cervone, DiPierro, Fernandez, Micarelli, Taylor

Language studies in the College of Arts and Sciences provide instruction in French, German, Italian, 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. Students majoring in a foreign language must complete 30 semester hours in the chosen language at the 3000 level or above. Among these 30 semester hours students must take courses numbered 3240,3420, 3100, and 3101. Non-native French majors must also take FRE 4780 (French Phonetics and Diction) or the overseas summer course FRE 3955. (Corrective Phonetics and Vocabulary Building). Students interested in a combined major must take courses
numbered 3240, 3420, 3100, and 3101 in both languages, plus an additional 15 hours in the primary language and an additional 6 hours in the secondary language for a total of 45 semester hours. This total must include FRE 4780 (French Phonetics and Diction) or FRE 3955 (Corrective Phonetics and Vocabulary Building).

Normal placement is as follows: Four years of one high school language would place the student in the first semester of the third year; three years, in the second semester of the second year; two years in the first semester of the second year; one year in the second semester of the first year.

A native speaker must substitute a literature course for the conversation course (3240). Also, a native French speaker must substitute a French literature course for FRE 4780 (French Phonetics and Diction) or FRE 3955 (Corrective Phonetics & Vocabulary Building). In cases where native speakers have received advanced education abroad, they will not be permitted to take the composition course (3420) for the fulfillment of their major requirements but must substitute another literature course chosen with their advisors.

Language Credit by Examination will not be given in courses lower in level than those in which students are presently enrolled. Native speakers will be allowed Credit by Examination only in literature courses.

MINORS
The Department of Foreign Languages offers a minor consisting of 18 semester hours in French, German, or Spanish.

Required courses: 18 semester hours at the 3000 level or above in one language including the courses numbered 3240 and 3420.

**BACHELOR OF ARTS: FRENCH OR SPANISH**

**Degree Requirements**

1. University graduation requirements  
   (See pages 44-48)

2. Special college and/or department requirements  
   (See page 66)

3. Required courses for French or Spanish Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100</td>
<td>Elementary Language &amp; Civilization I</td>
<td>4</td>
</tr>
<tr>
<td>1101</td>
<td>Elementary Language &amp; Civilization II</td>
<td>4</td>
</tr>
<tr>
<td>2200</td>
<td>Intermediate Language &amp; Civilization I</td>
<td>4</td>
</tr>
<tr>
<td>2201</td>
<td>Intermediate Language &amp; Civilization II</td>
<td>4</td>
</tr>
<tr>
<td>3240</td>
<td>Conversation</td>
<td>3</td>
</tr>
<tr>
<td>3420</td>
<td>Composition</td>
<td>3</td>
</tr>
<tr>
<td>3100</td>
<td>Survey of Literature I</td>
<td>3</td>
</tr>
<tr>
<td>3101</td>
<td>Survey of Literature II</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3130</td>
<td>Survey of Latin-American Lit. I</td>
<td>3</td>
</tr>
<tr>
<td>3131</td>
<td>Survey of Latin-American Lit. II</td>
<td>3</td>
</tr>
</tbody>
</table>

French Majors

FRE 4780  
French Phonetics and Diction  
3 hours

or

FRE 3955  
Corrective Phonetics & Vocabulary Building  
3 hours

4. Restricted Electives

   Students are required to choose two of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIN 4906</td>
<td>Articulatory Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>LIN 4341</td>
<td>Modern English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>LIN 3010</td>
<td>Principles of Linguistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Other restricted electives  
18 hours

5. Electives

   Total Semester Hours Required  
   120 hours

**BACHELOR OF ARTS: FOREIGN LANGUAGE COMBINATION**

**Degree Requirements**

1. University graduation requirements  
   (See pages 44-48)

2. Special college and/or department requirements  
   (See pages 66 and 86)
3. Required Courses for Combined Major in Foreign Languages

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>3240</td>
<td>Conversation</td>
<td>3</td>
</tr>
<tr>
<td>3420</td>
<td>Composition</td>
<td>3</td>
</tr>
<tr>
<td>3100</td>
<td>Survey of Literature I</td>
<td>3</td>
</tr>
<tr>
<td>3101</td>
<td>Survey of Literature II</td>
<td>3</td>
</tr>
<tr>
<td>FRE 4780</td>
<td>French Phonetics and Diction</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRE 3955</td>
<td>Corrective Phonetics &amp; Vocabulary Building</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives
- 15 credits in first language
- 6 credits in second language

Students are required to choose two of the following:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIN 4906</td>
<td>Articulatory Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>LIN 4341</td>
<td>Modern English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>LIN 3010</td>
<td>Principles of Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>Other restricted electives</td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>

5. Electives
Total Semester Hours Required 120 hours

Summer Study Abroad

The Department of Foreign Languages has been offering a Summer Study program in Spain since 1972 and one in France since 1981. These programs are approved by the Board of Regents and are expected to be offered in 1984. Credit bearing courses are available in these programs in language (all levels), art, and civilization of France and Spain. These programs are open to all students of the State University System of Florida.
AREA OF SPECIALIZATION
1. Russian Area Studies. The College of Arts and Sciences offers an academic minor in Russian Area Studies. Five departments in the College have cooperated to provide this unique study program so that the student may more fully enjoy the varied offerings of the University. Upon successful completion of courses, the student will receive a certificate of participation. Interested students should consult the Department Chairman.

DEPARTMENT OF HISTORY
Chairman: J. Shofner, FA 551-B, Phone 275-2224
Faculty: Colbourn, Crepeau, Evans, Fernandez, Fetscher, Greenhaw, Kallina, Pauley, Wehr

Students majoring in history must complete a minimum of 36 hours in history courses. At least six 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 are encouraged but not required to develop a proficiency in a foreign language.

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.

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. University graduation requirements (See pages 44-48)
2. Special college and/or department requirements (See page 66)
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 hours

AREA OF SPECIALIZATION
1. Russian Area Studies. The History Department participates in the Russian Area Program. For information consult with Professor Evans.

DEPARTMENT OF HUMANITIES, PHILOSOPHY AND RELIGION
Chairman: P. Riley, FA 463, Phone 275-2273
Faculty: Flick, Jones, Kassim, Levensohn, Riser

The Department of Humanities, Philosophy and Religion offers an interdepartmental humanities major, with three choices of specialization: a philosophy major, with an optional specialization in religion; minors in humanities, philosophy or religion; a variety of courses in humanities, philosophy and religion for students in other areas who do not seek a major or minor.

The humanities major provides a rich background in the liberal arts. It is well suited for those students who see the college experience as a means toward fulfillment and preparation for living, and not merely as preparation for earning a living. Yet a liberal education, as provided by this major, is still considered excellent preparation, by many
employers, for careers in personnel management, communications, planning, administration, labor relations, public relations, writing, editing, politics, and civil service. The philosophy major, by emphasizing a critical awareness of thought, language, and experience, provides the opportunity to engage systematically in problem clarification and resolution, to develop one's ability to discover unnoticed possibilities, and thus to deepen one's understanding of philosophical problems. The religion concentration permits one to combine a minimum program in philosophy with a selection of courses in religion.

Both majors may also lead to careers in teaching. A student who completes the humanities major and the necessary education courses may be certified to teach humanities in high school. With the addition of a Master's Degree he may qualify to teach in one of the many community colleges. Since philosophy is taught primarily in college, the student who plans to teach it will need to obtain an advanced degree. He will therefore be well advised to include at least a year of foreign language in his program.

MINORS

The Department of Humanities, Philosophy and Religion offers minors consisting of 23-24 semester hours. For specific requirements, students should see an advisor in Humanities, Philosophy, or Religion.

BACHELOR OF ARTS: HUMANITIES

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 89)
   The department requires one year of a foreign language.
3. Required Courses (all specializations; choose two)
   HUM 4301 The Classical Ideal in the Arts 4 hours
   HUM 4302 The Romantic Ideal in the Arts 4 hours
   HUM 4303 The Spiritual Ideal in the Arts 4 hours
4. Restricted Electives
   (Choose one of the three specializations)
5. Electives
   May be used to obtain a second major, to complete requirements for teacher certification in Humanities in the College of Education, or to strengthen the major with cognate courses.

Total Semester Hours Required 120 hours

AREAS OF SPECIALIZATION

1. IDEAS (See advisor for specific courses)
   a. Two courses in world or English literature 6 hours
   b. Two courses in Greek, Roman or European history 6 hours
   c. Two courses in history of philosophy 6 hours
   d. One course in Judaism, Christianity or world religions 3-4 hours
   e. Any course in literature, history, philosophy or religion 3 hours
   f. One course in art history or appreciation 3 hours
   g. One course in music appreciation 3 hours
   h. One course in theatre history 3 hours

2. THE ARTS (See advisor for specific courses)
   a. One course in world literature 3 hours
   b. One course in history 3 hours
   c. One course in history of philosophy 3 hours
   d. One course in religion 3-4 hours
   e. Two courses in art 6 hours
   f. Two courses in creative writing 6 hours
   g. Two courses in music 6 hours
   h. Two courses in theatre 6 hours

3. WORLD CULTURES (See advisor for specific courses)
   a. Two courses in world or European literature 6 hours
   b. Two courses in Russian or Far Eastern history 6 hours
c. Two courses in non-Western religion 6 hours
d. One course in philosophy 3 hours
e. Two courses in non-Western art 6 hours
f. One course in music appreciation 3 hours
g. One course in drama development 3 hours

BACHELOR OF ARTS: PHILOSOPHY

Degree Requirements
1. University graduation requirements (See pages 44-48)
2. Special college and/or department requirements (See pages 66 and 89)
3. Required Courses
   PHI 1100 Critical Thinking 3 hours
   PHI 2130 Formal Logic 3 hours
   PHI 2010 Introduction to Philosophy 3 hours
   PHH 3100 Ancient Philosophy 3 hours
   PHH 3400 Modern Philosophy 3 hours
   PHP 3786 Existentialism 3 hours
   PHH 3600 Problems in Contemporary Philosophy 3 hours
   PHI 3600 Ethics 3 hours
4. Restricted Electives
   Six elective courses in philosophy 18 hours
5. Electives
   To be selected with the approval of the student's advisor. May be used to obtain a second major.

Total Semester Hours Required 120 hours

AREA OF SPECIALIZATION
1. RELIGION
   Students may meet requirements for the Bachelor of Arts in Philosophy by completing the following alternate required courses and restricted electives.
   a. Required courses
      PHI 1100 Critical Thinking 3 hours
      PHI 2010 Introduction to Philosophy 3 hours
      PHH 3100 Ancient Philosophy 3 hours
      PHI 3600 Ethics 3 hours
      PHI 4700 Philosophy of Religion 3 hours
      REL 3203 Hebrew and Christian Heritage 4 hours
      REL 3314 Religions of China & Japan 3 hours
      REL 3342 Hinduism 3 hours
      REL 3353 Islam 3 hours
   b. Restricted electives
      Four elective courses in religion or philosophy 12 hours

DEPARTMENT OF MATHEMATICS

Chairman: L. Debnath, CG II 222, Phone 275-2585
Faculty: Andrews, Anthony, Armstrong, Barr, Brigham, Caron, Heinzer, Hurst, Jones, Norman, O'Hara, Pettofrezzo, Rautenstrauch, Rodriguez, Salzman, Sherwood, M. Taylor

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.
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 STA 6447, MHF 2300, MAA courses, MAP courses, MAS courses, or MTG courses. (Either MAS 3103 or MAS 3113 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 U.C.F.

BACHELOR OF SCIENCE: MATHEMATICS

Degree Requirements
1. University graduation requirements (See pages 44-48)
2. 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 U.C.F. or must be approved by the Mathematics Department Standards Committee.
3. Required Courses
   BSC 2010C General Biology 4 hours
   COP 2510 Programming I 3 hours
   COP 2511 Programming II 3 hours
   MAC 3311 Calculus with Analytic Geometry I 4 hours
   MAC 3312 Calculus with Analytic Geometry II 4 hours
   MAC 3313 Calculus with Analytic Geometry III 4 hours
   MAP 3302 Differential Equations 3 hours
   MAP 4363 Applied Boundary Value Problems I 4 hours
   MAP 4364 Applied Boundary Value Problems II 4 hours
   MAS 3103 Linear Algebra 4 hours
   MHF 2300 Logic and Proof in Mathematics 3 hours
   PHY 3048 Physics for Engineers & Scientists I 3 hours
   PHY 3048L Physics for Engineers & Scientists Lab. I 1 hour
   PHY 3049 Physics for Engineers & Scientists II 3 hours
   PHY 3049L Physics for Engineers & Scientists Lab. II 1 hour
   STA 3023 Statistical Methods I 3 hours
   STA 4321 Statistical Theory I 3 hours
   One course selected from
   ENC 3241 Science Report Writing 3 hours
   ENC 3310 Writing Skills 3 hours
   ENC 3311 Expository Writing 3 hours
4. AREA OF SPECIALIZATION
   a. Mathematics
      MAA 4226 Introduction to Analysis I 3 hours
      MAA 4227 Introduction to Analysis II 3 hours
      MAS 4301 Algebraic Structures 3 hours
      or
      MTG 4302 Introduction to Topology 3 hours
      STA 4322 Statistical Theory II 3 hours
      A minimum of 8 hours selected from upper division or graduate mathematics or statistics courses or from CNM 4110, 5142; COT 4001, or EGN 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. A list of courses which may be used to satisfy this requirement may be obtained from the Department Standards Committee.
   b. Applied Mathematics
      CHM 2045 Chemistry Fundamentals I 4 hours
      CHM 2046 Chemistry Fundamentals II 3 hours
      CHM 2046L Chemistry Fundamentals Laboratory 1 hour
      CNM 4110 Numerical Calculus 3 hours
      MAP 4364 Applied Boundary Value Problems II 3 hours
      STA 4322 Statistical Theory II 3 hours
      MAS 4153 Vector and Tensor Analysis 3 hours
One course selected from upper division or graduate mathematics or statistics courses or from CNM 5142 or COT 4001. (MAC 3233, 3253, 3254, MAE 3817 and MHF 4404 may not be used.)

Two courses selected from an area of application of mathematics taught outside the Department of Mathematics. These courses must be approved by the mathematics Department Standards Committee.

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 up to a total of 120 hours must be approved by the Department Standards Committee.

Total Semester Hours Required 120 hours

DEPARTMENT OF MUSIC
Chairman: G. Wolf, FA 105A, Phone 275-2867
Part-time Faculty:  Ault, Beck, Curtis, Hasse, Higgins, A. Mascaro, J. Mascaro, McQuinn, Micarelli, Petta, Schwab, Threatte, Townes.

The Department of Music offers a Bachelor of Arts with options in Applied Music, Piano Pedagogy, Instrumental Music Education, Choral Music Education, and Elementary School Music Education.

The Music Department is an Associate Member of the National Association of Schools of Music.

Music organizations on campus include Phi Mu Alpha, Sigma Alpha Iota, Tau Beta Sigma, Kappa Kappa Psi, and a Student Chapter of Music Educators National Conference.

SPECIAL MUSIC MAJOR ENTRANCE REQUIREMENTS
In order to be accepted as a music major, the following entrance requirements must be met:

1. Audition. Each student must demonstrate an advanced level of proficiency in the performance as evidenced by his ability to perform compositions representing a variety of musical periods. Memorization is required for pianists and vocalists. Accompanists for vocalists will be furnished only upon request prior to the audition. Each candidate must bring music for the compositions he 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.

2. Music Education majors must furnish proof of scoring at or above the 40th percentile on either the S.A.T. (835) or A.C.T. (17) before they can be admitted to the State Approved Education Program.

K-12 Certification
The Music Education programs are approved by the Florida State Department of Education. Students who wish to be certified to teach in elementary and secondary schools should consider a major in Music Education. Courses leading to teacher certification are offered cooperatively with the College of Education. A reciprocal certification arrangement is in effect with approximately 30 other states, with reciprocal certification pending in other states. In addition, a Master of Education degree in Music Education is offered by the College of Education.

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; a music history examination will be offered during the spring.

POLICY REGARDING MAJOR ENSEMBLE PARTICIPATION
1. Every music or music education major carrying an academic credit load of 8 or more hours must participate in a credit-bearing major ensemble in his applied major area.
Major ensembles which fulfill this requirement are chorus, symphony orchestra, concert band, marching band and wind ensemble. Students concentrating in piano, guitar and organ must take University Choir as their major ensemble.

2. Music majors must earn 8 hours of major ensemble credit to graduate. Music education majors must similarly earn 7 hours in their degree program. No more than one major ensemble may be used to satisfy this requirement in any given semester, although a student may participate in more than one ensemble if he so desires.

3. Music education majors in wind, brass, strings, and percussion are required to participate in the University Chorus for a minimum of two semesters during their degree program. The minor ensemble requirement will be reduced by two hours in order to accommodate this requirement. Vocal music education majors may elect to substitute 1 hour of band or orchestra for 1 hour of the minor ensemble provided they have sufficient facility on an appropriate instrument.

4. Assignment to major ensembles will be made by the ensemble directors.

5. Any undergraduate student taking a course in Principal Performance must take concurrently a major ensemble appropriate to his principal instrument.

POLICY REGARDING MINOR ENSEMBLE PARTICIPATION

1. Music majors must earn 8 semester hours of minor ensemble credit during at least 7 separate semesters to graduate. Music education majors must earn 4 hours of minor ensemble credit during at least 3 separate semesters to graduate.

2. The following ensembles will be considered minor ensembles: Brass Ensembles, Percussion Ensembles, Piano Ensembles, String Ensembles, Vocal Ensembles (except Opera Workshop), Woodwind Ensembles, Jazz Lab.

MINOR

The Department of Music offers a minor consisting of a minimum of 21 semester hours. An audition will be required for acceptance as a music minor.

Required courses: One year of theory (6 hours), two years of ensembles (4 hours), MUL 2011 (3 hours), one year of Performance I (4 hours), one year of Performance II (4 hours). A minimum of 11 hours of these required courses must be taken at UCF.

BACHELOR OF ARTS: MUSIC

Degree Requirements

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See pages 66 and 93)

3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1011</td>
<td>Music Forum (8 semesters)</td>
<td>0</td>
</tr>
<tr>
<td>MUT 2111, 2112, 3116, 3117, 4431</td>
<td>Music Theory</td>
<td>15</td>
</tr>
<tr>
<td>MVK/MVS, MVW/MVB, MVP/MVV</td>
<td>Performance (8 semesters) (including 2 semesters of level IV)</td>
<td>16</td>
</tr>
<tr>
<td>MUN</td>
<td>Major Ensemble (8 semesters)</td>
<td>8</td>
</tr>
<tr>
<td>MUN</td>
<td>Minor Ensemble</td>
<td>8</td>
</tr>
<tr>
<td>MUH 4211, 4212</td>
<td>Music History</td>
<td>6</td>
</tr>
<tr>
<td>MUG 3101</td>
<td>Basic Conducting</td>
<td>2</td>
</tr>
<tr>
<td>PHS 3805</td>
<td>Physical Basis of Music</td>
<td>3</td>
</tr>
<tr>
<td>Music Electives</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Any secondary performance class not in area of major instrument or any MUC, MUE, MUG, MUH, MUL, MUN, MUS, MUT courses numbered 3000 or higher except the following: MUH 4218, MUT 4031, 4275.

In partial fulfillment of the Music Electives requirement, Piano Majors take Piano Literature (MUL 3401, 3402) for 4 hours; Voice Majors take Foreign Diction (FRE 1005, GER 1005, ITA 1005—1 hour each) and Song Literature (MUL 3622, 3624—1 hour each) for a combined total of 5 hours; Piano Pedagogy Majors take Piano Literature (MUL 3401, 3402) for 4 hours, Piano Pedagogy (MVK 4640, 4641) for 2 hours, and Studio Teaching (MUS 4401) for 2 hours, for a combined total of 8 hours.

4. Restricted Electives

   To be selected from upper level courses outside the Department of Music, with the approval of the student’s advisor. 6 hours
5. Electives  4 hours

Total Semester Hours Required  124 hours

Three hours of courses required in music also meet General Education Program requirement.

Special Non-Course Requirements
1. Piano Proficiency Examination before admission to Performance III.
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. Any student who graduates from UCF with a major in music must complete his last two semesters of required performance and his senior recital while in attendance at UCF.

BACHELOR OF ARTS: MUSIC EDUCATION

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66, 93 and 125)
3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1011</td>
<td>Music Forum (6 semesters)</td>
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</tr>
<tr>
<td>MUT 2111, 2112, 3116, 3117, 4431</td>
<td>Music Theory</td>
<td>15</td>
</tr>
<tr>
<td>MVB/MVK/MVP</td>
<td>Performance (6 semesters)</td>
<td>12</td>
</tr>
<tr>
<td>MVS/MVV/MVW</td>
<td>(including 2 semesters of level III)</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Hours</td>
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<tr>
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<tr>
<td>MUN</td>
<td>Major Ensemble</td>
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<tr>
<td>MUN</td>
<td>Minor Ensemble</td>
<td>4</td>
</tr>
<tr>
<td>MUH 4211, 4212</td>
<td>Music History</td>
<td>6</td>
</tr>
<tr>
<td>MUG 3101</td>
<td>Basic Conducting</td>
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<tr>
<td>PHS 3805</td>
<td>Physical Basis of Music</td>
<td>3</td>
</tr>
<tr>
<td>MVP 1211</td>
<td>Secondary Trumpet</td>
<td>1</td>
</tr>
<tr>
<td>MVP 1211</td>
<td>Secondary Percussion</td>
<td>1</td>
</tr>
<tr>
<td>MVS 1211</td>
<td>Secondary Violin</td>
<td>1</td>
</tr>
<tr>
<td>MVW 1213</td>
<td>Secondary Clarinet</td>
<td>1</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>
<tr>
<td>EDF 4285</td>
<td>Application of Technology in Education</td>
<td>3</td>
</tr>
<tr>
<td>EDG 4324</td>
<td>Teaching in the Schools</td>
<td>3</td>
</tr>
<tr>
<td>EDG 4341</td>
<td>Teaching Strategies</td>
<td>4</td>
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<tr>
<td>EDE 3943</td>
<td>Junior Year Student Teaching</td>
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</tr>
<tr>
<td>EDE or ESE 4943</td>
<td>Senior Year Student Teaching</td>
<td>12</td>
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<tr>
<td>MUE 4330</td>
<td>Elementary School Music Instructional Analysis</td>
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<tr>
<td>MUE 4350</td>
<td>Secondary School Music Instructional Analysis</td>
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</table>

**Program A—Instrumental Music Education Specialization**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVV 1211</td>
<td>Class Voice</td>
<td>1</td>
</tr>
<tr>
<td>MVB/MVP/MVS/MVW</td>
<td>Secondary Instruments</td>
<td>6</td>
</tr>
<tr>
<td>MVK</td>
<td>Class Piano</td>
<td>2</td>
</tr>
<tr>
<td>MVB/MVK/MVP/</td>
<td>Performance IV</td>
<td>2</td>
</tr>
<tr>
<td>MVS/MVV/MVW</td>
<td>Instrumental Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUG 3301</td>
<td>Reading Band</td>
<td>0</td>
</tr>
<tr>
<td>MUN 3190</td>
<td>Arranging and Transcription</td>
<td>1</td>
</tr>
<tr>
<td>MUT 4321</td>
<td>Marching Band Techniques</td>
<td>1</td>
</tr>
<tr>
<td>MUE 4480</td>
<td>Diction</td>
<td>3</td>
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</tbody>
</table>

**Program B—Choral Music Education Specialization**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>MVK 1111-1114</td>
<td>Class Piano</td>
<td>4</td>
</tr>
<tr>
<td>MVV 1211</td>
<td>Class Voice</td>
<td>2</td>
</tr>
<tr>
<td>MVS 1216</td>
<td>Secondary Guitar</td>
<td>1</td>
</tr>
<tr>
<td>MUG 3201</td>
<td>Choral Conducting</td>
<td>2</td>
</tr>
<tr>
<td>MUL 3640</td>
<td>Reading Chorus</td>
<td>0</td>
</tr>
<tr>
<td>MVB/MVK/MVP/</td>
<td>Principal Performance IV</td>
<td>2</td>
</tr>
<tr>
<td>MVS/MVV/MVW</td>
<td>Diction</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program C—Elementary School Music Education Specialization**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVK 1111-1114</td>
<td>Class Piano</td>
<td>4</td>
</tr>
<tr>
<td>MVV 1211</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 1214</td>
<td>Secondary Recorder</td>
<td>1</td>
</tr>
</tbody>
</table>

**4. Electives**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Total Semester Hours Required</em></td>
<td>134-140</td>
</tr>
</tbody>
</table>

*Twelve hours of courses required in music and education also meet General Education Program requirements.

Special Non-course requirements

1. Piano Proficiency Examination before admission to Principal Performance III.
2. Music History and Music Theory Comprehensive Examinations which must be completed before applying for senior year student teaching.
3. A faculty-approved public recital of 30 minutes length. (A recital is optional for
4. Any student who graduates from UCF with a major in music education must complete his last two semesters of required performance; his recital, if required; and, his senior year student teaching while in attendance at UCF.

DEPARTMENT OF PHYSICS
Chairman: J. Noon, EN 312, Phone 275-2325
Faculty: Bolemon, Bolte, Brennan, Chow, Llewellyn, Meyers, Oelfke, Wilson

The Department of Physics offers a Bachelor of Science degree in Physics and a minor in Physics. Students planning graduate study should consult faculty advisors about increased course content in physics (some electives are offered in alternate years) and mathematics such as applied boundary problems, vector and tensor analysis, matrices; double majors are encouraged where appropriate. Extra independent study courses and laboratory work may be arranged but general courses such as astronomy, physical science, or physics of science fiction do not satisfy requirements for the major.

Physics is the basic science fundamental to many different fields of endeavor. Physics majors are encouraged to prepare for interdisciplinary type careers by using electives to study other areas in depth, planning with an advisor by the sophomore year (or after arrival, for transfer students). Independent investigation and use of scientific instrumentation (such as lasers, lock-in amplifiers, multi-channel analyzers, oscilloscopes) are emphasized at the upper division. Computer programming requiring numerical analysis and familiarity with microcomputers is required.

Research of the faculty covers astrophysics, atmospheric electricity, computing, geophysics, gravity, instrumentation and measurement of fundamental constants, lasers, mathematical modeling, Mossbauer Spectroscopy, microprocessors, nuclear physics, optics, physics education, plasmas, solar energy, thin film and organic semiconductors.

MINOR
The Department of Physics offers a minor consisting of a minimum of 20 semester hours. Required courses: PHY 3048, 3048L, 3049, 3049L, 3101. The remaining 9 semester hours must be selected from appropriate upper level lecture or laboratory courses.

BACHELOR OF SCIENCE: PHYSICS

Degree Requirements
1. University graduation requirements
(See pages 44-48)

2. Special college and/or department requirements
(See page 66)

In addition to the degree requirements listed below for a B.S. in Physics, the following standards are required by the department for graduation, and approval as a special case by the Department Academic Standards Committee is required for any waiver.

a. A minimum GPA of 2.0 for all courses used for a major in physics.

b. No credit toward graduation for a D grade in any physics or mathematics course required for a major in physics; a higher grade on repeating is acceptable.

3. Required Courses
The courses listed, or departmentally approved equivalents, are required in the physics curriculum.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BSC 2010</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHM 2045, 2046, 2046L</td>
<td>Chemistry Fundamentals</td>
<td>8</td>
</tr>
<tr>
<td>MAC 3311, 3312, 3313</td>
<td>Calculus with Analytic Geometry</td>
<td>12</td>
</tr>
<tr>
<td>PHY 3048, 3048L, 3049, 3049L</td>
<td>Physics For Engineers &amp; Scientists I &amp; II</td>
<td>8</td>
</tr>
<tr>
<td>PHY 3101</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3503</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAP 3302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3044</td>
<td>Electricity, Magnetism &amp; Electromagnetic Waves</td>
<td>3</td>
</tr>
<tr>
<td>COP 3215</td>
<td>Programming and Numerical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>
### DEPARTMENT OF POLITICAL SCIENCE

**Chairman:** S. Lilie, FA 426, Phone 275-2608  
**Faculty:** Bledsoe, Handberg, Johnson-Freese, Kennedy, Maddox, Morales, Pollock, Stern

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 advisors 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 Government, and Political Theory.

Although there are no formal language requirements for a political science major, it is strongly recommended that majors planning to continue their education at the graduate level or to pursued a career in international fields require a working knowledge of a foreign language.

### MINOR

The Department of Political Science offers minors consisting of a minimum of 19 semester hours in each minor.

1. **Political Science**  
   Required courses: POS 2041 and two 4000-level courses. 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. Other than 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. Other than these requirements, students may select any other Political Science courses with the aid of an advisor.

### BACHELOR OF ARTS: POLITICAL SCIENCE

**Degree Requirements**

1. University graduation requirements
Only two courses (6 semester hours) from a two-year institution will be accepted toward completion of major requirements.

2. Special college and/or department requirements

(See page 66)

3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>POS 2041</td>
<td>American National Government</td>
<td>3</td>
</tr>
<tr>
<td>POS 3703</td>
<td>Scope and Methods of Political Science</td>
<td>4</td>
</tr>
</tbody>
</table>

4. Restricted Electives

Majors must choose from one of the following emphases for a minimum of 28 additional hours.

Emphasis 1: American Politics and Policy

- Four courses from area A 16 hours
- One course from area B 4 hours
- One course from area C 4 hours
- One additional course from any area 4 hours

Emphasis 2: International Relations-Comparative Government

- Four courses from area B 16 hours
- One course from area A 4 hours
- One course from area C 4 hours
- One additional course from any area 4 hours

Emphasis 3: Prelaw

- POS 4284 Judicial Process and Politics 4 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 4 hours

- One course from area B* 4 hours
- One course from area C 4 hours
- Three or four courses from any area 12/16 hours

*This requirement may be met by one of the International Law courses.

Total Hours in Major 35 hours

5. Electives

Total Semester Hours Required 120 hours

AREAS OF SPECIALIZATION

The Department courses are divided into three areas of specialization.

A. American Politics and Policy

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POS 3122</td>
<td>State Government</td>
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<tr>
<td>POS 3443</td>
<td>Political Parties and Processes</td>
</tr>
<tr>
<td>POS 3413</td>
<td>The American Presidency</td>
</tr>
<tr>
<td>POS 3424</td>
<td>Congress and the Legislative Process</td>
</tr>
<tr>
<td>PUP 3314</td>
<td>Minorities in American Politics</td>
</tr>
<tr>
<td>POS 3235</td>
<td>Mass Media and Politics</td>
</tr>
<tr>
<td>POS 3233</td>
<td>Public Opinion</td>
</tr>
<tr>
<td>POS 3273</td>
<td>Voting and Elections</td>
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<tr>
<td>POS 3173</td>
<td>Southern Politics</td>
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<tr>
<td>POS 4261</td>
<td>Political Corruption</td>
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<td>POS 4246</td>
<td>Political Socialization</td>
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<td>American Constitutional Law I</td>
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<td>American Constitutional Law II</td>
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<tr>
<td>POS 4284</td>
<td>Judicial Process &amp; Politics</td>
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<tr>
<td>POS 4412</td>
<td>Presidential Campaigning</td>
</tr>
<tr>
<td>PUP 4323</td>
<td>Women and Politics</td>
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<tr>
<td>POS 4142</td>
<td>Metropolitan Politics</td>
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<tr>
<td>URP 4026</td>
<td>Community Planning</td>
</tr>
<tr>
<td>PUP 4003</td>
<td>American Public Policy</td>
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<tr>
<td>PUP 4503</td>
<td>Government and Science</td>
</tr>
<tr>
<td>PUP 4602</td>
<td>Politics of Health</td>
</tr>
<tr>
<td>POS 4265</td>
<td>Power and Policy in the United States</td>
</tr>
<tr>
<td>POS 4206</td>
<td>Political Psychology</td>
</tr>
</tbody>
</table>
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 should choose the prelaw emphasis within the political science major.

Prelaw students are encouraged to work closely with the prelaw advisor in planning their programs. By judicious use of electives, the student not only builds a firm foundation for law school entry, but in addition, acquires a broad vocational training which can result in career options upon graduation.

For further information, contact one of the Department's prelaw advisors: Dr. Robert Bledsoe, Dr. Joan Johnson-Freese, or Dr. Philip Pollock, FA 426, Phone 275-2608.

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
   EUH 2545 Introduction to Anglo-American Law
   LEA 3011 Legal Research and Writing

Internship Program: Political Science

For students who excel, a limited number of internships may be available each semester for 4 to 12 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. For further information contact the Department Internship Director.

Department of Psychology

Chairman: R. Tucker, CB 317, Phone 275-2216
Faculty: Abbott, Blau, Brophy, Burr, Burroughs, Connally, Fisher, Guest, McGuire, Rollins, Shirkey, Tell, Thomas, Turnage, Wooten, Zegman

The undergraduate program provides a general preparation in Psychology with the option to select specialization electives according to student interests. Successful
completion of the specified program of at least 38 semester hours leads to the Bachelor of Arts degree with a major in Psychology.

MINOR

The Department of Psychology offers a minor consisting of a minimum of 18 semester hours.

Required courses: PSY 2013 plus a minimum of 12 semester hours of upper level courses and a minimum of 9 semester hours must be taken at UCF. A maximum of 3 semester hours may be completed in courses identified as independent study. A maximum of 3 semester hours of PSY 3951 will apply.
BACHELOR OF ARTS: PSYCHOLOGY

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See page 66)
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 (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
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 in Major 38
   Total Semester Hours Required 120 hours

DEPARTMENT OF PUBLIC SERVICE ADMINISTRATION

Chairman: G. Holten, CB 336, Phone 275-2603
Faculty: Becker, Duffey, Gibson, Jones, Kimmitt, Korstad, Pyle, Slaughter

The Department of Public Service incorporates three related undergraduate degree programs: Allied Legal Services, Criminal Justice and Public Administration. It also offers the Masters of Public Administration degree.

ALLIED LEGAL SERVICES

The Allied Legal Services program provides students with a broad understanding of basic principles of law and the role and functions of the legal system as well as prepare students for positions as legal assistants in law offices, private corporations and public agencies. The graduate is expected to be adept at legal research and drafting of legal documents, and at undertaking whatever interviewing and investigative functions the employer deems appropriate. The program leads to the degree of Bachelor of Arts with the major in Allied Legal Services.

BACHELOR OF ARTS: ALLIED LEGAL SERVICES

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See page 66)
3. Required Courses (28 semester hours)
   - LEA 3001 Law and the Legal System 4 hours
   - LEA 3011 Legal Research and Writing 4 hours
   - LEA 3101 Civil Practice and Procedure 4 hours
   - LEA 3201 Property and Real Estate Law 4 hours
   - LEA 3601 Criminal Procedures 4 hours
   - LEA 4301 Contracts and Agency 4 hours
   - LEA 4501 Domestic Relations Law 4 hours
4. Restricted Electives
   a. Eight (8) additional semester hours of Allied Legal Services Coursework.
   b. Ten (10)--Twelve (12) semester hours of supporting courses selected from other disciplines or departments with the approval of the student’s advisor. Courses may be selected from among, but not necessarily limited to offerings in ac-
counting, communications, criminal justice, history, political science, public administration, social work, and sociology.

5. Electives

Total Semester Hours Required 120 hours

CRIMINAL JUSTICE

The Criminal Justice program of study is designed to provide students with a broad understanding of crime and society's control mechanisms as well as prepare them for professional careers in criminal justice and related agencies. The program offers three areas of concentration: law enforcement, corrections, and justice administration. Satisfactory completion of program requirements leads to the degree of Bachelor of Arts with a major in Criminal Justice.

BACHELOR OF ARTS: CRIMINAL JUSTICE

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See page 66)
3. Required Courses (20 semester hours)
   - CCJ 2020 Introduction to Criminal Justice 4 hours
   - CCJ 3010 Crime in America 4 hours
   - CCJ 3290 Prosecution and Adjudication 4 hours
   - CCJ 3300 The Correctional and Penal System 4 hours
   - PAD 3003 Public Administration 4 hours

4. Restricted Electives
   a. 16 additional semester hours of CCJ coursework.
   b. 16 additional semester hours of Allied 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, allied legal services, sociology, statistics, and psychology.

5. Electives

Total Semester Hours Required 120 hours

PUBLIC ADMINISTRATION

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.

BACHELOR OF ARTS: PUBLIC ADMINISTRATION

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 102)
3. Required Courses (32 semester hours)
   - PAD 3003 Introduction to Public Administration 4 hours
   - PAD 4034 Public Policy Administration 4 hours
   - PAD 4104 Administrative Theory 4 hours
   - PAD 4204 Fiscal Management 4 hours
   - PAD 4414 Public Personnel Administration 4 hours
   - POS 2041 American National Government 3 hours
   - ECO 2013 Principles of Economics I 3 hours
   - COC 1100 Introduction to Computer Science or
   - CAP 3001 Computer Fundamentals for Business Application 3 hours
STA 2014 Principles of Statistics
or
STA 3023 Statistical Methods I
or
a course in social science research with
an emphasis on statistical methods 3 hours

4. Restricted Electives
   a. Sixteen (16) additional semester hours of Public Administration coursework
      (may include GEO 3602 and internship)
   b. Ten (10) semester hours in an allied public service field. This field and the corres-
      ponding courses are selected with and approved by the student's advisor. Among
      such supporting fields are accounting, allied legal services, communications,
      computer science, criminal justice, economics, political science, social
      work, sociology and statistics.

5. Electives

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY
Chairman: W. R. Brown, FA 402, Phone 275-2227
Faculty: Allen, Cook, Dees, Hodgin, Jones, Miller, Stearman, Unkovic, Wallace

The Department of Sociology and Anthropology offers a Bachelor of Arts and a
Bachelor of Science in Sociology and Anthropology. Students should consult with
their advisor early in their academic career 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 2003, ANT 3000, 3410, 3422, LIN 4020, eight additional hours
to be taken in consultation with the student's advisor. No more than two courses
may be transferred from other Sociology/Anthropology Departments. The minimum
number of semester hours required—27.

2. Sociology
   Required Courses: SYG 2000, SYO 3000, and SYA 3110 or SYA 3120; and a minimum
   of 9 semester hours of Sociology courses. No more than two sociology courses
   may be transferred from another Sociology Department and no more than eight
   semester hours of 1000 or 2000 level sociology courses can be applied. Lists of
   several minor options in Sociology that complement other majors are available in
   the Department. The minimum number of semester hours required—18.

BACHELOR OF ARTS: SOCIOLOGY

Degree Requirements
The Sociology curriculum is designed to give students the perspective, competen-
cies, and experience needed to work effectively in areas concerning organizational
and human resources, problems and planning, social processes, and social research.
A minimum of 41 semester hours is required for a major. In addition a course in
statistics is also required.
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 104)
3. Required Courses (23 semester hours)
   SYG 2000 General Sociology 3 hours
   SYO 3000 Social Institutions 3 hours
   ANT 2003 General Anthropology 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 4450 Data Analysis (PR: A course in Statistics) 4 hours
   SYA 4650 Applied Sociology 3 hours
One course in Statistics

4. Restricted Electives
One course from each of the four following groups (12 hours) plus 6 additional hours from any of the groups below.

1. Family
   - SYO 4100 The Family 3 hours
   - SYD 3800 Sex Roles in Modern Society 3 hours
   - SYP 4730 Sociology of Aging 3 hours

2. Social Problems
   - SYG 3010 Social Problems 3 hours
   - SYP 3510 Sociology of Deviant Behavior 3 hours
   - SYP 3530 Juvenile Delinquency 3 hours
   - SYP 3520 Criminology 3 hours
   - SYO 3410 Sociology of Mental Illness 3 hours
   - SYP 3551 Sociology of Alcoholism 3 hours
   - SYP 4550 Sociology of Drug Abuse 3 hours
   - SYD 3700 Race & Ethnic Minorities in the U.S. 3 hours
   - SYD 3730 Afro-American Social Problems 3 hours

3. Social Processes
   - SYO 3530 Social Stratification 3 hours
   - SYD 4020 Population 3 hours
   - SYP 3400 Social Change: A Historical and Theoretical Approach 3 hours
   - SYP 3300 Collective Behavior 3 hours
   - SYP 4000 Sociological Social Psychology 3 hours

4. Social Organization
   - SYO 3360 Social Organization & Human Relations 3 hours
   - SYO 4300 Political Sociology 3 hours
   - SYO 4250 Sociology of Education 3 hours
   - SYO 4370 Sociology of Occupations & Professions 3 hours
   - SYO 4400 Medical Sociology 3 hours
   - SYD 3410 Urban Sociology 3 hours
   - SYD 4680 Soviet Sociology 3 hours

Special Courses: Qualified students may apply for an internship in Field Experience and/or Social Research Practicum (SYA 4350 – usually 6 hours)

5. Electives
Students electing the Bachelor of Arts degree are required to complete 8 semester hours of Foreign language.

Total Semester Hours Required 120 hours

**BACHELOR OF ARTS: ANTHROPOLOGY**

**Degree Requirements**
Anthropology offers the Bachelor of Arts and Bachelor of Science degrees with four subfields of the discipline: Physical Anthropology, Archaeology, Linguistics and Cultural Anthropology. In addition, area studies dealing with the North American Indians and Latin American Culture are available to the student. In keeping with the holistic nature of the discipline, students are required to pursue a course of study which comprehends all four subfields of Anthropology.

A minimum of 46 semester hours is required for a degree.

**Degree Requirements**
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 66 and 104)
3. Required Courses (31 semester hours)
   - ANT 2003 General Anthropology 3 hours
   - SYG 2000 General Sociology 3 hours
   - ANT 3000 Physical Anthropology and Archaeology 3 hours
   - ANT 3410 Introduction Social Anthropology 3 hours
   - ANT 3511 Physical Anthropology 3 hours
   - ANT 4086 Method and Theory 3 hours
   - ANT 3422 Comparative Social Organizations 3 hours
LIN 4020 Anthropological Linguistics 3 hours
ANT 4705 Applied Anthropology 3 hours
SYA 3300 Research Methods 4 hours

4 Restricted Electives (15 hours)
Area Studies (Select two)
ANT 3312 Ethnology of North American Indians 3 hours
ANT 3313 Plains Indians of North America 3 hours
ANT 3332 Peoples and Cultures of Latin America 3 hours

Specialized Studies (Select three)
ANT 3241 The Anthropology of Religion 3 hours
ANT 3432 Culture and Personality 3 hours
ANT 3424 Culture and Community 3 hours
SYD 3800 Sex Roles 3 hours
ANT 3464 Human Microevolution 3 hours
ANT 3512 Biobehavioral Anthropology 3 hours
ANT 3552 Primatology 4 hours
ANT 3142 Old World Prehistory 3 hours
ANT 3144 New World Prehistory 3 hours
ANT 3122 Archaeological Methods 3 hours
ANT 3141 Prehistory of Complex Societies 3 hours

5. Electives
Students electing the Bachelor of Arts degree are required to complete 8 semester hours of Foreign language.

Total Semester Hours Required 120 hours

DEPARTMENT OF SOCIAL WORK
Chairman: K. J. Kazmerski, FA 404, Phone 275-2114
Faculty: Abel, Green, Tropf

The Department of Social Work offers a professional degree program which is nationally accredited by the Council on Social Work Education. Its primary focus is the preparation of students for entry-level professional social work practice within diverse human service organizations such as hospitals, schools, correctional settings, public welfare departments, child placement organizations, community centers and counseling agencies.

Before applying for the professional phase of the program, students are to have completed courses in biology, economics, political science, psychology, and sociology. Applications to this limited access program may be obtained at the Department of Social Work.

BACHELOR OF SOCIAL WORK

Degree Requirements
1. University graduate requirements
(See pages 44-48)
2. Special college and/or department requirements
(See page 66)
3. Required Courses (45 hours)

SOW 3110 Assessing Individual Behavior 3 hours
SOW 3191 Assessing Human Systems 3 hours
SOW 3203 Social Welfare and Community Resources 3 hours
SOW 3232 Social Welfare Policy, Services and Issues 3 hours
SYA 3301 Social Research 3 hours
SOW 4431 Evaluating Social Work Practice and Service Programs 3 hours
SOW 3300 Generalist Practice in Social Work 3 hours
SOW 3352 Interpersonal Skills in Social Work Practice 3 hours
SOW 4341 Micro-level Roles and Interventions in Social Work 3 hours
SOW 4343 Macro-level Roles and Interventions in Social Work 3 hours
SOW 4620 Social Work with Minorities 3 hours
4. Restricted Electives (9 hours)
These electives may be taken from any department and are to be consistent with
the objectives of the Department of Social Work and are to be selected with the
student's faculty advisor. A concentration in child welfare, gerontology, or health
services will meet this requirement.

5. Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOW 4510</td>
<td>Field Education</td>
<td>9 hours</td>
</tr>
<tr>
<td>SOW 4522</td>
<td>Field Education Seminar</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

Areas of Concentration
Students desiring to concentrate their studies in an area must satisfy the
requirements of the basic curriculum while concurrently completing a minimum of 21
hours in the concentration.

1. Child Welfare Concentration

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJ 4540</td>
<td>Delinquency Control</td>
<td>4 hours</td>
</tr>
<tr>
<td>or</td>
<td>DEP 3302</td>
<td>Psychology of Exceptional Children</td>
</tr>
<tr>
<td>EDF 4003</td>
<td>Overview of Education</td>
<td>3 hours</td>
</tr>
<tr>
<td>SYO 4100</td>
<td>The Family</td>
<td>3 hours</td>
</tr>
<tr>
<td>SOW 4654</td>
<td>Children's Services</td>
<td>3 hours</td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

or

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDF 4003</td>
<td>Overview of Education</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

In addition, SOW 4510 Field Education must be completed in a child welfare agency
9 hours

2. Gerontology Certificate Program
See page 165, Office of Undergraduate Studies

3. Health Services Concentration

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYO 4400</td>
<td>Medical Sociology</td>
<td>3 hours</td>
</tr>
<tr>
<td>HSC 4302</td>
<td>Community and Public Health Services</td>
<td>3 hours</td>
</tr>
<tr>
<td>or</td>
<td>HSC 4393</td>
<td>History and Future of Health Care</td>
</tr>
<tr>
<td>SOW 4602</td>
<td>Social Work in Health Settings</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

Elective in Health Studies
In addition, SOW 4510 Field Education must be completed in a health setting.
9 hours

BACHELOR OF SCIENCE: SOCIAL SCIENCES

Contact Person: D. Dees, FA 208, Phone 275-2492

This unique program offers students an opportunity to become acquainted with the
various fields of Social Sciences and to understand better 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. University graduation requirements (See pages 44-48)
2. Special college and/or department requirements (See page 66)
3. Required Courses
   None
4. Restricted Electives
   a. Choose one
      | Course  | Title                                      | Hours |
      |---------|--------------------------------------------|-------|
      | POS 3703 | Scope and Methods of Political Science     | 4 hours |
      | PSY 4214 | 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1000</td>
<td>Basic Communication</td>
<td>3 hours</td>
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<tr>
<td>COM 3311</td>
<td>Communication as a Behavioral Science</td>
<td>3 hours</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Hours</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>ECO 2013</td>
<td>Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2023</td>
<td>Principles of Economics II</td>
<td>3</td>
</tr>
<tr>
<td>POS 2041</td>
<td>American National Government</td>
<td>3</td>
</tr>
<tr>
<td>PSY 2013</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PPE 3003</td>
<td>Personality Theory</td>
<td>3</td>
</tr>
<tr>
<td>PAD 3003</td>
<td>Introduction to Public Administration</td>
<td>4</td>
</tr>
<tr>
<td>CCJ 2020</td>
<td>Introduction to Criminal Justice</td>
<td>4</td>
</tr>
<tr>
<td>LEA 3001</td>
<td>Law and the Legal System</td>
<td>4</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>ANT 2003</td>
<td>General Anthropology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Semester Hours Required</strong></td>
<td><strong>120 hours</strong></td>
</tr>
</tbody>
</table>

**DEPARTMENT OF STATISTICS**

**Acting Chairman:** B. Ostle, CCII 227, Phone 275-2289  
**Faculty:** A. Dutton, Ferdon, Franklin, Malone, Marovich, J. Schott, S. Schott, Somerville, Tekyi-Mensah

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 student 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 4202, STA 4222, or STA 4502.

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 U.C.F. unless substitutes are approved by the Department Standards Committee.

**BACHELOR OF SCIENCE: STATISTICS**

**Degree Requirements**

1. **University graduation requirements**  
   (See pages 44-48)

2. **Special college and/or department requirements**
   (a) All statistics courses except STA 3023 or STA 3032 must be taken from the Department of Statistics at U.C.F. unless substitutes are approved by the Department Standards Committee.
   (b) To meet the College of Arts and Sciences requirement for Natural Science majors, a total of four courses must be taken in the physical and biological sciences. At least one biological sciences course with a laboratory component and at least one physical science course with a laboratory component are required. Only courses countable towards a major in the discipline in which a course is located are ac-
ceptable (e.g., BSC 2010C would count but not BSC 1020C nor BSC 1030C). Further, stand-alone laboratory courses (e.g., CHM 2046L) will not count as separate courses in meeting the four-course requirement. Any substitutions require prior approval of the Department Standards Committee. Any questions should be referred to that committee.

3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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 3664</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>CNM 4110</td>
<td>Numerical Calculus</td>
<td>3</td>
</tr>
<tr>
<td>COP 2510</td>
<td>Programming I</td>
<td>3</td>
</tr>
<tr>
<td>COP 2511</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>
<tr>
<td>MAS 3103</td>
<td>Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MAS 3113</td>
<td>Matrices</td>
<td>4</td>
</tr>
<tr>
<td>COT 3000</td>
<td>Introduction to Discrete Structure</td>
<td>3</td>
</tr>
<tr>
<td>MHF 2300</td>
<td>Logic and Proof in Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>ENC 3241</td>
<td>Scientific Report Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives

A minimum of 6 hours selected from upper division or graduate statistics, mathematics, or computer science courses. (COC 3024; MAC 3233, 3253, 3254; all MAE courses; and MHF 4404 may not be used.)

5. Electives

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

Total Semester Hours Required 120 hours
DEPARTMENT OF THEATRE

Director: H. Smith, TH 120, Phone 275-2861
Faculty: Chapman, McKay, Smith

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.

The major in Theatre offers three separate areas of concentration. There are five courses (16 hours) required of all theatre majors: THE 1020 (3), THE 2071 (3), THE 2925 (2,2), THE 3312 and THE 3313 (3,3).

MINOR

The Department of Theatre offers a minor consisting of a minimum of 24 hours, as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 1020</td>
<td>Theatre Survey</td>
<td>3</td>
</tr>
<tr>
<td>TPA 2210</td>
<td>Tech. Theatre Production</td>
<td>3</td>
</tr>
<tr>
<td>THE 2071</td>
<td>Cinema Survey</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>
<tr>
<td>TPP 3130</td>
<td>Classical Mime</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3111</td>
<td>Acting II</td>
<td>3</td>
</tr>
<tr>
<td>DAA 3200</td>
<td>Theatre Dance I</td>
<td>3</td>
</tr>
<tr>
<td>TPA 3250</td>
<td>Makeup Technique</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3310</td>
<td>Directing I</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>
<tr>
<td>THE 4800</td>
<td>Children’s Theatre</td>
<td>3</td>
</tr>
<tr>
<td>TPP 4140</td>
<td>Audition Techniques</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3700</td>
<td>Stage Diction</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Semester Hours Required: 24 hours

Suggested Electives:
- MUL 2011
- MUN 3340 or 3341
- ARH 2050
- RTV 3230

Total Semester Hours Required: 3-9 hours

Program “A” Performance

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPP 2110</td>
<td>Acting I</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3111</td>
<td>Acting II</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3130</td>
<td>Classical Mime</td>
<td>3</td>
</tr>
<tr>
<td>TPA 3250</td>
<td>Makeup Technique</td>
<td>3</td>
</tr>
<tr>
<td>DAA 3200</td>
<td>Theatre Dance I</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3310</td>
<td>Directing I</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>
<tr>
<td>THE 4800</td>
<td>Children’s Theatre</td>
<td>3</td>
</tr>
<tr>
<td>TPP 4140</td>
<td>Audition Techniques</td>
<td>3</td>
</tr>
<tr>
<td>TPP 3700</td>
<td>Stage Diction</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Semester Hours Required: 120 hours

Suggested Electives:
- MUL 2011
- Any ARH or ART
- THE 3251 or 4072

Total Semester Hours Required: 3-9 hours

Program “B” Technical Theatre & Design

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPA 2210</td>
<td>Technical Theatre Production</td>
<td>3</td>
</tr>
<tr>
<td>TPA 2082</td>
<td>Stage Properties</td>
<td>3</td>
</tr>
<tr>
<td>THE 3260</td>
<td>Theatrical Costume History and Design</td>
<td>3 hours</td>
</tr>
<tr>
<td>TPA 3250</td>
<td>Makeup Techniques</td>
<td>3</td>
</tr>
<tr>
<td>TPA 3060</td>
<td>Scene Design I</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>THE 3925</td>
<td>Theatre Practicum 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>

Total Semester Hours Required: 120 hours

Suggested Electives:
- MUL 2011
- Any ARH or ART
- THE 3251 or 4072

Program “C” Film

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE 3251</td>
<td>History of Motion Picture</td>
<td>3</td>
</tr>
<tr>
<td>THE 4072</td>
<td>Principles of Motion Picture Art</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Semester Hours Required: 3 hours
The Office of Pre-Health Professions Advisement has been created to operate as a service to all students preparing for and seeking admission to professional schools of dentistry, medicine, osteopathic medicine, optometry, pharmacy, podiatry and veterinary medicine. The services afforded the student through this office are numerous and range from basic advising and counseling in preprofessional matters to providing a Composite Evaluation of the student (upon his/her request) to each professional school to which he/she desires to apply. 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 preprofessional courses taken at UCF by the end of the Spring Semester preceding his/her application to the professional schools. Additionally, all preprofessional students are strongly encouraged to affiliate with and participate in the activities of the Preprofessional Medical Society.

PREPROFESSIONAL PLANNING
Preprofessional students should bear in mind that admission to a health professional school is competitive, that is, the professional schools have many more applicants than places available and they select those applicants they feel have the best credentials. In general, the best applicants have credentials that significantly exceed stated admission requirements. For this reason, preprofessional students should pay close attention to the characteristics of successful applicants. For example, while many dental and medical schools require only two and three years respectively of college preparation, more than 91 percent of all predental and 95 percent of all premedical students accepted throughout the nation last year had four years of college. Consequently, since pathways such as “premed” do not lead to a degree, each preprofessional student is urged to pursue a degree granting program not only 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 preprofessional 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 preprofessional courses to be obtained.

Obviously, preprofessional students are expected to be high achievers, to obtain good grades with heavy 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 every term they are enrolled.

CURRICULA GUIDELINES
All preprofessional 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 preprofessional studies.

Concerning required courses, all preprofessional 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 2050C, 2051C (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
Cell Physiology, PCB 3203
Comparative Anatomy, ZOO 3713C
Embryology, ZOO 4603C
Histology, ZOO 3753C
Microbiology, MCB 3203C, and PCB 3233C
Analytical Chemistry, CHM 3121C plus either (or both) Biochemistry, CHM 4053, 4054, or Physical Chemistry, CHM 3410.

Physics of Scientific Instruments, PHY 3752C.

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 and Physics of Scientific Instruments, PHY 3752C

Prepharmacy students must take
General Botany, BOT 2010C
Microbiology, MCB 3203C and it is strongly recommended they take Physics of Scientific Instruments, PHY 3752C; Histology, ZOO 3753C; 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 sophomore year.

Additionally, the UCF courses Histology (ZOO 3753C), Embryology (ZOO 4603C) and Physics of Scientific Instruments (PHY 3752C) are strongly recommended. Biochemistry (BCH 4053) would also be very helpful.

Meaningful Electives:
All preprofessional students are strongly encouraged to make prudent selections of elective courses complementary to their preprofessional 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
Communications: SPC 3301 or 4330.
Health Sciences: APB 3600; HSC 3328, 4411; SPA 3001
Human Anatomy: ZOO 3733C
Literature: LIT 2110 and 3120.
Management: GEB 3004.
Philosophy: PHI 3600, 3630.
Political Science: PUP 4602.
Psychology: CLP 3143, DEF 3004, 3202, 3212, EAB 3704; GEY 3610; PSB 3002, 3442, 4013C, PCO 4203.
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-OCAT; pharmacy-PCAT; podiatry-MCAT; veterinary medicine-GRE or VAT]. These examinations are generally offered twice each year: in the spring and fall. Preprofessional students are advised to take the appropriate examination in the spring preceding application to the professional school rather than waiting for the fall examination.

There are numerous support systems available for review. All applicants are encouraged to maximize their preparation before registering to take the exam the first time.

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. *American Schools and Colleges of Veterinary Medicine*, by John Mangiameli, 4630 Montgomery Avenue, Suite 201, Bethesda, Maryland 20014.

Each preprofessional student is encouraged to obtain a copy of the publication appropriate to his/her preprofessional area. Several of these publications are available in the University bookstore. Examination copies are available in the Pre-Health Professions Advisement Office, FA 511.

Other Health Professions

For Nursing and other Allied Health Sciences, see College of Health section, page 151.
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 (MS)
Applied Economics (MA)
Business Administration (MBA)
Management (MS)

*See the Graduate catalog for information.
The goal of the College of Business Administration is to assist in the maximum development of individual potential for accomplishment as a person and as a responsible member of society by preparing students for entry into professional positions in business and government. The various programs of study offered by the College are designed to assist the student in obtaining a sound academic preparation for the career of his/her choice and becoming a valuable member of society. 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 only after the University lower division General Education program has been completed to include the computer science, college algebra and statistics requirements. In addition, the basic Accounting and Economics sequence must be completed. A minimum grade of "C" must be achieved in ACG 2001 and 2011, or ACG 3023, ECO 2013 and 2023, ENC 1101 and 1102, MAC 1104, STA 3023, and CAP 3001. Students who otherwise meet the University admission requirements, such as entering freshmen and transfer students, will be classified as "provisional" Business Administration majors until they meet the requirements set forth above. All students should meet with an academic advisor in the College of Business Administration to outline a program of study.

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

- Accounting
- Economics
- Finance
- General Business Administration
- 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 2001</td>
<td>Principles of Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>ACG 2011</td>
<td>Principles of Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>or ACG 3023</td>
<td>Principles of Accounting I &amp; II</td>
<td>6</td>
</tr>
<tr>
<td>ECO 2013</td>
<td>Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2023</td>
<td>Principles of Economics II</td>
<td>3</td>
</tr>
<tr>
<td>BUL 3111</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>ENC 3210</td>
<td>Business Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>MAC 3233</td>
<td>Concepts of Calculus</td>
<td>3</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>ECO 3411</td>
<td>Quant. Methods &amp; Bus. Decisional Anal.</td>
<td>3</td>
</tr>
<tr>
<td>CAP 3001</td>
<td>Comp. Fund. for Business App.</td>
<td>3</td>
</tr>
<tr>
<td>FIN 3403</td>
<td>* Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3025</td>
<td>Management of Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MAR 3023</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3504</td>
<td>Production/Operations Management</td>
<td>3</td>
</tr>
<tr>
<td>GEB 4351</td>
<td>Business in the International Environment</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4720</td>
<td>Business Policies</td>
<td>3</td>
</tr>
</tbody>
</table>

Students in the College of Business Administration cannot receive credit for the following courses: MAN 3705, 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 where a "C" or better is required in each course.

STUDENT LOAD-MAXIMUM

A student who is enrolled in 15 semester hours of course work is considered to be carrying a normal academic load. Students desiring to take 20 or more semester hours of course work must obtain permission from the department chairperson of their major area.

COMMUNITY/JUNIOR COLLEGE TRANSFERS

Community/Junior College students who plan to transfer to the College of Business Administration at the University of Central Florida are advised to:

1. Complete the entire university-parallel program at the Community/Junior College (the Associate of Arts Degree) including:
   A. the general education requirements prescribed by the Community/Junior College
   B. the one-year accounting and economics sequences (sophomore years)
   C. a course in College Algebra

2. 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.

MINOR (not open to Business Majors)

The College of Business Administration offers a minor consisting of 24 semester hours.

Required courses: ACG 2001, 2011 or ACG 3023; ECO 2023, 2013; FIN 3403; MAN 3025; MAR 3023; one 3000/4000 level business course elective. A GPA of 2.0 is required for these courses. FIN 3100, GEB 3004, and MAN 3705 may not be used as the business course elective.

MINOR (Restricted to Business Majors)

The College of Business Administration offers a minor in International Business consisting of 18 semester hours.

Required Courses: GEB 4351, ECO 3702, FIN 4624, MAR 4243; Electives: 6 hours
of the following courses—ACG 5255, 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.

SCHOOL OF ACCOUNTING
Director: H. Anderson, PH 403, Phone 275-2463

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.
Special qualifications for satisfying this program's requirements are:

a. A minimum grade of "C" must be earned in each accounting course completed. Principles of Accounting I and II are included under this rule.
b. A transfer student to this program must:
   1. take a minimum of twelve (12) semester hours in accounting at the University of Central Florida 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 and legal environment of business and society such as political science, public administration, and ethics.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: ACCOUNTING

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program
   (See page 46)
3. Required Courses
   a. Business College Common Body of Knowledge
   b. 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 3401 Acc Info Systems I 3 hours
      TAX 4001 Federal Income Tax I 3 hours
      ACG 4651 Auditing 3 hours
4. Restricted Electives:
   ECP 4703 Managerial Economics 3 hours
   FIN 4430 Asset Selection Management 3 hours
   or
   FIN 4431 Financial Structure Management 3 hours
5. Electives: No more than 6 semester hours of accounting electives may be counted toward the Bachelor's Degree.

Total Semester Hours Required 126

NEW CPA EXAMINATION REQUIREMENTS
Effective August 31, 1983, a new State of Florida CPA Law was enacted. It states that to qualify to sit for the CPA exam, one must possess thirty (30) additional semester hours of credit beyond 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:
9 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 (may include additional accounting courses above the 36 hour requirement)

Because of these increased educational requirements, no experience or additional course work is needed for certification.

To supply the necessary coursework required by the new law, the School of Accounting has developed two separate avenues of study for its majors; the FIFTH YEAR Program and the MASTER OF SCIENCE IN ACCOUNTING degree program. Please see the graduate catalog for program requirements.

DEPARTMENT OF ECONOMICS
Chairman: B. Rungeling, PH 444, Phone 275-2465
Faculty: Cicchetti, Day, Fritz, D. Hosni, Joseph, Kilbride, McHone, McNiel, Pennington, Raffa, White, Xander

The discipline of economics is most frequently described as the study of how man uses limited resources to satisfy his wants. Within this framework, the economist is concerned with (1) the functioning of the economy as a whole and (2) the functioning of individual units within the economy, particularly the business firm and the consumer.

Courses in economics are designed to provide a sound grasp of tools of analysis and measurement, as well as the ability to apply systematic analysis to business problems.

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 3702, 4224, 4303, 4412, 4504; ECP 3203, 3424, 3433, 4403, 4603, 4703; ECS 4003, 4013.
BACHELOR OF SCIENCE IN BUSINESS
ADMINISTRATION: ECONOMICS

Degree Requirements
1. University graduation requirements
(See pages 44-48)
2. General Education Program
(See page 46)
3. Required Courses
   a. Business College Common Body of Knowledge
   b. 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 3702 International Economics 3 hours
   ECO 4224 Money: Issues and Analysis 3 hours
   ECO 4303 History of Economic Thought 3 hours
   ECO 4412 Economic Statistics and Econometrics 3 hours
   ECO 4504 Economics of the Public Sector 3 hours
   ECP 3203 Contemporary Labor Economics 3 hours
   ECP 3424 The Economics of Regulated Industries 3 hours
   ECP 3433 Transportation Economics 3 hours
   ECP 4403 Business, Government & Industrial Organization 3 hours
   ECP 4603 Urban and Regional Economic Problems 3 hours
   ECP 4703 Managerial Economics 3 hours
   ECS 4003 Comparative Economic Systems 3 hours
   ECS 4013 Economic Development 3 hours
5. Electives
   Total Semester Hours Required 120

DEPARTMENT OF FINANCE
Chairman: D. Klock, PH 436, Phone 275-2525
Faculty: Atkinson, Chambers, Cheney, Klock, Madura, Modani, Moses, Page, Reiff, Scott, Veit

The program in finance is designed to provide the student with a broad knowledge
in the areas of business finance, investments, financial institutions, insurance, risk
management and real estate. The program provides the students with the theoretical
background and the tools of analysis required for making effective judgements in
finance.

The study of finance prepares the student for careers in business financial manage­
ment. In addition to all forms of nonfinancial institutions, commercial banks, savings
and loan associations, insurance companies, and investment firms represent some
of the financial institutions seeking the student with a major in finance.

BACHELOR OF SCIENCE IN BUSINESS
ADMINISTRATION: FINANCE

Degree Requirements
1. University graduation requirements
(See pages 44-48)
2. General Education Program
(See page 46)
3. Required Courses
   a. Business College Common Body of Knowledge
   b. FIN 3502 Investments 3 hours
      FIN 3453 Financial Models 3 hours
      FIN 3233 Money and Banking 3 hours
   c. Select one of the following:
      FIN 4430 Asset Selection Management 3 hours
      FIN 4431 Financial Structure Management 3 hours
4. Restricted Electives
   (Select 4 courses)
   FIN 3303  Financial Institutions  3 hours
   FIN 3324  Commercial Bank Administration  3 hours
   FIN 4430  Asset Selection Management  (if not used above in 3)  3 hours
   FIN 4431  Financial Structure Management  (if not used above in 3)  3 hours
   FIN 4520  Security Analysis and Portfolio Management  3 hours
   FIN 4624  International Finance  3 hours
   REE 3040  Fundamentals of Real Estate  3 hours
   REE 4100  Real Estate Investment Analysis  3 hours
   RMI 3015  Principles of Risk and Insurance  3 hours

5. Electives

   Total Semester Hours Required  120

GENERAL BUSINESS ADMINISTRATION

This option allows students to develop a general program of study which will satisfy career objectives not provided for by the specialized areas of concentration. To pursue this option, students must make application through the office of the Assistant Dean of the College of Business Administration. An academic advisor will be assigned to assist each student in developing a meaningful program of study.
BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION:
GENERAL BUSINESS ADMINISTRATION

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program
   (See page 46)
3. Required Courses
   a. Business College Common Body of Knowledge
   b. One (1) additional course beyond the Common Body of Knowledge in Finance
      and Marketing (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) in the College of
   Business Administration.
5. Electives

Total Semester Hours Required 120

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: HOSPITALITY MANAGEMENT

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program
   (See page 46)
3. Required Courses
   a. Business College Common Body of Knowledge
   b. Hospitality Management Core courses
      (For information on the above inquire at the Dick Pope, Sr. Institute for Tourism
       Studies)
4. Restricted Electives
   (For information on the above inquire at the Dick Pope, Sr. Institute for Tourism
    Studies)
5. Electives

Total Semester Hours Required 120

DEPARTMENT OF MANAGEMENT
Chairman: H. Jones, PH 343, Phone 275-2376
Faculty: Berry, Bogumil, Bondurant, Burnette, Callarman, Comish, Eubanks, Fernald,
Hollis, T. Jones, Martin, McCartney, A. Schou, C. Schou, Stevens

The study of management includes an investigation into the processes and tech­
niques 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, satisfac­
tion 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. University graduation requirements
   (See pages 44-48)
2. General Education Program
   (See page 46)
3. Required Courses
   a. Business College Common Body of Knowledge
   b. MAN 3301 Personnel Management 3 hours
MAN 4201 Organization Theory 3 hours
MAN 4120 Business and Society 3 hours
MAN 4722 Information Systems Analysis 3 hours

4. Restricted Electives (Select a minimum of 3 courses)
MAN 4150 Human Relations in Management 3 hours
MAN 4854 Management Science 3 hours
MAN 4310 Personnel Management Issues 3 hours
MAN 4401 Labor Relations Management 3 hours
MAN 4420 Service Organization Management 3 hours
MAN 4590 Procurement Management 3 hours
MAN 4724 Implementing Information Systems 3 hours

5. Electives

Total Semester Hours Required 120 hours

DEPARTMENT OF MARKETING
Chairman: G. Paul, PH 404, Phone 275-2108
Faculty: Butler, Calantone, Conley, Davis, Dewitt, Fuller, Gillett, Joyce, Rubin, Teeple

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. University graduation requirements
   (See pages 44-48)
2. General Education Program
   (See page 46)
3. Required Courses
   a. Business College
   b. MAR 3503 Consumer Market Behavior 3 hours
      MAR 3613 Marketing Research 3 hours
      MAR 4722 Marketing Management 3 hours
      MAR 4713 Marketing Policies and Strategies 3 hours
4. Restricted Electives
   Minimum of 3 courses
   MAR 3303 Advertising Management 3 hours
   MAR 3403 Sales Management 3 hours
   MAR 4123 Product Management 3 hours
   MAR 4153 Retailing Management 3 hours
   MAR 4203 Channels of Distribution Management 3 hours
   MAR 4243 International Marketing 3 hours
   MAR 4703 Contemporary Marketing Issues 3 hours
5. Electives

Total Semester Hours Required 120 hours
UNDERGRADUATE PROGRAMS

Art Education (BA)
Business Education (Comprehensive) (BA)
Educational Media Specialist (BA)
Elementary Education (BA)
English Language Arts Education (BA)
Exceptional Child (BA)
Foreign Language Education (BA)
Mathematics Education (BA)
Physical Education (BA)
Science Education (BA)
Social Science Education (BA)
Speech Education (BA)
Technical/Vocational Education (BA)

GRADUATE PROGRAMS*

Masters Programs
Administration & Supervision (MA) (M.Ed)
Business Education (Comprehensive) (MA) (M.Ed)
Counselor Education (MA) (M.Ed)
Educational Media Specialist (MA) (M.Ed)
Elementary Education (MA) (M.Ed)
English Language Arts Education (MA) (M.Ed)
Exceptional Child (MA) (M.Ed)
Mathematics Education (MA) (M.Ed)
Music Education (M.Ed)
Physical Education (MA) (M.Ed)
Reading Specialist (M.Ed)
School Psychology (MS)
Science Education (MA) (M.Ed)
Social Science Education (MA) (M.Ed)
Visual Arts Education (MA) (M.Ed)
Vocational Education (MA) (M.Ed)

Doctoral Programs
Administration & Supervision (Ed.D) (Ed.S)
Community and Junior College Instruction (Ed.D) (Ed.S)
Counseling Education (Ed.D)

*See the Graduate catalog for information
Students who are planning a career in teaching in the elementary or secondary schools should enroll in this College. Programs are offered leading to the Bachelor of Arts, Master of Education and Master of Arts degree in Education.

The professional program is concerned primarily with the interrelated and interdependent areas of Specialized Preparation and Professional Preparation.

In general, specialized preparation in subject matter areas for secondary education majors is offered by the other colleges, while specialized elementary education content courses are offered by the College of Education.

The professional sequence, a responsibility of the College of Education, is designed for developing:

A. Insights into the processes of school curriculum and organization.
B. Understanding of how learning takes place with methods and procedures needed for successful teaching.
C. An understanding of the society in which a school functions.
D. An awareness of the individual of his relationship with students and the community.
E. A realization of the challenges and responsibilities in the field of education and a basic philosophy of education.

Considerable emphasis is given to providing all education majors with an opportunity to have cooperatively planned learning experiences in a laboratory setting which are specifically designed to blend realistic practical experience with theoretical knowledge. Public elementary and secondary schools in Central Florida serve as educational laboratories for the College of Education.

UNDERGRADUATE CAREER TEACHING PROGRAM

Students are encouraged to designate the College of Education as their intended major college as early as this becomes their clear intent. Junior transfer students should enter Phase I of the professional education sequence during their initial term in attendance.

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 recorded as part of their official university academic record, 2) have an overall and UCF academic average (G.P.A.) of 2.0 or above, 3) have satisfactorily completed Phase I, and 4) submit a formal junior student teaching application to the college Student Internships Office.

All UCF Teacher Education Programs provide for two semesters of student teaching—one at the junior level and one at the senior level.

The Career Teacher Program consists of three distinct phases:

PHASE I—EXPLORATION

EDG 4341 Teaching Strategies 4 hours

This is required of all education students and is designed to explore the basic strategies of teaching. Various aspects of teaching and child development are analyzed to help provide the student a basis for a decision whether or not to pursue teaching as a career. Any university student of sophomore level or higher may enroll. This phase is prerequisite to admission to the State Approved Program of Teacher Education and/or junior student teaching.

PHASE II—DEVELOPMENTAL

Junior Student Teaching 6 hours
EDE 3942 Junior Student Teaching-Elementary OR
EDE 3943 Junior Student Teaching-All K-12 majors OR
ESE 3940 Junior Student Teaching-Secondary

Laboratory experience in Phase II is jointly planned by public school personnel and university faculty and conducted in approved Student Teaching Centers. Experience
is provided at different grade levels and in different settings. In this phase the prospective teacher participates in activities to develop and sharpen specific teaching skills and to expand teaching field knowledge.

**Application Deadline**—An application for Phase II (junior) student teaching must be submitted. Applications are due in at least one semester (summer excluded) prior to registration.

**PHASE III—APPLICATION**

**Senior Year Student Teaching** 12 hours

- EDE 4943  Senior Student Teaching—Elementary OR
- ESE 4943  Senior Student Teaching—Secondary

In Phase III the student applies the fundamentals of teaching and academic knowledge previously attained under the supervision of a selected teacher; the student is responsible for developing and executing plans. A full semester is devoted to student teaching. To be admitted to Phase III, a student must have satisfied the requirements for Phase I and Phase II; have a 2.2 average in his area of academic specialization; have a 2.0 UCF and overall academic average; be recommended by his department and be accepted by the Student Internships office.

**Application Deadline**—An application for Phase III Student Teaching must be submitted at least one semester (summer excluded) prior to registration. Application deadlines will be published and followed.

**CERTIFICATION FOR TEACHING**

All College of Education undergraduate curricula academically fulfill State of Florida certification requirements for a Bachelor's Degree Florida Teaching Certificate. There is an “interstate” agreement with several states for College of Education graduates who desire to teach outside Florida. Persons who complete a Florida State Approved Program are certifiable upon completed application in any of the participant states (post degree requirements excluded, i.e., state exam.)

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.
STUDENT INTERNSHIPS PROGRAM
Director: Harold J. Haughee, ED 214, Phone 275-2401

The UCF program for students planning a career in teaching is considered innovative and functional because of early and continuous field experience which attempts to blend theoretical consideration with the practical. Cooperative planning and articulation with school personnel assures appropriate activities in education settings. A full year of internship is an integral part of each program and consists of one junior and one senior semester along with appropriate support courses.

DEPARTMENT OF EDUCATIONAL FOUNDATIONS
Chairman: William K. Esler, ED 243, Phone 275-2426
Faculty: Barr-Johnson, Beadle, Blume, Dziuban, Harlacher, Harrow, Hiett, Hoover, Lange, Manning, Miller, Olson, Sciortino, Sullivan, Wood

PROFESSIONAL PREPARATION
The Educational Foundations Department conducts professional preparation courses that include topics and skills required by all teachers. The twenty-three generic teaching competencies as defined by the Florida Department of Education are included. State teacher certification requirements (Professional Preparation) include the following:

EDF 4285 Application of Technology in Education 3 hours
EDG 4341 Teaching Strategies 4 hours
EDG 4324 Teaching in the Schools 3 hours
EDF 3603 Analysis of Educational Foundations 3 hours
EDF 4214 Classroom Learning Principles 3 hours
EDE 3942, 3943 or ESE 3940 Junior Year Student Teaching 6 hours
EDE 4943 or ESE 4943 Senior Year Student Teaching 12 hours
EDG 4341, Teaching Strategies, is the preferred entry course for the Exploratory portion (Phase I) of the teacher education program. Courses to fulfill the Special Methods and Specialization certification requirements are offered by other departments within the college and university.

DEPARTMENT OF EDUCATIONAL SERVICES
Chairman: J. Powell, ED 318, Phone 275-3581
Faculty: Bollet, Cleland, Cornell, Gergley, Hernandez, Higginbotham, Hunter, Lue, Marowitz, Martin, Mealor, Midgett, Olson, Orwig, Renner, Rohter, Rothberg, Shadgett, Toler

The focus of the Department of Educational Services is to provide training for specialists in school and non-school environments. Undergraduate academic major programs leading to bachelor's degrees and K-12 certification are offered in Educational Media, Exceptional Child Education, and Physical Education. In addition, minors, certification programs and masters level (M.A., M.S., or M.Ed.) graduate programs are available in the following areas: Administration & Supervision, Educational Media, Exceptional Child Education, Counselor Education, Physical Education, and School Psychology. Cooperative doctoral programs have been established with the University of Florida (Counselor Education) and Florida Atlantic University (Administration & Supervision) which lead to a Doctorate of Education degree. At present, other specialization areas are being considered for cooperative doctoral programs.

BACHELOR OF ARTS: EXCEPTIONAL CHILD EDUCATION
1. University graduation requirements (See pages 44-48)
2. Special college and/or department requirements (See pages 124 and 125)
3. Required courses
   Specialization
   RED 3012 Foundations of Reading 3 hours
   MAE 3112 Teaching Math in the Elementary School 3 hours
   PET 4601 Motor Development: Habilitation &
EEX 3010 Remediation for Exceptional Students 3 hours
EEX 3102 Orientation to Special Education 3 hours
EEX 3221 Assessment of Exceptional Learners 3 hours
EEX 4601 Introduction to Behavioral Management 3 hours
EEX 3263 Arts and Sciences for Exceptional Students 4 hours
EEX 4240 Techniques for the Exceptional Adolescent-Adult 3 hours
EED 4011 Introduction to the Emotionally Disturbed 4 hours
or
ELD 4011 Introduction to Specific Learning Disabilities 4 hours
or
EMR 4011 Introduction to Mental Retardation 4 hours
EED 4212 Curriculum and Program Adaptations, E.H. 4 hours
or
ELD 4242 Program Planning for Specific Learning Disabilities 4 hours
or
EMR 4371 Curriculum Method and Materials for Retarded Persons 4 hours

Electives
Minimum Total Semester Hours Required 127 hours

BACHELOR OF ARTS: PHYSICAL EDUCATION

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See pages 124 and 125)

3. Required Courses
   Specialization
   DAE 3301 Instructional Analysis of Dance & Rhythmics 2 hours
   LEI 3434C Recreation and Intramurals 2 hours
   PEO 3011C Instructional Analysis in Team Sports 4 hours
   PEO 3031C Instructional Analysis of Individual Activities 2 hours
   PEP 3000 Instructional Analysis of Performer Centered Activities 2 hours
   PEQ 3101C Instructional Analysis in Aquatics 2 hours
   PET 3450C Teaching PE in the Secondary School 2 hours
   PET 3453 Coaching Theory 2 hours
   PET 3461C Teaching PE in the Elementary School 2 hours
   PET 4050C Motor Development and Learning 3 hours
   PET 4310C Kinesiology 2 hours
   PET 4320C Kinesiologic Anatomy 2 hours
   PET 4370C Exercise Physiology-Cardiovascular 2 hours
   PET 4371C Exercise Physiology-Respiratory 2 hours
   PET 4410 Organization and Administration of Typical and Atypical Physical Education Programs 2 hours
   PET 4622C Care and Prevention of Athletic Injuries 2 hours
   PET 4640 Adapted Physical Education 2 hours

4. Restricted Electives
   None

5. Electives
Minimum Total Semester Hours Required 127 hours
BACHELOR OF ARTS: EDUCATIONAL MEDIA SPECIALIST

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See pages 124 and 125)

3. Required Courses
   Specialization
   LIS 3016 Introduction to Media Services 3 hours
   LIS 3412 Media for Children and Young Adults 3 hours
   LIS 4310 Production of Materials for the Media Center 3 hours
   LIS 4422 Administration and Operation of the Media Center 3 hours
   LIS 4428 Utilization of Educational Media 3 hours
   LIS 4453 School Media Services 3 hours
   LIS 4510 Development of Media Services 3 hours
   LIS 4540 Interactive Techniques in Media Services 3 hours
   LIS 4601 Reference Sources and Services 3 hours
   LIS 4731 Organization of Media and Information 3 hours

4. Restricted Electives
   Electives in supportive areas to be selected on advice of Educational Media Counselor 15 hours

5. Electives
   Minimum Total Semester Hours Required 127 hours

DEPARTMENT OF INSTRUCTIONAL PROGRAMS

Chairman: R. Martin, ED 346, Phone 275-2939
Faculty: Anderson, Armstrong, Bird, Brumbaugh, Clarke, Cox, Green, Gurney, Hall, Hopkins, Hudson, Hynes, Joels, McAllister, McGee, Miller, Palmer, Paugh, Siebert, Sorg, Thompson, Weidenheimer
Elementary Education

The career Elementary Education program is planned for students interested in the education of young 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, 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 (nursery and kindergarten). In combination with preparation to teach grades one through six, requirements may be met for preparation/certification to teach Kindergarten (6 semester hour minimum).

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, Chemistry, English, Foreign Language, Mathematics, Physics, Social Studies, and Speech.

Art/Music

Two programs are designed to prepare specialists to function at both the elementary and secondary levels (K-12). A major in Art Education (Visual Arts) is available for students with an interest in art. The Bachelor’s degree program in Music Education is located in the Department of Music with the Department of Instructional Programs responsible for professional requirements.

Vocational Education

The vocational education degree is for individuals in 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 for 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.

Business Education

A bachelor’s degree comprehensive curriculum is planned for students who desire to specialize in Business Education.

Minor

The Department of Instructional Programs offers a minor of Executive Secretary consisting of 24 hours.

Required Courses: BTE 2061, 3062, 2063, 3151, 4152, 3266, 4265, and 4366.

BACHELOR OF ARTS: ART EDUCATION

Degree Requirements

1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See pages 124 and 128)
3. Required Courses

   Specialization
   ART 2201C  Design Fundamentals I  3 hours
   ART 2300C  Drawing Fundamentals I  3 hours
   ART 3110C  Ceramics  3 hours
   ART 3230C  Design in Advertising  3 hours
   ART 3400C  Printmaking  3 hours
   ART 3510C  Painting  3 hours
   ART 3600C  Photography  3 hours
   ART 4130C  Fibers, Fabrics, Textiles and Synthetics  3 hours
### BACHELOR OF ARTS: BUSINESS EDUCATION

**Degree Requirements**

1. University graduation requirements  
   (See pages 44-48)

2. Special college and/or department requirements  
   (See pages 124 and 128)

3. **Required Courses**

   **Core Requirements**
   - ACG 2001 Principles of Accounting I 3 hours
   - ACG 2011 Principles of Accounting II 3 hours
   - BTE 2061 Typewriting Production 2 hours
   - BTE 3062 Professional Typewriting Production 3 hours
   - BTE 3266 Office Technology 3 hours
   - BTE 4265 Office Systems and Procedures 3 hours
   - BTE 4366 Business Correspondence 3 hours
   - BUL 3111 Legal Environment of Business 3 hours
   - ECO 2013 Principles of Economics I 3 hours
   - ECO 2023 Principles of Economics II 3 hours
   - EVT 3062 Professional Role of the Vocational Teacher 3 hours

   **Special Methods**
   - BTE 3391 Business Instruction Analysis I 2 hours
   - BTE 4393 Business Instruction Analysis III 2 hours

   **AREAS OF SPECIALIZATION (select one area)**
   
   **(a) Comprehensive Area**
   - BTE 2063 Principles of Shorthand I 3 hours
   - BTE 3151 Advanced Shorthand 3 hours
   - BTE 4152 Shorthand Dictation and Transcription 3 hours
   - BTE 4392 Business Instructional Analysis II 2 hours
   - BTE 4392L Shorthand Laboratory for Instructional Development 1 hour

   **(b) Basic Business and Accounting Area**
   - ACG 3103 Financial Accounting I 3 hours
   - CAP 3001 Computer Fundamentals for Business Applications 3 hours
   - CAP 3002 Business Application Programming 3 hours
   - MAN 3025 Management 3 hours

4. **Restricted Electives (none)**

5. **Electives**  
   Minimum Total Semester Hours Required 127 hours

### BACHELOR OF ARTS: ELEMENTARY EDUCATION

**Degree Requirements**

1. University graduation requirements  
   (See pages 44-48)
2. Special college and/or department requirements
(See pages 124 and 128)

3. Required Courses

Specialization

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARE 4313</td>
<td>Art in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>HLP 4460</td>
<td>Teaching Elementary School Health/</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Physical Education</td>
<td></td>
</tr>
<tr>
<td>LAE 3414</td>
<td>Literature for Children</td>
<td>3</td>
</tr>
<tr>
<td>LAE 4314</td>
<td>Language Arts in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>MAE 4326</td>
<td>How Children Learn Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MUE 3401</td>
<td>Music in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>SCE 3310</td>
<td>Teaching Science in the Elementary School</td>
<td>4</td>
</tr>
<tr>
<td>SSE 3312</td>
<td>Teaching Social Science in the</td>
<td>4</td>
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</table>

Special Methods

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED 3012</td>
<td>Basic Foundations of Reading</td>
<td>3</td>
</tr>
<tr>
<td>RED 4519</td>
<td>Diagnostic and Corrective Reading Strategies</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives (Area of Academic Concentration)
A minimum of 9 semester hours is required in a related field of academic concentration. Elementary Education majors are advised to select courses leading to certification to teach English, mathematics, social sciences, or sciences in the junior high school, which also may increase employability in a middle school or departmentalized elementary school; or Early Childhood Education; or another area. Prerequisites for “How Children Learn Mathematics” are MAE 1810 and MAE 2811 or MAE 3112 “Instruction of Mathematics in the Elementary School.” PHY 3015C is required (in addition to BSC 1020C and PHY 3014C).

5. Electives
Minimum Total Semester Hours Required 127 hours

BACHELOR OF ARTS: ENGLISH LANGUAGE ARTS EDUCATION

Degree Requirements
1. University graduation requirements
(See pages 44-48)

2. Special college and/or department requirements
(See pages 124 and 128)

3. Required Courses

Lower Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENC 1101</td>
<td>Composition I</td>
<td>3</td>
</tr>
<tr>
<td>ENC 1102</td>
<td>Composition II</td>
<td>3</td>
</tr>
<tr>
<td>LIT 3000</td>
<td>Literary Analysis</td>
<td>3</td>
</tr>
<tr>
<td>SPC 1014</td>
<td>Fundamentals of Oral Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

Literature

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENL 2010</td>
<td>English Literature I: Beowulf to 1660</td>
<td>3</td>
</tr>
<tr>
<td>ENL 3021</td>
<td>English Literature II: From 1660 to 1870</td>
<td>3</td>
</tr>
<tr>
<td>AML 2011</td>
<td>American Literature I</td>
<td>3</td>
</tr>
<tr>
<td>AML 3020</td>
<td>American Literature II</td>
<td>3</td>
</tr>
<tr>
<td>AML 4321</td>
<td>Modern American Literature</td>
<td>3</td>
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<tr>
<td>OR</td>
<td>Modern British Literature</td>
<td>3</td>
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</table>

Language and Composition

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENC 3310</td>
<td>Writing Skills</td>
<td>3</td>
</tr>
<tr>
<td>LIN 4341</td>
<td>Modern English Grammar</td>
<td>3</td>
</tr>
<tr>
<td>LAE 4342</td>
<td>Teaching Language and Composition</td>
<td>3</td>
</tr>
</tbody>
</table>

Special Methods

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAE 3335</td>
<td>English Instructional Analysis</td>
<td>4</td>
</tr>
</tbody>
</table>

4. Restricted Electives
Select from the following: ENL 4330, LIN 3010, ENL 3273, LAE 5464, LIN 4100 or other Literature courses.

5. Electives
A certification in Speech (7-12) is available with the following additional courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPC 1014</td>
<td>Fund Oral Comm</td>
<td>3</td>
</tr>
</tbody>
</table>
BACHELOR OF ARTS: FOREIGN LANGUAGE EDUCATION

Degree Requirements

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See pages 124 and 128)

3. Required Courses

   AREAS OF SPECIALIZATION (Select one)

   French Language
   - FLE 3063 Foreign Language as Human Behavior 2 hours
   - FRE 1100 Elementary Language and Civilization I 4 hours
   - FRE 1101 Elementary Language and Civilization II 4 hours
   - FRE 2200 Intermediate Language and Civilization I 4 hours
   - FRE 2201 Intermediate Language and Civilization II 4 hours
   - FRE 3240 French Conversation 3 hours
   - FRE 3420 French Composition 3 hours
   - FRW 3100 Survey of French Literature I 3 hours
   - FRW 3101 Survey of French Literature II 3 hours

   Spanish Language
   - FLE 3063 Foreign Language as Human Behavior 2 hours
   - SPN 1100 Elementary Language and Civilization I 4 hours
   - SPN 1101 Elementary Language and Civilization II 4 hours
   - SPN 2230 Intermediate Language and Civilization I 4 hours
   - SPN 2231 Intermediate Language and Civilization II 4 hours
   - SPN 3240 Spanish Conversation 3 hours
   - SPN 3420 Spanish Composition 3 hours
   - SPW 3100 Survey of Spanish Literature I 3 hours
   - SPW 3101 Survey of Spanish Literature II 3 hours

   Special Methods
   - FLE 3333 Foreign Language Instructional Analysis 4 hours

4. Restricted Electives
   Select upper division courses in Area of Specialization.
   - LIN 3010 or 4801 Language and Meaning 3 hours
   - ANT 3410 Social Anthropology 3 hours

5. Electives
   See your advisor concerning courses related to "English for Speakers of other Languages" (ESOL), and Bilingual Education.

Minimum Total Semester Hours Required 127 hours

BACHELOR OF ARTS: MATHEMATICS EDUCATION

Degree Requirements

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See pages 124 and 128)

3. Required Courses

   Specialization
   - MAC 1104 College Algebra 3 hours
   - MAC 1114 College Trigonometry 3 hours
   - MAC 3311 Calculus w/Analytic Geometry I 4 hours
   - MAC 3312 Calculus w/Analytic Geometry II 4 hours
   - MHF 2300 Logic & Proof 3 hours
   - MTG 4212 Modern Geometry 4 hours
   - STA 3023 Statistical Methods I 3 hours
   - COP 2510 Programming I 3 hours
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAE 5637</td>
<td>Lab Program in Math</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAE 3330</td>
<td>Math Instructional Analysis</td>
<td>4 hours</td>
</tr>
</tbody>
</table>
| **4. Restricted Electives**
| MAE 3330 | Math Instructional Analysis | 6-8 hours |
| **5. Electives**
| Select in consultation with advisor. | | |

**Minimum Total Semester Hours Required 127 hours**

### BACHELOR OF ARTS: SCIENCE EDUCATION

**Degree Requirements**

1. **University graduation requirements**
   (See pages 44-48)

2. **Special college and/or department requirements**
   (See pages 124 and 128)

3. **Required Courses**

#### Biology Specialization

**CORE**
- BSC 2010C | General Biology | 4 hours |
- CHM 1034 | General Chemistry | 3 hours |
- BOT 2010C | General Botany | 3 hours |
- PCB 3043 | Principles of Ecology | 3 hours |
- PCB 3043L | Principles of Ecology Laboratory | 1 hour |
- PCB 3063 | Genetics | 3 hours |
- PCB 3063L | Genetics Laboratory | 1 hour |
- ZOO 2010C | General Zoology | 3 hours |
- ZOO 3733C | Human Anatomy | 4 hours |

**Special Methods**
- SCE 3330 | Science Instructional Analysis | 4 hours |

4. **Restricted Electives**
   Select 6-8 hours from the following courses: BOT 3223C, 3303C, MCB 2013C, PCB 3703C.

5. **Electives**
   Select in consultation with advisor.

**Minimum Total Semester Hours Required 127 hours**

#### Chemistry Specialization

**CORE**
- CHM 2045 | Chemistry Fundamentals I | 4 hours |
- CHM 2046 | Chemistry Fundamentals II | 3 hours |
- CHM 2046L | Chemistry Fundamentals Laboratory | 1 hour |
- CHM 3121C | Analytical Chemistry | 5 hours |
- CHM 3210 | Organic Chemistry I | 3 hours |
- CHM 3211 | Organic Chemistry II | 3 hours |
- CHM 3211L | Organic Laboratory Techniques I | 2 hours |

**Special Methods**
- SCE 3330 | Science Instructional Analysis | 4 hours |

**Mathematics**
- MAC 1104 | College Algebra | 3 hours |
- MAC 1114 | College Trigonometry | 3 hours |
- MAC 3311 | Calculus with Analytic Geometry I | 4 hours |
- MAC 3312 | Calculus with Analytic Geometry II | 4 hours |

4. **Restricted Elective**
   Select one Chemistry course.

5. **Electives**
   Select in consultation with Advisor.

**Minimum Total Semester Hours Required 127 hours**

#### Physics Specialization

**CORE**
- AST 3005 | Astronomy | 3 hours |
- PHY 2040 | University Physics I | 3 hours |
- PHY 2040L | University Physics Laboratory I | 1 hour |
- PHY 2041 | University Physics II | 3 hours |
BACHELOR OF ARTS: SOCIAL SCIENCE EDUCATION

Degree Requirements

1. University graduation requirements

2. Special college and/or department requirements

3. Required Courses

Specialization (lower division)

ECO 2013 Principles of Economics I 3 hours
EUH 2000 Western Civilization I 3 hours
EUH 2001 Western Civilization II 3 hours
AMH 2010 U.S. History 1492-1877 3 hours
AMH 2020 U.S. History 1877-present 3 hours
POS 2041 American National Government 3 hours
SYG 2000 General Sociology 3 hours

Specialization (upper division)

GEO 3370 Resources Geography 3 hours
GEO 3470 or 3602 World Pol. Geog. or Urban Geog. 3 hours
CPO 3103 Comparative Politics 4 hours

Special Methods

SSE 3333 Social Science Instructional Analysis 4 hours

Minimum Total Semester Hours Required 127 hours
4. Restricted Electives (upper division)
   Select six hours from History, six hours from Sociology or Political Science, and
   three hours from the remaining area.
5. Electives
   Minimum Total Semester Hours Required 127 hours

BACHELOR OF ARTS: TECHNICAL/VOCAIONAL EDUCATION

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   This program differs from other programs in the college as noted below in #3.
3. Required Courses
   Professional Education
   Phase I Exploration
   EVT 3371 Essential Teaching Skills in VOED 3 hours
   EDF 4214 Classroom Learning Principles 3 hours
   Phase II Developmental
   EDF 4285 Application of Technology in Education 3 hours
   EVT 3365 Methods of Teaching in VOED Subjects 4 hours
   EVT 3367 Evaluation of Vocational Instruction 2 hours
   EVT 3562 Special Needs of Vocational Students 3 hours
   EVT 3815 Management of Vocational Classroom & Laboratory OR
   EVT 3311 Preparation for Clinical Teaching in VOED 3 hours
   EVT 3062 Professional Role of the Vocational Teacher 3 hours
   EVT 4066 Principles and Practices of VOED 3 hours
   Phase III Application
   EDG 4941 Directed Field Experience 12 hours

AREAS OF SPECIALIZATION

Health Occupations 30 hours
   Students must complete a specialization in the Health Occupations area by meeting
   the licensure requirements for teacher certification set forth in the Florida Accreditation Codes.
Industrial/Technical 30 hours
   Students must complete a specialization in an Industrial/Technical area by passing
   both the written and performance portions of the National Occupational Competency Test. This Occupational Competency Test must be successfully completed before
   the student is eligible for EDG 4941, Directed Field Experience.

In both Health Occupations and Industrial/Technical specializations, students must have completed at least two years of work experience PRIOR TO GRADUATION at
   the journeyman, professional, technician, engineer or trained employee level.

   A sample of National Occupational Competency Tests Available:
   Auto Mechanic Industrial Electrician
   Air Conditioning & Refrigeration Machine Drafting
   Architectural Drafting Machine Trades
   Audio-Visual Communication Major Appliance Repair
   Automotive Body & Fender Masonry
   Brick Masonry Printing
   Cabinet Making & Millwork Plumbing
   Carpentry Power Sewing
   Cosmetology Quantity Food Preparation
   Commercial Art Sheet Metal
   Diesel Engine Small Engine Repair
   Electrical Installation Tool & Die Making
   Electronics Communication Welding

4. Restricted Electives (none)
5. Electives (must be upper division level) (EVT 4368 recommended) 9 hours
   Minimum Total Semester Hours Required 123 hours
COLLEGE OF ENGINEERING

UNDERGRADUATE PROGRAMS

ENGINEERING
- Civil Engineering (BSE)
- Computer Engineering (BSE)
- Electrical Engineering (BSE)
- Environmental Engineering (BSE)
- Industrial Engineering (BSE)
- Mechanical Engineering (BSE)

ENGINEERING TECHNOLOGY
- Computer Technology (BET)
- Design Technology (BET)
- Electronics Technology (BET)
- Engineering Technology: Computer Technology (BET)
- Environmental Control Technology (BET)
  (To be discontinued Fall 1985)
- Operations Technology (BET)

GRADUATE PROGRAMS*

ENGINEERING
- Civil Engineering (MSE, MCE)
- Computer Engineering (MSE, Ph.D.)
- Electrical Engineering (MSE, Ph.D.)
- Engineering (MS)
- Environmental Engineering (MSE, Ph.D.)
- Industrial Engineering (MSE, Ph.D.)
- Mechanical Engineering (MSE, Ph.D.)

ENVIRONMENTAL SYSTEMS MANAGEMENT
- Environmental Systems Management (MSESM)

*See the Graduate Studies Catalog for information
COLLEGE OF ENGINEERING
Dean: R. Kersten, EN 207, Phone 275-2156
Associate Dean: G. Schrader, EN 212, Phone 275-2156

PROFESSIONAL COLLEGE OF ENGINEERING
The Professional College of Engineering at the University of Central Florida was formally organized by the Engineering faculty in the Fall of 1974. The objective of the Professional College of Engineering is to produce well qualified, competent graduates from outstanding accredited programs for the practice of engineering and to conduct research and service responsive to the State of Florida and national needs. To achieve high professional status, the Professional College of Engineering has developed a unique and outstanding educational program to serve the people of Florida by providing engineering education in specifically selected professional disciplines.

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.

The satisfactory completion of an engineering curriculum of a minimum of 132 semester hours, including general education courses, an engineering core curriculum, and both required and elective courses of study in an engineering option of the student's choice, leads to the degree of Bachelor of Science in Engineering. Graduates of the College of Engineering may pursue a wide variety of careers in private practice, industry, education, and government. It is the policy of the Professional College of Engineering that all graduates from the Engineering Curriculum who receive the Bachelor of Science in Engineering or Master of Science in Engineering degrees must have taken the Fundamentals of Engineering examination of the Florida State Board of Professional Engineers as a graduation requirement.

Students who wish to be admitted to full freshman standing in engineering studies in the College should present certain secondary school units in addition to the minimum University requirements. A total of 3½ units is required in mathematics, including advanced algebra, geometry, and trigonometry. Calculus is recommended. The laboratory sciences chosen must include at least one unit in physics and one in chemistry. One unit of biology is strongly recommended.

Students who have omissions or deficiencies in subject matter preparation may be required to complete additional university credit course work which may not be applied toward an engineering degree. The most common deficiencies that must be removed before beginning regular engineering course work are algebra, trigonometry, general physics, English and general chemistry.

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 the University of Central Florida'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, 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 will be determined by the Dean of the College.

The College of Engineering offers a special Five-Year Program to those 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
Satisfactory completion of an engineering technology curriculum of 128 semester hours, including general education courses, an engineering technology core curriculum, and required and elective courses in a selected technology module of the student's
choice, leads to the degree of Bachelor of Engineering Technology. Technology graduates may also seek a wide variety of careers in private practice, industry, and government. Programs of study are applications oriented and are designed to assist the student in the attainment of his or her career objectives.

Students who wish to be admitted to the engineering technology program must possess an Associate in Science (or equivalent education) degree in an appropriate engineering technology area. The engineering technology program provides junior and senior year education. Freshman and sophomore year technology education must be taken at a community college or equivalent. Typically students who have completed the A.S. degree in technology should complete the BET program in two additional years. The status of a student and the specific credits acceptable toward the degree will be determined by the Dean of the College. Provisional credits accepted for transferred course work will become final only after a student has demonstrated the ability to do satisfactory work at the University.

**CERTIFICATE PROGRAM: ENGINEERING, TECHNOLOGY, AND SOCIETY**

Contact Person: J. Paul Hartman, EN 215B, Phone 275-2156

The College of Engineering offers a certificate program to interested students within the University of Central Florida in the programmatic area of Engineering, Technology, and Society (ETS). The program is primarily intended for students not enrolled in the College of Engineering. To meet the requirements, the students must complete a minimum of 14-15 semester hours as follows:

Four or five of the following courses: (12 hours minimum)
- EGN 4033 Technology and Social Change
- EGN 4811 Engineering and Technology in Canada
- EGN 4814 Engineering and Technology in History
- EGN 4815 Historical Architecture
- EGN 4818 Technology in America
- EGN 4824 Energy and Society
- EGN 4825 Environment and Society
- EGN 4832 Computers, Cybernetics and Society
- EGN 4844 Man and Machine

An Independent Study or Research Project (2-3 hours)
- EGN 4906 or EGN 4912

The Independent Study or Research Project will generally be done after the student has completed at least 3 of the specified courses and has developed an appropriate project under the guidance of one of the instructors.
STUDENT PERFORMANCE

Prior to enrolling in courses at the professional level, each student must: (1) receive approval from the office of the Dean of Engineering, and (2) secure from his advisor an approved course of study for his remaining work. Generally, students with a 2.250 grade point average or higher in the basic phase will receive approval.

Counseling is provided so that the student may be aided in making a choice of major. Required and elective courses for each area are listed later in this Bulletin and changes or substitutions may be made only with the approval of the Dean.

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.

A student enrolled in the College as an undergraduate must fulfill all University degree requirements including the General Education Program as well as the specialized curriculum requirements for the particular degree option being pursued in either engineering or engineering technology. To be certified for graduation, a student must achieve a minimum grade point average of: (1) 2.250 in all core courses; (2) 2.250 in all courses in the major (option); and (3) 2.000 in remaining course work presented for the degree.

BACHELOR OF SCIENCE IN ENGINEERING DEGREE PROGRAM


Engineering is one of the most important evolutionary forces in civilization today. The professional engineer should assume a leading role not only in the conceptual and planning stages but also in the design, manufacturing, construction, operation, and management phases of various engineering facilities and programs. At the same time, the professional engineer should understand that engineering innovation is a means of solving problems in our society and accept a large measure of social responsibility for significant engineering developments.

The professional engineer is the key individual in a team of technical specialists which includes engineering design specialists, engineering operations and management specialists, and engineering technicians. It is the purpose of the University of Central Florida's engineering program to provide the broad university level educational opportunities requisite for preparing qualified individuals to make effective contributions through careers in engineering and applied science in our technologically oriented society.

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 for 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. For assistance and counsel in planning a program, each student will be assigned an advisor from the instructional staff in his or her chosen area of specialization.

ENGINEERING CORE REQUIREMENTS

The engineering core consists of basic 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.

**BASIC PHASE**

<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>COP 3215</td>
<td>Programming and Numerical Methods²</td>
<td>3</td>
</tr>
<tr>
<td>or EGN 3210</td>
<td>Engineering Analysis and Computation²</td>
<td>3</td>
</tr>
<tr>
<td>EGN 1111C</td>
<td>Engineering Graphics</td>
<td>2</td>
</tr>
</tbody>
</table>

139
CHS 1440  Fundamentals of Chemistry For Engineers\(^3\)  4 hours
PHY 3048  Physics For Engineers and Scientists I\(^4\)  3 hours
PHY 3049  Physics For Engineers and Scientists II  3 hours
PHY 3048L or PHY 3049L  Laboratory Elective\(^2\)  1 hour
          or CHM 2046L
EGN 3311  Engineering Analysis-Statics  3 hours
EGN 3363C  Structure and Properties of Materials  3 hours
EGN 3613  Engineering Economic Analysis  2 hours
EGN 3704  Engineering and the Environment  2 hours
MAC 3311,3312,3313  Calculus and Analytic Geometry  12 hours
Biological or Earth Science Electives\(^2\)  3 hours

\(^1\)Includes portions of the General Education Program.
\(^2\)Consult Department Chairman for specific course required in option.
\(^3\)Students without one secondary school unit of Chemistry should enroll in CHM 1034 and CHM 2046L prior to taking CHS 1440.
\(^4\)Students without one secondary school unit of Physics should enroll in PHY 2050C prior to taking PHY 3048.

**PROFESSIONAL PHASE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN 3321</td>
<td>Engineering Analysis-Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3331C</td>
<td>Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3343</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3353C</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3373</td>
<td>Principles of Electrical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3375C</td>
<td>Electrical Devices and Systems</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3703</td>
<td>Systems Analysis(^6)</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGN 4714</td>
<td>Linear Control Systems(^6)</td>
<td>3</td>
</tr>
<tr>
<td>EGN 4624</td>
<td>Engineering Administration</td>
<td>3</td>
</tr>
<tr>
<td>EGN 4634</td>
<td>Operations Research</td>
<td>2</td>
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<tr>
<td>MAP 3302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3101</td>
<td>Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>STA 3032</td>
<td>Probability and Statistics for Engineers</td>
<td>3</td>
</tr>
</tbody>
</table>

\(^6\)Consult Department Chairman for specific course required in option.
DEPARTMENT OF CIVIL ENGINEERING AND ENVIRONMENTAL SCIENCES

Chairman: M. Wanielista, EN 410, Phone 275-2841
Faculty: Block, Carroll, Cooper, Dietz, Harper, Hartman, Jackson, Kersten, Kuo, Leftwich, Palmer, Rodriguez-Ramos, Seaman, R. Smith, Taylor, Yousef

The Department of Civil Engineering and Environmental Sciences offers an option in Environmental Engineering and an option in Civil Engineering. The Environmental Engineering option is concerned primarily with the interaction of man and his environment, and the planning, design, and control of systems for environmental quality management, with emphasis on the water environment. The Civil Engineering option is primarily concerned with fundamental civil engineering design and analysis skills in such areas as structures, soil mechanics, sanitary engineering and transportation. Environmental and civil engineers are responsible for research, development, planning, design, and construction of structures and processes that form the basis of contemporary civilization.

Programs of study are available within these options which enable the student to pursue an integrated sequence of courses in major fields. These include not only basic and fundamental civil and environmental engineering disciplines, but also specialized support courses in areas of hazardous wastes and water resources, structures and geotechnical engineering, and transportation and urban systems engineering, and construction management. These courses reflect contemporary developments and trends in these engineering disciplines. The undergraduate degree programs in Civil Engineering and Environmental Engineering (leading to the B.S.E. degree) are fully accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

BACHELOR OF SCIENCE IN ENGINEERING: CIVIL ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program requirements
   (See page 46)
3. Engineering core requirements
   (See page 139)
4. Required Courses
   CES 4124 Structural Engineering Analysis 3 hours
   CES 4605 Structural Steel Design 3 hours
   or
   CES 4704 Structural Concrete Design
   ECI 4305C Geotechnical Engineering I 3 hours
   Civil Engineering Design Courses
   (1 hr. each) 2 hours
   ENV 4404 Hydrology and Hydraulics 4 hours
   ENV 4504 Environmental Engineering-Process Design 4 hours
   TTE 4004 Transportation Engineering 3 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 chairman. 7 hours
6. Electives
   None

Total Semester Hours Required 132

BACHELOR OF SCIENCE IN ENGINEERING: ENVIRONMENTAL ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program requirements
(See page 46)

3. Engineering core requirements
(See page 139)

4. Required Courses

- EES 4202 Chemical Process Control 3 hours
- EES 4204 Biological Process Control 3 hours
- ENV 4119 Air Pollution 3 hours
- ENV 4355 Solid and Hazardous Wastes 3 hours
- ENV 4404 Hydrology and Hydraulics 4 hours
- ENV 4433 Water Resources Design 1 hour
- ENV 4434 Environmental Engineering Systems Design 1 hour
- ENV 4504 Environmental Engineering Process Design 4 hours

5. Restricted Electives

- Chemical Process Control 3 hours
- Biological Process Control 3 hours
- Solid and Hazardous Wastes 3 hours
- Hydrology and Hydraulics 4 hours
- Water Resources Design 1 hour
- Environmental Engineering Systems Design 1 hour
- Environmental Engineering Process Design 4 hours

Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chairman, and must include an additional design course. 7 hours

6. Electives

None

Total Semester Hours Required 132

DEPARTMENT OF COMPUTER ENGINEERING

Acting Chairman: C. Bauer, EN 412, Phone 275-2236
Faculty: Bauer, Klee, Linton, Patz, Sammer, Simons

In contemporary professional engineering practice, and in research and development activities there is an increasing need for engineers with a high degree of training and capability in the application of mathematics and computers to the modeling, simulation and solution of complex technical problems. Many of our modern industries and government organizations are involved in the design and analysis of highly complex equipment and systems often requiring rigorous mathematical treatment which can only be carried out effectively through the use of modern, high speed, digital/analog/hybrid computer facilities. The computer has become an indispensable partner to the aerospace systems designer, the microelectronic circuit designer, the environmental systems analyst, the industrial manager, and many other professional engineering oriented activities. Thus, students majoring in Computer Engineering will enjoy a broad spectrum of challenging opportunities.

The option is inter-disciplinary and allows considerable flexibility in tailoring programs to fit individual student interest. The undergraduate degree program in Computer Engineering is fully accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).
BACHELOR OF SCIENCE IN ENGINEERING:
COMPUTER ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program requirements
   (See page 46)
3. Engineering core requirements
   (See page 139)
4. Required Courses
   ECM 4504 Mini-Computers in Engineering Systems 3 hours
   ECM 4804 Engineering Software Design 3 hours
   EEL 3342C Introduction to Digital Circuits and Systems 4 hours
   EEL 4701C Digital Systems Organization 3 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
   man, and must include a course in Data Systems and one of the following groups:
   Group A (EEL 4702 and EEL 4343C) or Group B (ECM 4124 and ECM 4411). 16 hours
6. Electives
   None
Total Semester Hours Required 132

DEPARTMENT OF ELECTRICAL ENGINEERING
AND COMMUNICATION SCIENCES
Acting Chairman: R. Walker, EN 315, Phone 275-2786
Faculty: Belkerdid, Erickson, Harden, Harris, Litka, Malocha, Mathews, Martin, Miller,
Petrasko, Phillips, Radloff, Towle, Walker, Walters

Electrical Engineers are primarily concerned with the development and utilization
of devices and systems which are based on electrical phenomena. The range of ap­
plication includes computer systems, electronics, control systems, electrical power
utilization, communication systems, medical instrumentation, etc. The electrical
engineer can find professional challenges in virtually every facet of modern technology.
The option in Electrical Engineering is designed to present the basic electrical
engineering principles which are common to this broad spectrum of application. In
addition, courses are offered which present in-depth studies of specific electrical
engineering sub-disciplines such as computer engineering, electrical networks, and
electronics, electromagnetic fields and microwaves, electromechanics and control,
power transmission and utilization, communication and information theory, and solid
state systems and devices.
Many modern scientific developments are either essentially electrical in character
or depend on electrical equipment and technique. Electrical Engineering graduates
will find a broad employment opportunity in the field since electrical engineering enters
into much of industry and service where information is processed and transmitted,
control exercised over physical, chemical, or mechanical operations, and power utilized.
The undergraduate degree program in Electrical Engineering (leading to the B.S.E.
degree) is fully accredited by the Engineering Accreditation Commission (EAC) of the
Accreditation Board for Engineering and Technology (ABET).

BACHELOR OF SCIENCE IN ENGINEERING:
ELECTRICAL ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program requirements
   (See page 46)
3. Engineering core requirements
   (See page 139)
4. Required Courses
   EEL 3122 Electrical Networks 3 hours

DEPARTMENT OF ELECTRICAL ENGINEERING
AND COMMUNICATION SCIENCES
Acting Chairman: R. Walker, EN 315, Phone 275-2786
Faculty: Belkerdid, Erickson, Harden, Harris, Litka, Malocha, Mathews, Martin, Miller,
Petrasko, Phillips, Radloff, Towle, Walker, Walters

Electrical Engineers are primarily concerned with the development and utilization
of devices and systems which are based on electrical phenomena. The range of ap­
plication includes computer systems, electronics, control systems, electrical power
utilization, communication systems, medical instrumentation, etc. The electrical
engineer can find professional challenges in virtually every facet of modern technology.
The option in Electrical Engineering is designed to present the basic electrical
engineering principles which are common to this broad spectrum of application. In
addition, courses are offered which present in-depth studies of specific electrical
engineering sub-disciplines such as computer engineering, electrical networks, and
electronics, electromagnetic fields and microwaves, electromechanics and control,
power transmission and utilization, communication and information theory, and solid
state systems and devices.
Many modern scientific developments are either essentially electrical in character
or depend on electrical equipment and technique. Electrical Engineering graduates
will find a broad employment opportunity in the field since electrical engineering enters
into much of industry and service where information is processed and transmitted,
control exercised over physical, chemical, or mechanical operations, and power utilized.
The undergraduate degree program in Electrical Engineering (leading to the B.S.E.
degree) is fully accredited by the Engineering Accreditation Commission (EAC) of the
Accreditation Board for Engineering and Technology (ABET).
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 chairman, and must include two additional design courses.

6. Electives

None

Total Semester Hours Required: 132

DEPARTMENT OF INDUSTRIAL ENGINEERING & MANAGEMENT SYSTEMS

Acting Chairman: C. Bauer, EN 412, Phone 275-2236
Faculty: Babu, Biegel, Brooks, Doering, Hosni, Morse, Schrader, Sepulveda, L. Smith, White

The option in Industrial Engineering is concerned primarily with the design, improvement and installation of integrated systems of men, materials, and equipment for operations through the application of the principles of the engineering, mathematical, physical, and behavioral sciences.

The program of study available within this option enables the student to pursue an integrated series or sequence of courses in the major field which includes not only basic and fundamental courses but specialized courses as well, in the areas of management standards development, manufacturing production and inventory control, project management, work analysis and design, management information systems, computer simulation, operations research, industrial facilities planning and design, and human engineering. These specialized courses reflect the contemporary developments and trends in each of these areas with emphasis on uses of the digital computer in appropriate courses.

There is a growing tendency on the part of industry, government and institutions to select engineering personnel for managerial positions. Because of this the IEMS courses are oriented to systems management principles and concepts so as to enable the Industrial Engineering graduate to accept and succeed in these opportunities. The undergraduate degree program in Industrial Engineering (leading to the B.S.E. degree) is fully accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

BACHELOR OF SCIENCE IN ENGINEERING:
INDUSTRIAL ENGINEERING

Degree Requirements

1. University graduation requirements
   (See pages 44-48)

2. General Education Program requirements
   (See page 46)

3. Engineering core requirements
   (See page 139)

4. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 3812</td>
<td>Accounting for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>EIN 3315C</td>
<td>Work Measurement and Design</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4118</td>
<td>Industrial Engineering Applications</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4332</td>
<td>Industrial Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4364</td>
<td>Industrial Facilities Planning and Design</td>
<td>3</td>
</tr>
<tr>
<td>ESI 4314</td>
<td>Quantitative Techniques in Industrial Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ESI 4234</td>
<td>Engineering Reliability and Quality Assurance</td>
<td>3</td>
</tr>
</tbody>
</table>

5. Restricted Electives

Technical Electives are to be courses consistent with department objectives and
chosen with the approval of the student's faculty advisor and department chairman, and must include two additional design courses.

6. Electives
None

DEPARTMENT OF MECHANICAL ENGINEERING AND AEROSPACE SCIENCES
Chairman: S. Rice, EN 115, Phone 275-2416
Faculty: Anderson, Beck, Bishop, Chang, Eno, Gunnerson, Hagedoorn, Hosler, Jenkins, Metwalli, Minardi, Moslehy, Nuckolls, W. Smith, Ventre

The Department of Mechanical Engineering and Aerospace Sciences is primarily concerned with dynamic physical systems such as transportation, production and energy conversion. Because such systems involve an energy source, the mechanical or aerospace engineer is concerned with the application of the basic laws of the engineering sciences to the conversion, transfer and control of the energy. When dealing with problems of this nature, the engineer must consider the economic constraints and the social implications of the proposed solutions.

The Mechanical Engineering option provides the student with the opportunity to pursue educational objectives within the framework of this broad theme. Primary emphasis is given to the departmental subdisciplines of aerospace sciences, measurement systems engineering, mechanical systems design and control, energy conversion and power systems, thermal sciences and engineering acoustics.

The program is specifically designed to give the student a broad-based undergraduate engineering sciences program to have sufficient knowledge to converse with specialists in other fields of engineering and to analyze the basic problems in these fields. By judiciously selecting courses from the department sub-disciplines, a firm foundation is laid so that the student will obtain the theoretical tools and the design methodology to pursue successfully a career in the mechanical or aerospace engineering professions. The undergraduate degree program in Mechanical Engineering (leading to the B.S.E. degree) is fully accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).
BACHELOR OF SCIENCE IN ENGINEERING: MECHANICAL ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. General Education Program requirements
   (See page 46)
3. Engineering core requirements
   (See page 139)
4. Required Courses
   EML 3106 Thermodynamics of Mechanical Systems 3 hours
   EML 3262 Kinematics of Mechanisms 3 hours
   EML 3303L Measurement Systems 1 hour
   EML 3502 Machine Design and Analysis 3 hours
   EML 4142 Heat Transfer 3 hours
   EML 4222 Vibration Analysis 3 hours
   EML 4505 Engineering Design 3 hours
   EML 4412L Mechanical Engineering Laboratory 1 hour
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
   man, and must include one additional design course. 9 hours
6. Electives
   None
   Total Semester Hours Required 132

DEPARTMENT OF ENGINEERING TECHNOLOGY
Chairman: R. Denning, EN 118, Phone 275-2268
Faculty: Bullard, Debo, Dehler, Dixon, Griffith, Head, Hubler, Lewis, Osborne, Uspen­
ski, Worbs

The Engineering Technology Degree Program at UCF includes only the upper divi­
sion (junior and senior years) and is designated primarily for the student who has com­
pleted an A.S. degree in Engineering Technology or an equivalent program at a com­
munity college. The community college two-year associate of science program is
designed to provide the student with the training necessary to become an engineer­
ing technician. The upper division Bachelor of Engineering Technology (BET) program
at the University of Central Florida is designed to advance the engineering techni­
cian to the engineering technician level.
The four year engineering technology graduate will provide a vital link in the
engineering-fabrication/construction-facility operations chain. He or she will be practice
and applications oriented while at the same time, possessing a broad and comprehen­
sive education in the field. As such he or she will be a key individual in teams of
technical specialists dealing with the environment today. Completion of the required
curriculum will prepare qualified individuals to make significant contributions to society
and will allow them to progress into responsible technical and management positions.
Principal areas of study in the engineering technology curriculum, building on a
sound base attained through the AS degree, will include mathematics and communica­
tions. In addition, substantial additional work will be taken in the technical sciences
and technical specialty. The courses will include theory and practical laboratory ex­
perience. Hence they will provide a sound technical base for subsequent work. For
assistance in planning a program, each student will be assigned an advisor to assist
in selecting the best course sequence to meet career objectives.
The areas of specialization (modules) in Engineering Technology are concerned prin­
cipally with the details of design, maintenance, operation, environmental monitoring
and the fabrication/construction functions. The work of the technologist is in direct
support of the engineer and the emphasis is on material results and details as con­
structed, within the broader conceptual and systems processes of the engineer.
Five Engineering Technology options are offered. The Design, Electronics, En­
vironmental Control (to be phased out in 1984-85), and Operations options are accredited
by the Technology Accreditation Commission (TAC) of the Accreditation Board for
Engineering and Technology (ABET). The Computer Technology option was added effective with Fall Semester 1983.

**BACHELOR OF ENGINEERING TECHNOLOGY**

**Degree Requirements**

1. University graduation requirements
   (See pages 44-46)

2. General Education Program requirements (See page 46)
   - Basic (43 hours)
     - Community College (36 hours)
   - UCF (7 hours)
   - Advanced (6 hours)

   'Includes college algebra, trigonometry, English, speech, humanities and social sciences. At least one course each in chemistry, physics and computer programming should be completed at the Community College. Credit shown is maximum transferable under this program.

3. Required Courses

   **A. Transferred from Community College**
   - Lower Level Technical Specialty
   - General Education Program (includes Science & Math)
   - Related Studies
   - **TOTAL (Maximum transfer credit)**

   **B. Course work at UCF**
   - Engineering Technology Core
     - ETE 3663C Microprocessor Electronics
     - ETE 4111C Electricity and Electronics
     - or
     - ETE 4112 Electrical Network Analysis
     - ETG 3520 Applied Statics and Strength of Materials
     - ETI 3421C Materials and Processes
     - ETI 3671 Technical Economic Analysis
     - ETM 4310 Applied Thermodynamics and Fluid Mechanics
     - MAC 3253 Applied Calculus I
     - MAC 3254 Applied Calculus II
     - MAP 3401 Problem Analysis
     - STA 3023 Statistical Methods I
     - **SUBTOTAL**
     - **TOTAL MINIMUM HOURS REQUIRED**

   **Area of Specialization (see below)**
   - Typical community college AS Degree programs used for entrance to UCF's Design Technology specialization are Mechanical, Drafting Design, Civil, and Air Conditioning Technologies.

   **Required Courses (12 hours)**
   - ETC 4410C Applied Structural Design I
   - ETE 4735C Electro-Mechanical Design
   - ETI 3440 Product Design
   - ETM 4403C Applied Kinematics

   **Upper Level Technical Electives (8 hours)**
   - Technical electives are to be courses consistent with module objectives and are chosen with the approval of the student's faculty advisor and department chairman.

2. Electronics Technology Module
   - The specialization in Electronics Technology is designed to present the electronics
principles beyond the first two years of study that are essential for installation, operation, maintenance and design support of electrical/electronics equipment and facilities. Typical community college AS Degree programs used for entrance to UCF’s Electronics Technology specialization are Electronic, Electrical and Instrumentation Technologies. A minimum of 6 semester hours of basic electronics and 6 semester hours of digital electronics must be included in the Community College Degree program.

Required Courses (12 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETE 4650C</td>
<td>Microcomputer Electronics</td>
<td>4</td>
</tr>
<tr>
<td>ETE 4422C</td>
<td>Electronic and Digital Communications</td>
<td>4</td>
</tr>
<tr>
<td>ETE 4326</td>
<td>Feedback Control</td>
<td>4</td>
</tr>
</tbody>
</table>

Upper Level Technical Electives (8 hours)

Technical electives are to be courses consistent with module objectives and are chosen with the approval of the student's faculty advisor and department chairman.

3. Environmental Control Technology Module

The specialization in Environmental Control Technology is designed to give the student upper level courses in water, wastewater, air pollution, solid wastes, sampling and analysis, and control processes that are essential for environmental operations control. Typical community college AS Degree programs used for entrance to UCF’s Environmental Control Technology specialization are Environmental Control, Civil, and Chemical Technologies.

Required Courses (12 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETM 3314</td>
<td>Hydraulics/Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>EVS 3240</td>
<td>Water Supply Systems</td>
<td>3</td>
</tr>
<tr>
<td>EVS 4110</td>
<td>Remote Sensing of the Environment</td>
<td>3</td>
</tr>
<tr>
<td>EVS 4220</td>
<td>Wastewater and Treatment Plant Analysis and Control</td>
<td>4</td>
</tr>
</tbody>
</table>

Upper Level Technical Electives (8 hours)

Technical electives are to be courses consistent with module objectives and are chosen with the approval of the student’s faculty advisor and department chairman.
4. Operations Technology

The specialization in Operations Technology is designed to present the management operations, supervisory and methods courses that are essential for operations control in the sales, service, manufacturing and construction industries. The curriculum is designed to accept a broad range of AS Degree backgrounds and develop the management and supervisory skills necessary to produce a marketable skill. AS Degree programs with emphasis on Architectural, Building Construction, Aerospace, Automotive Services, Civil, Computer, Fire Control, Drafting and Graphics, Industrial Management or Supervision, Quality Control and Surveying Technologies are normally acceptable.

Required Courses (10 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETI 3651</td>
<td>Computer Methods in Industry</td>
<td>3</td>
</tr>
<tr>
<td>ETI 4650</td>
<td>Process Planning and Estimating</td>
<td>4</td>
</tr>
<tr>
<td>ETI 4700</td>
<td>Occupational Safety</td>
<td>3</td>
</tr>
</tbody>
</table>

Upper Level Technical Electives (10 hours)

Technical electives are to be courses consistent with module objectives and are chosen with the approval of the student’s faculty advisor and department chairman.

5. Computer Technology

The specialization in Computer Technology is designed to present hardware analysis and applications of mini/micro-computers in electronics, industrial, and business environments. Typical community college 2 year programs used for entrance into UCF’s Computer Technology program include AS degrees in Engineering Technology, Electronics, Computer Technology, Industrial Supervision and Management, and Quality Control & Reliability. A minimum of 12 semester hours of Computer Systems or Computer Technology coursework must be included in the community college program.

Required Courses (12 hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETE 3666C</td>
<td>Applied Microprocessor Technology</td>
<td>4</td>
</tr>
<tr>
<td>ETE 4650C</td>
<td>Microcomputer Electronics</td>
<td>4</td>
</tr>
<tr>
<td>ETE 4661C</td>
<td>Applied Computer Systems I</td>
<td>4</td>
</tr>
</tbody>
</table>

Upper Level Technical Electives (8 hours)

Technical electives are to be courses consistent with module objectives and are chosen with the approval of the student’s faculty advisor and department chairman.
COLLEGE OF HEALTH

UNDERGRADUATE PROGRAMS
Communicative Disorders (BA)
Medical Record Administration (BS)
Medical Technology (BS)
Nursing (BSN)
Radiologic Sciences (BS)
Respiratory Therapy (BS)

GRADUATE PROGRAM*
Communicative Disorders (MA)
Health Sciences (MS)
Public Health (MPH)

OTHER PROGRAMS
Pre-Occupational Therapy
Pre-Physical Therapy

*See the Graduate Studies catalog for information.
To meet the needs of students and the community, the College of Health was established in 1978. Included in the College are programs in Communicative Disorders, Medical Record Administration, Medical Technology, Nursing, Radiologic Sciences, and Respiratory Therapy. In addition to the six degree programs the College offers a core area of Health Sciences to broaden the student’s understanding of the health care system as well as provide counseling in pre-physical and pre-occupational therapy. The College believes that through a liberal arts education and an intensive study in a specific health related area the graduate will be a valuable asset to health care in the nation as well as Florida.

General Requirements for the Bachelors Degree

All degree programs in the College of Health are upper division limited access programs. Acceptance by or registration at the University does not constitute admission to a College of Health program. Separate application must be made to the director/chairman of the program/department prior to February 1st preceding the semester in which the student desires to begin the program. Before acceptance to the program, a minimum grade point average of 2.5 and a minimum grade of C in the major and in prerequisite courses are required for admission to and continuation in a College of Health program.

In addition to University and program requirements, each student in a College of Health program is required to complete the following:

1. HSC 3328 U.S. Health Care Systems and
2. HSC 4511 Pathophysiologic Mechanisms*

*Human Physiology, PCB 3703, and Human Anatomy, ZOO 3733C, are prerequisites for Pathophysiologic Mechanisms, HSC 4511. Medical Technology students will be allowed to substitute MCB 3203, Pathogenic Microbiology, for ZOO 3733C, Human Anatomy.

COMMUNICATIVE DISORDERS DEPARTMENT

Associate Chairman: D. Hedrick, CB 103, Phone 275-2121
Faculty: Ingram, Mullin, Utt

The primary goal of the Communicative Disorders program is the preparation of clinical specialists in Speech/Language Pathology and Audiology. The undergraduate offerings are consistent with the philosophies of the American Speech and Hearing Association in that most of the course work is designed to give the student the 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, industrial settings, and a mobile diagnostic unit are available for the development of various clinical competencies.

MINOR

The Program of Communicative Disorders offers a minor in Communicative Disorders consisting of a minimum of 22 semester hours.

Required courses: LIN3710, 3710L and SPA 3001, 3101, 3112, 3112L, 4030, 4222, 4222L, and 4402, 4402L.

BACHELOR OF ARTS: COMMUNICATIVE DISORDERS

Degree Requirements

1. University graduation requirements
   (See pages 44-48)
2. Special college and/or department requirements
   (See page 151)
3. Required Courses
   LIN 3710 Foundations of Language 3 hours
   LIN 3710L Foundations of Language Lab 1 hour
   SPA 3001 Introduction to Communicative Disorders 3 hours
SPA 3052 Clinical Observation & Practice 1 hour
(Taken in Fall & Spring of Senior year)
SPA 3101 Physiological Bases of Speech and Hearing 3 hours
SPA 3112 Basic Phonetics 3 hours
SPA 3112L Basic Phonetics Lab 1 hour
SPA 3550 Clinical Methods 3 hours
SPA 3550L Clinical Methods Lab 1 hour
SPA 4030 Basic Audiology 4 hours
SPA 4011 Speech & Hearing Science 3 hours
SPA 4201 Communicative Disorders-Articulation 3 hours
SPA 4201L Communicative Disorders-Articulation Lab 1 hour
SPA 4222 Non-Organic Speech Disorders 3 hours
SPA 4222L Non-Organic Speech Disorders Lab 1 hour
SPA 4250 Organic Speech Disorders 3 hours
SPA 4250L Organic Speech Disorders Lab 1 hour
SPA 4323 Aural Habilitation-Rehabilitation 4 hours
SPA 4402 Communicative Disorders-Language 3 hours
SPA 4402L Communicative Disorders-Language Lab 1 hour
SPA 4336 Augmentative Communication Systems 3 hours

4. Restricted Electives
To be selected from the following:

DEP 3212 Psychological Approaches to Mental Retardation 3 hours
DEP 3202 Psychology of Exceptional Children 3 hours
EAB 3703 Principles of Behavior Modification 4 hours
STA 3023 Statistical Methods I 3 hours
STA 4163 Statistical Methods II 3 hours

5. Electives
To be selected from the following:

Students who wish to obtain a Teachers Certificate for the state of Florida must include the necessary coursework as electives.

Total Semester Hours Required 128 hours

PROGRAM IN HEALTH SCIENCES
Director: T. Mendenhall, BL 308, Phone 275-2741
Faculty: Bergner, Elder

The Health Sciences program provides several courses to broaden the student's understanding of health care and provide counseling in pre-physical and pre-occupational therapy.

MINOR
The program of Health Sciences offers a minor consisting of a minimum of 16 semester hours. In order to be awarded a minor in Health Sciences, a student must complete the required course work and maintain at least a 2.5 GPA and a minimum of C on all College of Health course work.

Required Courses: HSC 3328, 3081, and 4101; a minimum of 7 hours of upper division courses in the College of Health (College of Health majors may not count courses presently required of a College program).

PROGRAM IN MEDICAL RECORD ADMINISTRATION
Director: L. Kuyper, BL 308, Phone 275-2741
Faculty: Barr

The Medical Record Administrator is the professional member of the modern health care team responsible for: (1) the acquisition and supervision of complete medical records on each patient, (2) design and management of health information systems which collect, process, store, retrieve, and release health information and statistics, (3) assistance to administration, other health professionals and medical staff in developing quality assurance programs by abstraction of medical data, preparation of statistical reports, and analysis of information, and (4) assistance in collection and analysis of data for public health services planning.
The curriculum of the Medical Record Administration program is approved by the Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with the Council on Education of the American Medical Record Association.

Before applying to the professional phase of the program, students are required to have completed courses in biology with lab, anatomy with lab, physiology with lab, statistics, an introduction to data processing, and microbiology.

Personal qualifications include a keen intellect, initiative and organization, and above average ability for standards of accuracy and detail. Communication skills as well as diplomacy and tact in dealing with people are desirable assets.

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 1 of the year in which prerequisites will have been met to be considered an applicant. A cumulative grade point average of 2.5 or better and a minimum grade of C in the prerequisite courses is required for admission to the upper division MRA program. A personal interview is also a requirement. A minimum grade of C in all prerequisite, pre-professional, and professional courses is required for continuation in the program.

Upon completion of the approved program, the student is eligible to apply to write the national examination administered by the American Medical Record Association to qualify as a Registered Record Administrator.
**BACHELOR OF SCIENCE: MEDICAL RECORD ADMINISTRATION**

**Degree Requirements**

1. University graduation requirements  
   (See pages 44-48)
2. Special college and/or department requirements  
   (See page 151)
3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APB 3600</td>
<td>Introduction to Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>COM 3110</td>
<td>Business and Professional Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENC 3210</td>
<td>Business Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>HSC 3152</td>
<td>Health Law</td>
<td>2</td>
</tr>
<tr>
<td>HSC 3531</td>
<td>Medical Terminology</td>
<td>3</td>
</tr>
<tr>
<td>HSC 4511</td>
<td>Pathophysiologic Mechanisms</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3010</td>
<td>Management of Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3301</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>MAN 4722</td>
<td>Information Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MRE 3000</td>
<td>Introduction to Medical Records</td>
<td>4</td>
</tr>
<tr>
<td>MRE 3110</td>
<td>Medical Record Organization &amp; Management</td>
<td>3</td>
</tr>
<tr>
<td>MRE 3202</td>
<td>Coding Procedures</td>
<td>4</td>
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<tr>
<td>MRE 3800</td>
<td>Directed Practice I</td>
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<tr>
<td>MRE 3810</td>
<td>Directed Practice II</td>
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</tr>
<tr>
<td>MRE 4102</td>
<td>Medical Word Processing &amp; Transcription</td>
<td>2</td>
</tr>
<tr>
<td>MRE 4206</td>
<td>Health Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>MRE 4304</td>
<td>Medical Record Department Management</td>
<td>2</td>
</tr>
<tr>
<td>MRE 4312</td>
<td>Analysis of Medical Record Department Operations</td>
<td>3</td>
</tr>
<tr>
<td>MRE 4400</td>
<td>Health Care Delivery Systems</td>
<td>4</td>
</tr>
<tr>
<td>MRE 4402</td>
<td>Fundamentals of Medicine II</td>
<td>4</td>
</tr>
<tr>
<td>MRE 4420</td>
<td>Health Legislation</td>
<td>2</td>
</tr>
<tr>
<td>MRE 4500</td>
<td>Health Information Retrieval Systems</td>
<td>3</td>
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<tr>
<td>MRE 4830</td>
<td>Directed Practice III</td>
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<tr>
<td>MRE 4832</td>
<td>Directed Practice IV</td>
<td>1</td>
</tr>
<tr>
<td>MRE 4850</td>
<td>Medical Record Research</td>
<td>2</td>
</tr>
<tr>
<td>MRE 4835</td>
<td>Management Affiliation</td>
<td>5</td>
</tr>
</tbody>
</table>

4. Restricted Electives: None
5. Electives: None

**Total Semester Hours Required** 132

**PROGRAM IN MEDICAL TECHNOLOGY**

**Director:** M. Kangulas, BL 303, Phone 275-2741

**Faculty:** Heinsohn, Sweeney

The medical technologist is involved in medical diagnosis, treatment, surveillance, management, research and education. He/she uses 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 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 Technology Program. Separate application must be made through the Medical Technology Office prior to February 1 of the year for which admission is sought. An applicant must meet the following requirements to be considered for this upper division program: (1) a minimum overall grade point average of 2.5, on a 4.0 scale, (2) a minimum grade of C in all major and prerequisite courses, and (3) 60 semester hours of appropriate courses. A minimum grade of C in all major courses is required for continuation in the program. 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 and Winter Haven. This will necessitate that
the student move to Lakeland and Winter Haven for this period.

The degree in Medical Technology 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 Technology, the graduate will be eligible to write a national certification examination and the State of Florida licensure examination.

**BACHELOR OF SCIENCE: MEDICAL TECHNOLOGY**

**Degree Requirements**

1. University graduation requirements
   (See pages 44-48)

2. Special college and/or department requirements
   (See pages 151 and 154)

3. Required Courses
   Prerequisites for professional phase admission
   - BSC 2010C General Biology 4 hours
   - MCB 3013C General Microbiology 4 hours
   - MCB 3203C Pathogenic Microbiology 4 hours
   - PCB 3703C Human Physiology 4 hours
   - CHM 2045, 2046 Chemistry Fundamentals I & II 7 hours
   - CHM 2046L Chemistry Fundamentals Laboratory 1 hour
   - CHM 3121C Analytical Chemistry 5 hours
   - MAC 1104 College Algebra 3 hours
   - STA 3023 Statistical Methods I 3 hours
   - CAP 3001 Computer Fundamentals for Business Applications I 3 hours

   Upper Division Professional Phase
   - PCB 3233 Immunology and Serology 4 hours
   - CHM 2205 Introduction to Organic & Biochemistry 5 hours
   - MLS 3220 Techniques in Clinical Microscopy 2 hours
   - MLS 3305 Hematology 4 hours
   - MLS 4830C, 4831C, 4832C, 4833C, 4834C Clinical Practice I, II, III, IV, & V 20 hours
   - MLS 4405 Clinical Pathogenic Microbiology 4 hours
   - MLS 4625C, 4630C Advanced Clinical Chemistry I & II 8 hours
   - MLS 4334 Hemostasis 2 hours
   - MLS 4550 Clinical Immunohematology 4 hours
   - MLS 4420C Clinical Mycology 1 hour
   - MLS 4431C Clinical Parasitology 2 hours
   - MLS 4511 Clinical Serology 2 hours
   - MLS 4910 Clinical Research Project 2 hours
   - MLS Medical Technology Seminar 1 hour

4. Restricted Electives: None
5. Electives: None

Total Semester Hours Required 138

**NURSING DEPARTMENT**

**Interim Chairperson:** F. B. Smith, CH 232, Phone 275-2744

**Faculty:** Brinson, Chapell, Chase, Dorner, Douglas, Eldredge, Green, Guarda, Larrabee, Mercer, Mitchell, Murray, Ziegel.

The nursing curriculum at UCF and its extension campuses 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. **Applicants for Fall admission must make separate application directly to the Department of Nursing prior to February 1st.** R.N.'s and minority applicants receive special consideration. Completion of the A.A. degree or General Education Program is strongly recommended. A minimum grade point average of 2.5 and a C in all prerequisite courses is required **prior to admission.** A minimum grade of C in all nursing courses is required for continuation of the upper division nursing
major. Graduates are eligible to take the licensing examination for registered nurses.
Courses for nurses registered in Florida are offered at the Daytona and Brevard Campuses, including challenge examinations for selected courses.

BACHELOR OF SCIENCE: NURSING

Degree Requirements

1. University graduation requirements; General Education Program
(See pages 44-48)

2. Special college requirements (See pages 151 and 155)
   - HSC 4511 Pathophysiology 3 hours
   - HSC 3328 U.S. Health Care Systems 3 hours

3. Required Courses
   Prerequisites to Nursing Major
   Note: Courses must be completed with a grade of "C" or better prior to beginning upper division nursing courses.
   - BSC 2010C General Biology 4 hours
   - MCB 3013C General Microbiology 4 hours
   - ZOO 3733C Human Anatomy 4 hours
   - PCB 3703C Human Physiology 4 hours
   - CHM 1034 General Chemistry 3 hours
   - CHM 2025 Introduction to Organic/Biochemistry 5 hours
   - MAC 1104 College Algebra 3 hours
   - STA 2014 or 3023 Principles of Statistics 3 hours
   - SOW 3104 or
   - DEP 3004 Human Growth and Development 3 hours
   - HUM 3011 Human Nutrition (In some cases may be taken concurrently) 3 hours

Upper Division Professional Phase

- NUU 3111 Introduction to Baccalaureate Nursing 2 hours
- *NUR 3618C Concepts Basic to Nursing Practice 9 hours
- NUR 3740 Physical Assessment 2 hours
- *NUR 3207C Scientific Theories of Nursing I 11 hours
- *NUR 3208 Nursing Seminar I 1 hour
- *NUR 3134C Scientific Theories of Nursing II 6 hours
- *NUR 3135 Nursing Seminar II 1 hour
- NUU 4300 Critical Inquiry 3 hours
- NUR 4411C Scientific Theories of Nursing III 11 hours
- NUR 4412 Seminar III 1 hour
- NUR 4460 Special Nursing Topics 3 hours
- NUR 4225C Scientific Theories of Nursing IV 7 hours
- NUR 4226 Seminar IV 1 hour
- NUR 4905C Nursing Independent Study (4 hrs. required for senior students) 1-10 hours

4. Restricted Electives: One course in nursing 2-3 hours
   *Students who are Registered Nurses in Florida may write examinations for credit for these courses after enrollment in:
   - NUR 3050 Transitional Concepts in Nursing 6 hours

5. Electives: None
   Total Semester Hours Required 133-146

Neonatal Nurse Clinician Program

Requirements for certificate:
- NUR 4950 Theories of Neonatal Intensive Care Nursing 8 hours
- NUR 4951 Seminar in Neonatal Intensive Care Nursing 8 hours
- NUR 4952 Practicum in Neonatal Intensive Care Nursing 16 hours

Total 32 hours

For further information, contact Linda Bellig, Orlando Regional Medical Center.
The baccalaureate Radiologic Science program is designed with two areas of specialization: (1) Radiography (2) Radiation Therapy Technology.

Radiographers are integral members of a team dedicated to patient care. Their primary role is to perform the technical procedures in producing X-ray studies for the diagnosis and treatment of disease and injury.

The Radiography specialization is designed to provide the graduate with Radiography skills, extended in-depth education in the Radiologic Sciences, and management and instructional skills. Graduates are capable of assuming leadership roles in the community as Radiographers and with experience advance to positions of Radiologic educators, program directors, departmental managers, and quality assurance coordinators.

Radiation Therapy technologists work closely with the physician to plan and deliver radiation treatment to patients diagnosed with cancer. Their primary role is to deliver radiation to the cancer site and monitor the patients progress throughout the treatment.

The program works in conjunction with Halifax Medical Center, Daytona; Florida Hospital, Altamonte Springs; and Waterman Memorial Hospital, Eustis, and is approved by the committee on Allied Health Education and Accreditation of the American Medical Association. Graduates are eligible to take the national certifying examination administered by the American Registry of Radiologic Technologists.

Application deadline is February 1 for acceptance into the upper division limited access phase which begins with the Summer semester.

MINOR

The Program in Radiologic Sciences offers a Health Physics Technology Minor designed to prepare graduates for employment with various agencies concerned with radiation monitoring and protection. The minor is open to Radiologic Science majors and students from other majors who have completed the following prerequisite courses or approved equivalents: BSC 2010C, MAC 1104, PHY 2050C, 2051C, STA 3023, COC 1100.

Required Courses: RTE 3387C, RTE 4569, RTE 4362, RTE 3341, RTE 3365, RTE 3388, RTE 3841
BACHELOR OF SCIENCE: RADIOLOGIC SCIENCES

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college requirements
   (See pages 151 and 157)
3. Required courses
   Prerequisites
   BSC 2010C  General Biology  4 hours
   COC 1100  Introduction to Computer Science  3 hours
   MAC 1104  College Algebra  3 hours
   PCB 3703  Human Physiology  4 hours
   PHY 2050C  College Physics I  4 hours
   ZOO 3733C  Human Anatomy  4 hours
   Professional Phase
   PHY 2051C  College Physics II  4 hours
   RTE 3002  Fundamentals of Radiologic Technology  1 hour
   RTE 3832L  Clinical Education Orientation  1 hours
   RTE 3806  Clinical Education II  4 hours
   RTE 3816  Clinical Education III  4 hours
   RTE 3826  Clinical Education IV  5 hours
   RTE 3528C  Radiographic Procedures I  3 hours
   RTE 3549  Radiographic Procedures II  3 hours
   RTE 3412C  Principles of Radiographic Exposure I  2 hours
   RTE 3457C  Principles of Radiographic Exposure II  2 hours
   RTE 3720  Anatomy for the Medical Imager  3 hours
   RTE 3932  Special Imaging Seminar  3 hours
   HSC 4511  Pathophysiologic Mechanisms  3 hours
   RTE 3156  Pathophysiology  2 hours
   RTE 3684C  Physics of Image Production  2 hours
   RTE 3387C  Medical Physics  2 hours
   RTE 4876  Clinical Education V  5 hours
   RTE 4843  Clinical Education VI  5 hours
   RTE 4865L  Clinical Education VII  3 hours
   RTE 4362  Radiobiology  1 hour
   RTE 4932  Diagnostic Imaging Seminar  2 hours
   STA 3023  Statistical Methods I  3 hours
4. Restricted Electives
5. Electives: None

AREAS OF SPECIALIZATION (Select one course of study)
1. Radiography
   Option I
   RTE 4569  Quality Assurance  2 hours
   RTE 4205C  Quality Assurance Management  3 hours
   ACG 2001  Principles of Accounting I  3 hours
   MAN 3025  Management of Organization  3 hours
   RTE 4207  Methods in Radiology Management  3 hours
   RTE 4209  Radiological Administrative Practice  3 hours
   Option II
   RTE 4569  Quality Assurance  2 hours
   RTE 4205C  Quality Assurance Management  3 hours
   EVT 3062  Professional Role of the Vocational Teacher  3 hours
   EVT 3371  Essential Teaching Skills in Vocational Education  3 hours
   HSC 4055  Curriculum Planning in the Health Professions  2 hours
   HSC 4052  Analysis of Instruction in Health Professions  3 hours
   RTE 4258L  Directed Clinical Study in Education  1 hour

Total Semester Hours Required 138 hours
Respiratory Therapy is one of the newest and fastest growing of the health professions. Over the past thirty years it has grown from the days of oxygen tents and iron lungs to the high level technology that modern respiratory therapists see today. Today's respiratory therapist provides a variety of services within the hospital. Emergency resuscitation using external heart massage and artificial respiration is one of the therapist's most important functions. The therapist serves as an important medical team member in such emergencies as heart attacks, near-drownings, shock, and automobile accidents. The therapist may also perform diagnostic pulmonary function tests and arterial blood gas analysis to aid the physician in his diagnosis of respiratory disease. Oxygen administration, the delivery of aerosol medications, humidity therapy, administration of positive pressure breathing, and rehabilitation of patients with chronic respiratory diseases are also among the duties of the respiratory therapist. One of the therapist's most challenging roles involves working with the critically ill patient. With the advent of sophisticated medical research, surgical techniques, and technology, the need for qualified respiratory therapists has grown tremendously. Therapists are also actively involved in the care of premature infants with respiratory diseases.

Acceptance at the University does not constitute admission to the upper division limited access program. Separate application must be made directly to the program office prior to February 1 of the year in which the prerequisites have been met, to be considered an applicant. A minimum grade point average of 2.5 and a minimum grade of a C in the major and prerequisite courses is required for admission and continuation in the upper division. Students must complete the prerequisite coursework before entering the upper division program in the Fall of the junior year.

The Respiratory Therapy Program is accredited by the American Medical Association in collaboration with the Joint Review Committee for Respiratory Therapy Education.
BACHELOR OF SCIENCE: RESPIRATORY THERAPY

Degree Requirements
1. University graduation requirements
   (See pages 44-48)
2. Special college requirements
   (See pages 151 and 159)
3. Required Courses (General education requirements for the lower division A.A. degree or completion of the basic General Education Program requirements at the University of Central Florida.)

Prerequisites
- BSC 2010C General Biology 4 hours
- MCB 3013C General Microbiology 4 hours
- ZOO 3733C Human Anatomy 4 hours
- PCB 3703C Human Physiology 4 hours
- CHM 1034 General Chemistry 3 hours
- CHM 2046L Chemistry Fundamentals Laboratory 1 hour
- PHY 2050C, 2051C College Physics I & II 8 hours
- MAC 1104 College Algebra 3 hours

Suggested Program of Study
Upper Division Professional Phase

FALL
- HSC 4511 Pathophysiological Mechanisms 3 hours
- RET 3026 Intro to R.T. 4 hours
- PCB 3233C Immunology & Serology 4 hours
- APB 3263C Cardiopulmonary Physiology 4 hours
- HSC 3328 U.S. Health Care Systems 3 hours

   18 hours

SPRING
- RET 3874 Clinical Practice I 4 hours
- RET 3264C Mechanical Ventilation 3 hours
- APB 4650 Pharmacology 4 hours
- RET 3244C Life Support Systems 2 hours
- CAP 3001 Computer Applications 3 hours

   16 hours

SUMMER
- RET 4714 Pediatric Respiratory Care 4 hours
- RET 4144C Pulmonary Function Studies 4 hours
- RET 4935 Chest Medicine 4 hours
- STA 3023 Statistics 3 hours
- RET 3483 R.T. Disease Assessment 1 hour

   16 hours

FALL
- RET 3875 Clinical Practice II 10 hours
- RET 4284C C.P. Diagnostics I 3 hours
- RET 4616 Cardiopulmonary Services 3 hours
- RET 4034 Problems in Pt. Mgmt. 1 hour

   17 hours

SPRING
- RET 4875 Clinical Practice III 10 hours
- RET 4285C C.P. Diagnostics II 3 hours
- RET 4104 R.T. Education Systems 2 hours
- RET 4933 Medical Research Seminar 1 hour

   16 hours

4. Restricted Electives: None
5. Electives: None

Total Semester Hours Required 123-129 hours
The College of Extended Studies was established to develop, coordinate and implement University programs of extension, outreach and continuing education. Toward this objective, as an alternative to regular credit courses, the College of Extended Studies offers opportunities to learners wishing to continue their education. Such courses may be offered for academic credit, professional and personal growth and enrichment at off campus locations and centers. The primary purpose is to provide lifelong opportunities by utilizing University resources to benefit nontraditional and traditional learners.

The College of Extended Studies is responsible for noncredit and sponsored credit institute programs. A broad spectrum of programs, many designed specifically for individuals and groups, include short courses, in-service training, conferences, seminars, institutes, special training programs and workshops. Educational courses may be conducted in cooperation with outside agencies for non-matriculated and nontraditional students who wish to complete baccalaureate degree requirements. Professional level courses are offered to business and industrial groups, governmental agencies, social services, educators and others interested in strengthening personal and professional qualities to improve their status for employment.

Noncredit programs are organized for the general public for which Continuing Education Units (CEU) may be earned and used as evidence of the individual's enrichment by participation in the program. Accordingly, the College of Extended Studies designs and organizes learning activities to assist the learner to increase vocational competence, enhance cultural ambitions and attain personal goals.
Nontraditional and diverse methods, including the use of telecourses for academic credit, may be utilized in working with adult learners. Nontraditional students are brought together through common experiences, learning needs and objectives. Through the use of recognized experts, learning resources and life experiences, acceptable levels of skills and knowledge are taught to enrich the learner's experience and to gain new abilities and professional qualifications and thus improve the employment status.

Registration in the College of Extended Studies courses does not require admission to the University nor does it imply admission.

OFFICE OF UNDERGRADUATE STUDIES

Dean: Charles N. Micarelli, AD 210, Phone 275-2691
Associate Dean: Paul R. McQuilkin, AD 210, Phone 275-2691
Assistant Dean: Beth Barnes, AD 210, Phone 275-2691
Assistant to the Dean: Lawrence Tanzi, AD 210, Phone 275-2691

The Office of Undergraduate Studies was established in July 1980, to assist in the development of University-wide programs and to assist undergraduate students in the pursuit of their academic goals.

The activities in which Undergraduate Studies is involved include the General Education Program, placement examinations, CLAST, intercollege programs, academic skills services, academic advisement. Undergraduate Studies reviews student problems in such areas as class schedules, withdrawals, the grade forgiveness policy, and admissions and standards policies (through the University Admissions and Standards Committee). The office works to improve teaching conditions through the Learning Resource Council and administers various university scholarships.

Undergraduate Studies also administers the Gerontology Certification Program, the Honors Program, and the Liberal Studies Program; and it oversees the Academic Skills Center, Air Force and Army ROTC Programs, the Office of High School and Community College Relations, and the Office of Minority Student Services.

ACADEMIC SKILLS CENTER

Mary Hartman, AD 210, Phone 275-2691

The Academic Skills Center offers assistance in English grammar, spelling, English as a second language, speed reading, reading comprehension, arithmetic and algebra skills, and study skills. Each program is conducted as an independent study and meeting time is arranged at the student's convenience. All work is free to any enrolled student. The center will also offer programs for students who are preparing to take examinations for entrance to graduate school.

AEROSPACE STUDIES

Chairman: C. W. Bradley, FA 214, Phone 275-2264
Faculty: Coyne, McSpadden, Jessup

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. 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. The POC must be completed by all students who seek a commission through the Air Force ROTC. 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 requirements prior to reaching age 26 years old and 6 months if entering Flight Training or before age 30 if entering non-flying Air Force specialty. (Age 35 for individuals with prior military service.)
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 available for qualified students in both the four-year and two-year AFROTC programs. These scholarships provide for full tuition, fees and required textbooks. In addition, scholarship recipients receive $100 per month.

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.

FLIGHT INSTRUCTION PROGRAM

Students enrolled in the Professional Officer Course who have been selected for pilot training in the United States Air Force receive 45 hours of classroom instruction and 25 hours of civilian flight training in light aircraft.

OFFICER COMMISSIONS

Students who complete the Professional Officer Course are appointed Second Lieutenants in the United States Air Force Reserve. As reserve officers, they incur an obligated active duty tour of four years (non-flying) or six years (navigator) or seven years (pilot). During this period of active service, they 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

Chairman: Robert M. Weiss, FA 215C, Phone 275-2430
Faculty: Alexander, Leonard, Nash, O'Neal, Swanson

The University of Central Florida, in cooperation with the Army ROTC Program at Stetson University provides an opportunity to acquire the skills and knowledge necessary for commissioning as a lieutenant in the U.S. Army, U.S. Army Reserve or the National Guard. The program offers both a four-year and two-year option. 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. If you are in the Army National Guard or Army Reserve and continuing your education full time, then you may be eligible for the Army’s new Simultaneous Membership Program (SMP). It lets you combine Reserve Forces duty with Army ROTC officer training courses on campus and earn about $5,000 in two years.

MINOR

The Department of Military Science offers a minor consisting of a minimum of 16 semester hours. Required courses: MIS 3301, 3410, 4421 and 4430.

CURRICULUM

The Military Science curriculum is divided into three phases:

1. Basic Military Science
   - The Basic Military Science courses are designed for four-year participants and are normally offered during the freshman and sophomore years. These courses address military organization, equipment, weapons, map readings, land navigation, use of a compass, grade structure, the Threat, communications, and leadership.

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.

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.

SUMMER TRAINING

A summer training program is offered for students who are academic juniors without previous ROTC or military training. Two options are available for summer training:

1. A five week course, on-campus.
2. A six week course at Ft. Knox, Kentucky.
   - Either summer option will qualify a student for entry into the Advanced Course, thus allowing completion of all requirements for commissioning within two years. Students attending the summer course at Ft. Knox will receive approximately $500 pay for the period.

MONETARY ALLOWANCE

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

SCHOLARSHIPS

Scholarships are available to qualified ROTC students. These scholarships provide full tuition, fees and required textbooks. Additionally, scholarship recipients receive $100 (tax free) per month.

REQUISITES FOR ADMISSION TO THE BASIC COURSE

1. Enrollment in a Baccalaureate or Masters degree program.
2. 18 years of age at the time of entry but not more than 30 years of age at the time of graduation.

REQUISITES FOR ADMISSION TO THE ADVANCED COURSE

1. Successful completion of Basic Course or equivalent.
2. Successful completion of an Army officer qualifying test.
3. Successful completion of an Army physical examination.
4. Selection by the professor of military science.
5. Agreement to complete the Advanced Course requirements and serve on active reserve, or national guard duty as a commissioned officer.
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 Dean of Undergraduate Studies, AD 210. 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 4024 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 contact Dr. Barnes in Undergraduate Studies to enroll in the program and see one of the following faculty members for advisement:

- Health Sciences—Louis J. Acierno, M.D., Associate Professor of Health Sciences, BL 104.
- Psychology—Richard D. Tucker, Ph.D., Associate Professor and Chairman, 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 Office of Undergraduate Studies for advisement.

LIBERAL STUDIES PROGRAM

Dean: Charles N. Micarelli, AD 210, Phone 275-2691
Coordinator: Dennis Kamrad, AD 374, Phone 275-2351

PURPOSE

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

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

The Liberal Studies program has two main purposes:

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

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

Students fulfilling the requirements for a degree in Liberal Studies must complete either the UCF Basic General Education Program or the General Education requirement at a Florida State Junior College. In addition, 8-9 semester hours of Enhancement Option courses are required.

The Liberal Studies student must complete:

1. A minimum of four course area groupings in which at least three disciplines are represented.
2. A minimum of 14 semester hours in each area with an additional 15 semester hours to be completed in a fifth area or used to strengthen one or more of the four course area groupings. Students choosing only four course area groupings may include a maximum of 9 semester hours of general electives as well as 6 hours of supporting electives in completing the fifth area.
3. A minimum of 42 upper level hours must be earned in the 5 areas.
   In addition to the university-wide degree requirements, a minimum grade point average of 2.0 must be achieved in each course grouping.
   The areas of Education and Engineering may be used twice provided a specific concentration corresponding to a traditional major is chosen for one of the area course groupings.

### COURSE AREA GROUPINGS

<table>
<thead>
<tr>
<th>COURSE AREA GROUPINGS</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR FORCE OR ARMY ROTC</td>
<td>VII</td>
<td>For students who take and complete the Air Force or Army ROTC four-year or two-year upper division programs.</td>
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</tr>
<tr>
<td>HEALTH SCIENCES</td>
<td>IV</td>
<td>Communicative Disorders, Health Sciences, Medical Record Administration, Medical Technology, Nursing, Radiologic Sciences, Respiratory Therapy, and other Health Related Professions.</td>
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</tr>
<tr>
<td>BEHAVIORAL SCIENCES</td>
<td>VII</td>
<td>Anthropology, Psychology, Sociology and Social Welfare.</td>
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</tr>
<tr>
<td>BIOLOGICAL SCIENCES</td>
<td>VI</td>
<td>Biology, Botany, Microbiology, Zoology.</td>
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<td></td>
</tr>
<tr>
<td>BUSINESS ADMINISTRATION</td>
<td>I</td>
<td>Accounting, Business Administration, Economics+, Finance, Management, Marketing.</td>
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<tr>
<td>COMMUNICATION</td>
<td>VII</td>
<td>Journalism, Radio-Television, Speech, and general courses in Communication.</td>
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<tr>
<td>EDUCATION*</td>
<td>II</td>
<td>Business Education, Library Science, Physical Education, Teaching Analysis, Voca­tional Education, and selected courses from Elementary and Secondary Education.</td>
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<tr>
<td>ENGINEERING</td>
<td>III</td>
<td>Selected courses from the Engineering core and departmental offerings. A maximum of 9 semester hours from the following courses may be used in the General Education Program and Liberal Studies program: EGN 4033, 4813, 4814, 4815, 4823, 4824, 4825, 4832, 4843, and 4844.</td>
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<tr>
<td>FINE ARTS</td>
<td>V</td>
<td>Art, Music and Theatre.</td>
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<tr>
<td>HUMANITIES</td>
<td>V</td>
<td>English, Foreign Literature, History, Humanities, Philosophy, and Religion.</td>
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</tr>
<tr>
<td>LANGUAGES</td>
<td>V</td>
<td>French, German, Italian, Russian, Spanish.</td>
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<td></td>
</tr>
<tr>
<td>MATHEMATICAL SCIENCES</td>
<td>VI</td>
<td>Computer Science, Mathematics and Statistics.</td>
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<td></td>
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<tr>
<td>PHYSICAL SCIENCES</td>
<td>VI</td>
<td>Astronomy, Chemistry, Forensic Science, Geography (Physical), Geology, Physics, and general courses in the Earth and Space Sciences.</td>
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<tr>
<td>SOCIAL SCIENCES</td>
<td>VII</td>
<td>Allied Legal Services, Criminal Justice, Economics+, Geography (Social), Political Science, and Public Administration.</td>
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</tr>
</tbody>
</table>
Consult your advisor. Many Education courses require concurrent public school practicum.

This course shown in two areas.

The Liberal Studies disciplines are:

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

MINORITY STUDENT SERVICES

Director: Robert Belle, AD 225, Phone 275-2716

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.

HIGH SCHOOL AND COMMUNITY COLLEGE RELATIONS

Director: Ralph Boston, AD 210, Phone 275-2231

High School and Community College Relations has the responsibility of monitoring implementation of the Statewide Articulation Agreement, providing pre-transfer information to community college students and their counselors, and serving as liaison with community college deans, presidents, and faculty. The office annually publishes a UCF Transfer Student Counseling Manual that describes in detail lower division course requirements for each major at UCF.
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.

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 non-equivalent 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. 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/same place.
Examples: Marine Biology OCB-013 (lecture only)
OCB-013L (lab only)

Marine Biology OCB-013C (lecture & lab combined)
with lab
Therefore, OCB 013C is equivalent to OCB-013 plus OCB-013L.

An alphabetical listing of prefixes:
ACG Accounting General
ACO Accounting: Occupational/Technical
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
BCH Biochemistry
BCN Building Construction
BOT Botany
BSC Introductory Biology
BTE Business Teacher Education
BUL Business Law
CAP Computer Applications
CBH Comparative Psychology & Animal Behavior
CGJ Criminology & Criminal Justice
CDA Computer Design/Architecture
CES Civil Engineering Structure
CHM Chemistry
CHS Chemistry-Specialized
CIS Computer & Information Systems
CJT Criminal Justice Technology
CLP Clinical Psychology
CNM Computational/Numerical Method
COC Computer Concepts
COM Communications
COP Computer Programming
COT Computer Theory
CPO Comparative Politics
CRM Computer Resources/Management
CRW Creative Writing
CYP Communication Psychology
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tr>
<td>DAA</td>
<td>Dance Activities</td>
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<td>DAE</td>
<td>Dance Education</td>
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<td>Development Psychology</td>
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<td>EAB</td>
<td>Experimental Analysis of Behavior</td>
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<td>EAS</td>
<td>Engineering: Aerospace</td>
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<td>ECI</td>
<td>Engineering: Civil</td>
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<tr>
<td>ECM</td>
<td>Engineering: Computer Mathematics</td>
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<td>ECO</td>
<td>Economics</td>
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<tr>
<td>ECP</td>
<td>Economic Problems &amp; Policy</td>
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<tr>
<td>ECS</td>
<td>Economic Systems &amp; Development</td>
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<tr>
<td>EDA</td>
<td>Education: Administration</td>
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<tr>
<td>EDE</td>
<td>Education: Elementary</td>
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<tr>
<td>EDF</td>
<td>Education: Foundation</td>
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<tr>
<td>EDG</td>
<td>Education: General</td>
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<tr>
<td>EDH</td>
<td>Education: Higher</td>
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<td>EDM</td>
<td>Education: Middle School</td>
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<td>EDP</td>
<td>Education: Psychology</td>
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<td>EDS</td>
<td>Education: Supervision</td>
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<td>EEC</td>
<td>Education: Early Childhood</td>
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<td>EED</td>
<td>Education: Emotional Disorders</td>
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<tr>
<td>EEL</td>
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<td>EES</td>
<td>Environmental Engineering Science</td>
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<td>EEX</td>
<td>Education: Exceptional Child-Care Competencies</td>
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<td>EGC</td>
<td>Guidance &amp; Counseling</td>
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<tr>
<td>EGM</td>
<td>Engineering: Mechanical</td>
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<tr>
<td>EGN</td>
<td>Engineering: General</td>
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<tr>
<td>EIN</td>
<td>Engineering: Industrial</td>
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<tr>
<td>ELD</td>
<td>Education: Specific Learning Disabilities</td>
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<tr>
<td>EMA</td>
<td>Engineering: Material</td>
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<td>EME</td>
<td>Education: Technology &amp; Media</td>
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<td>EML</td>
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<td>EMR</td>
<td>Education: Mental Retardation</td>
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<td>ENU</td>
<td>Engineering: Nuclear</td>
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<td>FOT</td>
<td>Foreign &amp; Biblical Languages in Translation</td>
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<td>FRE</td>
<td>French Language</td>
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<td>FRW</td>
<td>French Literature (Writings)</td>
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<td>GEO</td>
<td>Geography</td>
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<td>German Language</td>
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<td>PEM</td>
<td>Physical Education Acts (GEN)-Perform Centr., Land</td>
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<td>PEN</td>
<td>Physical Education Acts (GEN)-Water, Snow, Ice</td>
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<td>PHM</td>
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<td>Religion</td>
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<td>Speech Pathology &amp; Audiology</td>
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<td>STA</td>
<td>Statistics</td>
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<td>SYD</td>
<td>Sociology of Demography and Area of Studies</td>
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<td>SYO</td>
<td>Sociology—Social Organizations</td>
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<td>SYP</td>
<td>Sociology—Social Processes</td>
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<td>TPA</td>
<td>Theatre Production &amp; Administration</td>
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<td>TPP</td>
<td>Theatre Performance &amp; Performance Training</td>
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<td>TTE</td>
<td>Transportation &amp; Traffic Engineering</td>
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<tr>
<td>ZOO</td>
<td>Zoology</td>
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</tbody>
</table>
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.

### Special Undergraduates Grad

<table>
<thead>
<tr>
<th>Course</th>
<th>Undergraduates</th>
<th>Grad</th>
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</thead>
<tbody>
<tr>
<td>Directed Independent Studies</td>
<td>3905</td>
<td>5907</td>
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<tr>
<td>Directed Independent Research</td>
<td>3930</td>
<td>5937</td>
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<tr>
<td>Special Topics/Seminars</td>
<td>3940</td>
<td>5944</td>
</tr>
<tr>
<td>Internships, Practicums, Clinical Practice</td>
<td>3955</td>
<td>5957</td>
</tr>
</tbody>
</table>

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

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

2Enrollment is limited to those students who are fully admitted to the Graduate Program.

### 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:

CHM 3121C

Analytical Chemistry I: CHM 3121C 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; HLTH = Health; 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

Principles of Accounting I: PR: Sophomore standing and MAC 1104 or equivalent. Nature of accounting, financial statements, the accounting cycle, assets, current liabilities, and owner's equity.

ACG 2011


ACG 3023

Principles of Accounting I and II: PR: Junior standing and MAC 1104 or equivalent. Same as ACG 2001, 2011. Credits may not be earned in both ACG 3023 and the ACG 2001, 2011 sequence.

ACG 3103

Financial Accounting I: PR: Junior standing and MAC 1104, ECO 2013, ECO 2023; and ACG 2011 or ACG 3023 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

Financial Accounting II: PR: ACG 3103 with a grade of "C" or better. A continuation of ACG 3103.

ACG 3301

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)

ACG 3401 BA 3(3,0)
Accounting Information Systems I: PR: ACG 3103 and CAP 3001, ACG 3113 and ACG 3361 with a grade of "C" or better. An introduction to manual and computer-based accounting information systems.

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

ACG 5005 BA 3(3,0)

ACG 5206 BA 3(3,0)

ACG 5255 BA 3(3,0)
International and Multinational Accounting: PR: ACG 3113 with a grade of "C" or better or C.I. and meet departmental admission requirements. An examination of the environmental factors affecting international accounting concepts and standards. Cross-country differences in accounting treatments are compared.

ACG 5346 BA 3(3,0)
Cost Accounting II: PR: ACG 3361, FIN 3403, ECO 3411 or C.I. and meet departmental admission requirements. Continuation of ACG 3361. Overhead and joint cost allocation, capital budgeting and analysis, EOQ analysis, decentralization, quantitative decision analysis.

ACG 5506 BA 3(3,0)
Managerial Accounting for Governmental and Nonprofit Organizations: PR: ACG 3501 or C.I. and meet departmental admission requirements. Study of problems and methods of applying managerial accounting concepts in a nonprofit environment.

ACG 5625 BA 3(3,0)
Auditing and EDP. PR: ACG 3401 and ACG 4651. An examination of auditing procedures followed when a company uses a computer to process financial records.

ACG 5636 BA 3(3,0)
Advanced Auditing: PR: ACG 3401, ACG 4651, STA 3023, meet departmental admission requirements. Special topics relative to the standards, practices, and procedures followed in the audit function.

ACG 5675 BA 3(3,0)
Operational Auditing: PR: ACG 4651 with a grade of "C" or better and meet departmental admission requirements. The standards, principles, practices, and procedures followed in the internal audit function.

ADV 4000 AS 3(3,0)
Principles of Advertising: PR: Junior standing or C.I. Overview of the field of advertising; purposes, techniques, the role of agencies, advertisers and the media.

ADV 4003 AS 4(2,2)
Advertising Layout and Preparation: PR: ADV 4000. Advertising design and layout for print media; reproduction methods and requirements, art background not required.

ADV 4101 AS 4(2,2)

ADV 4103 AS 3(3,0)
Radio-Television Advertising: PR: ADV 4000 or C.I. Radio and television advertising sales; including interpretation of rate structures, program audiences, and creative approaches to sponsor needs.

ADV 4300 AS 3(3,0)
Advertising Media: PR: ADV 4000 or C.I. Evaluation of media's ability to serve the advertiser's communication needs and analysis used in determining media success.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR 1101</td>
<td>The United States Air Force and Strategic Offensive-Defensive Forces: PR: Qualification for Air Force ROTC or permission of Professor of Aerospace Studies. History, mission, organization and doctrine of the United States Air Force and a study of U.S. Strategic Offensive and Defensive Forces.</td>
<td></td>
</tr>
<tr>
<td>AFR 1111</td>
<td>Conventional Military Forces: PR: AFR 1101 or permission of Professor of Aerospace Studies. A brief review of the Army, Navy, and Marine force. An introduction to special operations and counterinsurgency.</td>
<td></td>
</tr>
<tr>
<td>AFR 2130</td>
<td>The Development of Airpower: PR: AFR 1111 or approval of the PAS. A study of the development of airpower from experiments by 18th century balloonists to the achievement of combat airpower capabilities during World War II.</td>
<td></td>
</tr>
<tr>
<td>AFR 2131</td>
<td>The Aerospace Age: PR: AFR 2130 or approval of the PAS. A study of the development of aerospace capabilities since World War II, highlighting technological advancements and the role of aerospace power in the contemporary world.</td>
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</tr>
<tr>
<td>AFR 3220</td>
<td>Air Force Management and Leadership: PR: GMC or Two-Year Program Selection and/or approval of the PAS. An introductory study of Air Force management fundamentals, communications skills and basic leadership styles.</td>
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<tr>
<td>AFR 3230</td>
<td>Air Force Management and Evaluation: PR: AFR 3220 or approval of the PAS. A concluding study of Air Force management fundamentals including performance evaluation skills.</td>
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<tr>
<td>AFR 4201</td>
<td>Societal Role and Defense Strategy: PR: AFR 3230 or approval of PAS. Examination of the military and its role in American society. A study of the framework and formation of defense strategy.</td>
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<tr>
<td>AFR 4210</td>
<td>Implementation of Defense Policy: PR: AFR 4201 or approval of PAS. An examination of defense implementation and its impact on the decision making process. A study of the military justice system and its protection of individual rights.</td>
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</tr>
<tr>
<td>AFR 4240</td>
<td>Introduction to Flight (Pilot): PR: AFR 3220,3230 and/or permission of the Professor of Aerospace Studies. An academic, introductory study of FAA regulations, weather, navigation and aircraft components, systems and performance.</td>
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<tr>
<td>AMH 3370</td>
<td>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.</td>
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<tr>
<td>AMH 3402</td>
<td>History of the South to 1865: PR: AMH 2010 or 2020 or C.I. Development of the southern colonies, beginning on sectionalism, the cotton economy, slavery, Calhoun’s constitutional theories, secession, Civil War and its aftermath.</td>
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<tr>
<td>AMH 3403</td>
<td>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.</td>
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<tr>
<td>AMH 3421</td>
<td>History of Florida to 1845: PR: AMH 2010 and 2020 or C.I.</td>
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<td>AMH 3423</td>
<td>Florida History 1845-Present: PR: AMH 2010 and 2020 or C.I.</td>
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<tr>
<td>AMH 3441</td>
<td>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.</td>
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</tbody>
</table>
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.

Spanish Borderlands: PR: AMH 2010 and 2020 or C.I. Survey of Spanish settlement in South and Southwestern U.S. with emphasis upon cultural conflicts found in the imperial rivalries for control of the area.

Military History: A survey of US military history from the European background of the colonial period through the contemporary military experience.

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.

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.

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.

Jeffersonian America: PR: AMH 2010 and 2020 or C.I. The Confederation era, the Federalists, Jeffersonian Democracy, and the War of 1812.

Jacksonian America: PR: AMH 2010 and 2020 or C.I. The risk of American nationalism, Jeffersonian Democracy, the Mexican War and sectional conflict.

Civil War and Reconstruction: PR: AMH 2010 and 2020 or C.I. Reconstruction, and impact of industrialism.

Robber Baron Era: PR: AMH 2010 and 2020 or C.I. The Agrarian Revolt, the Spanish-American War, and the Progressive Era.

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.

United States History: 1945-Present: PR: AMH 2010 and 2020 or C.I. Contemporary America from World War II.

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.

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.

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.

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.

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.

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.

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.

Colloquium Age of Jackson: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of the Jacksonian age.

Colloquium in Civil War and Reconstruction: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of the Civil War and Reconstruction era.
AMH 5219  AS 3(3,0)
Colloquium in Late 19th Century U.S.: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of late 19th century U.S.

AMH 5296  AS 3(3,0)
Colloquium in 20th Century U.S.: PR: Senior Standing or C.I. Reading and class discussion on selected topics in 20th century U.S.

AMH 5391  AS 3(3,0)
Colloquium in U.S. Cultural History: PR: Senior Standing or C.I. Students will read and discuss a common or diverse body of the significant literature in the field.

AMH 5407  AS 3(3,0)
Colloquium in American South: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of Southern history from colonial origins to the Present.

AMH 5446  AS 3(3,0)
Colloquium in U.S. Frontier: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of frontier history.

AMH 5515  AS 3(3,0)
Colloquium in U.S. Diplomatic History: PR: Senior Standing or C.I. A survey of the historical literature of American foreign policy.

AML 2011  AS 3(3,0)
American Literature I: PR: ENC 1102. Major American writers from beginning through Whitman.

AML 3020  AS 3(3,0)
American Literature II: PR: ENC 1102. Major American writers from Twain to present.

AML 4101  AS 3(3,0)

AML 4261  AS 3(3,0)
Literature of the South: PR: ENC 1102 or C.I. Development of Southern literature from its beginnings in the "Old South" through the post-Civil War and the Southern Renaissance to the present. Emphasizes reading from Poe, Ransom, Tate, Faulkner, Porter, Warren, O'Connor, Percy and Styron.

AML 4321  AS 3(3,0)

ANT 2003  AS 3(3,0)
General Anthropology: An introductory survey of the four major subfields of anthropology: Social Anthropology, Physical Anthropology, Linguistics and Archaeology.

ANT 3000  AS 3(3,0)
Physical Anthropology and Archaeology: Survey of man's place among primates, evolution, genetics, and prehistoric cultural development to the earliest civilizations.

ANT 3122  AS 3(3,0)
Archaeological Methods: PR: ANT 3000 or ANT 3410. A seminar surveying archaeological field and laboratory techniques; i.e., bone preservation, zooarchaeology, ethnobotany, cataloguing, classification, and laboratory analysis.

ANT 3141  AS 3(3,0)
Prehistory of Complex Societies: An analysis of prehistoric urban systems in Europe, Asia, Africa and the Americas, approached in an evolutionary perspective.

ANT 3142  AS 3(3,0)
Old World Prehistory: PR: ANT 3000 and ANT 3410. Fundamentals of archaeological discipline and research techniques. Surveys prehistoric record of cultural development from earliest times to rise in civilizations in all areas of Old World.

ANT 3144  AS 3(3,0)
New World Prehistory: PR: ANT 3000 and ANT 3410. Essentials of New World archaeology, methods, and excavations. Surveys space-time framework of Native American Indian cultures and civilization from earliest times to A.D. 1500.

ANT 3241  AS 3(3,0)
The Anthropology of Religion: Patterns in religious behavior in various societies with primary emphasis on myth, rite, taboo and festival as social phenomena.

ANT 3312  AS 3(3,0)
Ethnology of North American Indians: A survey of the aboriginal cultures of North America with emphasis on the pre-contact cultural condition.

ANT 3313  AS 3(3,0)

ANT 3332  AS 3(3,0)
People and Cultures of Latin America: An overview of the history and society of the peoples of Latin America emphasizing patterns of subsistence and social organization.

ANT 3410  AS 3(3,0)
Cultural Anthropology: Framework and principles of sociocultural organization as exemplified among various cultures and ethnic groups.
ANT 3422 Comparative Social Organization: PR: ANT 3000 and 3410. Introduction to anthropological viewpoints on role of marriage, family, kin groups, and descent in the study of economic, political and ideological aspects of social organization.

ANT 3424 Culture and Community: The anthropology of the human community in a cross-cultural context focusing on such aspects as settlement patterns, subsistence activities, social structure and processes of interaction.

ANT 3432 Culture and Personality: Theories of the variations in personality in relation to culture and group life.

ANT 3464 Human Microevolution: A study of the forces of evolution operating within the contemporary human populations, with particular emphasis upon epidemiological areas of research.

ANT 3511 Physical Anthropology: PR: ANT 3000 and 3410. The study of man as a product of the evolutionary process. Study and analysis of diversity among present human populations.

ANT 3512 Biobehavioral Anthropology: An introduction to the study of human behavior in terms of mutual interaction between human biology and cultural environments.

ANT 3552 Primatology: An introduction to the evolution of non-human primates and to contemporary field and laboratory primatological research.

ANT 4086 Method and Theory in Anthropology: PR: ANT 3000 and 3410. Central methodological and theoretical concerns of anthropology in its emergence as a separate discipline and field of study.

ANT 4705 Applied Anthropology: The application of social science to problems of directed social and technological change in industrial as well as non-industrial societies.

ANT 5937 Proseminar in Anthropology: An intensive introduction to the study of anthropology. Open to all graduate students and undergraduate students with C.I.

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


APB 3293 Respiratory Pathology: PR: ZOO 3733C. Cellular pathology with emphasis on pathology of respiratory and cardiovascular systems.

APB 3600 Introduction to Pharmacology: Review of terminology and regulations. Study of drug types and usage.

APB 4650 Medical Pharmacology: PR: C.I. Drugs in cardiovascular diseases; effects on nervous system, gastrointestinal tract, and neuroeffectors. Depressants and stimulants; influence on metabolism and endocrines. Anesthetics, chemotherapy.

APB 5581 Applied Microbiology: PR: MCB 3013C or C.I. Microbial biochemistry of industrial processes including: economics, screening, scale up, quality control and applied genetics.

ARE 4143 Methodology for Teaching K-12 Art Education I: Methods and curriculum materials for teaching art in elementary and secondary schools.

ARE 4144 Methodology for Teaching K-12 Art Education II: Continuation of ARE 4143.

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

ARE 4440 Two-Dimensional Instructional Materials: PR: ARE 4313 or C.I. Application of two-dimensional materials to appropriate levels of instruction; chalk, ink, watercolor, crayon, tempera, acrylics, paper, fiber, and oils. Lab. TBA.

ARE 4441 Graphic Instructional Materials: PR: 4313 or C.I. Application of graphic materials to appropriate level of instruction; direct and indirect basis processes of reproduction of mono and multi-printing. Lab. TBA.

ARE 4443 Three-Dimensional Instructional Materials: PR: ARE 4313 or C.I. Application of three-dimensional materials to appropriate levels of instruction: wood, paper, plaster, stone, clay, wax fiber, metal, and synthetics. Lab. TBA.
ARE 5251 ED 3(2,1)
Art for Exceptionalities: Concepts, principles, and methods of integrating art processes into the education of the physically, emotionally, and mentally handicapped.

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 5358 ED 3(3,0)
Found Arts: PR: ARE 4440 and ARE 4443 or C.I. Materials available for instruction in the public schools will be explored in depth in relation to their appropriateness and productive qualities.

ARE 5444 ED 3(3,0)

ARE 5648 ED 3(3,0)
Contemporary Visual Arts Education: PR: ARE 4344 or 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 3118 AS 3(3,0)
Arts of Pre-Literate Societies: The visual arts in recent and contemporary primitive societies with emphasis on the cultures of Africa and Oceania.

ARH 3550 AS 3(3,0)
Asian Art: History of visual arts of China, Japan, India and other Eastern cultures.

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 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 4071 AS 4(4,0)
Symbolism in the Visual Arts: A study of the origin, migration, and transmutation of religious 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 4311 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 seventeenth and eighteenth centuries.

ARH 4430 AS 3(3,0)
19th Century Art: A survey of the trends and developments in art during the nineteenth century, including the art of America and of Western Europe.

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

ARH 4655 AS 3(3,0)
Mexican Art: A survey of the art of the Pre-Columbian cultures of Meso-America; the art of great cultures such as The Olmecs, Maya & Aztecs.

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

ARH 4700 AS 3(3,0)
Art and Technology: The impact of technological developments in the visual arts of the 20th Century.

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 AS 3(3,0)

ART 2201C AS 3(2,3)
Design Fundamentals I: Materials, processes, form. Emphasis on two-dimensional design problems, including problems in black and white and basic color theory.

ART 2202C AS 3(2,3)
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 2300.

ART 3100C

ART 3110C
Ceramics: PR: ART 2202C or C.I. Basic concepts of ceramic design, experience in processes of forming, decorating, glazing, and firing pottery.

ART 3230C

ART 3280C
Graphic Design I: PR: ART 2201, 2202, or C.I. Current: Use of type, color and illustration on layout elements and mechanical separations.

ART 3300C
Intermediate Drawing I: PR: Six semester hours of Drawing Fundamentals or C.I. Intermediate problems in drawing with emphasis on the human form.

ART 3310C
Intermediate Drawing II: PR: C.I. Continuation of Intermediate Drawing I.

ART 3400C
Printmaking: PR: 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 3600C
Photography: PR: ART 2201. Consideration of basic technical and aesthetic factors in using still photography as a vehicle for visual expression.

ART 3701C
Sculpture: PR: Six semester hours in Design Fundamentals, to include three semester hours in three-dimensional work, or C.I.

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

ART 4111C
Advanced Ceramics: PR: ART 3110C. May be repeated for credit.

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

ART 4160C

ART 4237C
Special Problems in Graphic Design: PR: ART 4242C or C.I. Advanced problems in Visual Design and Reproduction. May be repeated for credit.

ART 4242C
Graphic Design II: PR: ART 3280C or C.I. Practical Studio Problems with emphasis on organization of visual design elements. May be repeated for credit.

ART 4320C
Advanced Drawing: PR: ART 3331C. May be repeated for credit.

ART 4402C
Advanced Printmaking: PR: ART 3400C. May be repeated for credit.

ART 4530C
Advanced Painting: PR: ART 3510C. May be repeated for credit.

ART 4604C
Advanced Photography: PR: ART 3600C. May be repeated for credit.

ART 4606C
Special Problems in Photography: PR: ART 3600C or C.I. A series of directed photographic problems of a research nature. May be repeated for credit.

ART 4634C
Special Problems in Film Design: A series of exercises in craft, technique, and design for film production, including animation.

ART 4703C
Advanced Sculpture: PR: ART 3701C. May be repeated for credit.

ART 4965
Senior Studio and Exhibition: Studies for the preparation of portfolios, resumes, gallery exhibitions, and other professional practices.
Crafts Design: Crafts design and production, including the use of rigid, flexible, and linear materials.

Survey of East Asia: PR: EUH 2000 and 2001 or C.I. An introduction to Far Eastern Cultures including India since the Age of the Moguls, China since early European penetration, Japan since the Hermit Kingdom.

Survey of Chinese History I: PR: EUH 2000 and 2001 or C.I. From antiquity to 1368, a study of the development of Chinese social, political and cultural traditions from their early beginnings to the end of Yuan Dynasty.

Survey of Chinese History II: PR: EUH 2000 and 2001 or C.I. From 1368 to present, a study of the evolution and transformation of Chinese society during late-imperial and modern periods, with special emphasis on China's response to the western impact.

Early Islamic History: PR: EUH 2000 and 2001 or C.I. Early Islamic History from the Prophet Mohammad (600 A.D.) to the Mongol invasion (1258 A.D.).

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.

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.

Astronomy: PR: PSC 1512. An up-to-date survey of the solar system, the properties and evolution of stars, galaxies, and cosmology. Optional night observation sessions offered.


Biochemistry II: PR: BCH 4053. Continuation of BCH 4053.

Biochemical Methods: PR: BCH 4053 and CHM 3121C. A laboratory course stressing the application of the chemical arts to the separation, identification, and quantification of materials of biological significance.

Construction Methods, Contracts and Specifications: Construction principles, details, materials and methods used. Legal contractual provisions and interrelations of specifications applied to construction.

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.

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.

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.

Plants and Man—Ethnobotany: PR: C.I. Man's historical and modern uses of plants economically important in various cultures. Designed for majors and non-majors.

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.

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

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.

Freshwater Algae: PR: BOT 2010C or C.I. A lecture-laboratory course to survey the physiology, diversity and ecology of the freshwater algae.
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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>BOT 4503C</td>
<td>Plant Physiology: A study of mechanisms used by plants to cope with</td>
<td>PCB 3023 or C.I.</td>
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<td>the environment.</td>
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<td>BOT 4623</td>
<td>Plant Geography: The major climatic plant formations of the world and</td>
<td>8 hours Botany or C.I.</td>
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<td>historical plant geography.</td>
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<td>BOT 4713C</td>
<td>Plant Taxonomy: An introduction to systematic classification and</td>
<td>BOT 2010C.</td>
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<td>identification of vascular plants with emphasis on the flora of</td>
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<td>peninsular Florida.</td>
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<tr>
<td>BOT 5495C</td>
<td>Bryology: A lecture-laboratory survey course on the diversity and</td>
<td>BOT 4303C or C.I.</td>
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<td>classification of mosses, liverworts, and hornworts with special</td>
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<td>emphasis on those found in Florida.</td>
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<td>BSC 1020C</td>
<td>Biological Principles: A study of various biological factors which</td>
<td>Designed for non-majors.</td>
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<td>affect the health and survival of man in modern society.</td>
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<td>BSC 1030C</td>
<td>Biology and Environment: The biological implications of the</td>
<td>Designed for non-majors.</td>
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<td>interaction among human society, population, and technology in relation</td>
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<td>to the environment and natural systems.</td>
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<tr>
<td>BSC 2010C</td>
<td>General Biology: High school biology or C.I. Basic principles,</td>
<td>Designed for non-majors.</td>
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<td>unifying concepts and facts of modern biology. Introduction to</td>
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<td>quantitative biological experimentation. For biological sciences,</td>
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<td>allied health sciences and preprofessional majors.</td>
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<tr>
<td>BTE 1060</td>
<td>Introductory Typewriting: Instruction in touch control of the</td>
<td>ED 3(2,2)</td>
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<td>typewriter keyboard. 1 Introduction to typing letters, tables,</td>
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<td>manuscripts, and typing composition.</td>
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<td>BTE 2061</td>
<td>Typewriting Production: Extend speed and accuracy in touch</td>
<td>ED 2(2,1)</td>
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<td>typewriting. Develop skills for advanced</td>
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<td></td>
<td>letters, tables, and manuscripts.</td>
<td></td>
</tr>
<tr>
<td>BTE 2063</td>
<td>Principles of Shorthand I: Introduction to basic theory of</td>
<td>ED 3(3,1)</td>
</tr>
<tr>
<td></td>
<td>Gregg shorthand, vocabulary development, and speed building.</td>
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<tr>
<td>BTE 3062</td>
<td>Professional Typewriting Production: Develop professional level</td>
<td>ED 3(3,1)</td>
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<tr>
<td></td>
<td>speed, accuracy and production skills in the use of the</td>
<td></td>
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<tr>
<td></td>
<td>typewriter.</td>
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<tr>
<td>BTE 3151</td>
<td>Advanced Shorthand: Extend and refine Gregg shorthand</td>
<td>ED 3(3,1)</td>
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<tr>
<td></td>
<td>dictation, speed and vocabulary; introductory typewritten</td>
<td></td>
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<tr>
<td></td>
<td>communication production skills.</td>
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<tr>
<td>BTE 3266</td>
<td>Office Technology: Basic operation and function of technological</td>
<td>ED 3(2,1)</td>
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<tr>
<td></td>
<td>media in modern business offices, including word processing</td>
<td></td>
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<tr>
<td></td>
<td>equipment.</td>
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<tr>
<td>BTE 3391</td>
<td>Business Instructional Analysis I: Techniques, materials, and</td>
<td>ED 2(2,1)</td>
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<tr>
<td></td>
<td>instructional media; psychological principles, evaluation, and</td>
<td></td>
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<tr>
<td></td>
<td>current trends in typewriting instruction.</td>
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<tr>
<td>BTE 3391L</td>
<td>Typewriting Laboratory for Instructional Development: Practical</td>
<td>ED 10(0,4)</td>
</tr>
<tr>
<td></td>
<td>application of typewriting theory in the competency-based</td>
<td></td>
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<tr>
<td></td>
<td>and traditional classroom. For Business Education majors only.</td>
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<tr>
<td>BTE 4071</td>
<td>Professional Student Leadership Development: Knowledge and</td>
<td>ED 10(0,4)</td>
</tr>
<tr>
<td></td>
<td>application of objectives for vocational student organizations.</td>
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<tr>
<td></td>
<td>Participation in local, state and national business education</td>
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<tr>
<td></td>
<td>organization functions. (May be repeated once.)</td>
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<tr>
<td>BTE 4152</td>
<td>Shorthand Dictation and Transcription: Professional level</td>
<td>ED 3(3,1)</td>
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<tr>
<td></td>
<td>shorthand dictation for transcription and refinement of</td>
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<tr>
<td></td>
<td>typewritten communications production skills.</td>
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<tr>
<td>BTE 4265</td>
<td>Office Systems and Procedures: Study of the responsibilities of the</td>
<td>ED 3(3,0)</td>
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<tr>
<td></td>
<td>executive secretary and office supervisor, records management,</td>
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<tr>
<td></td>
<td>travel services, case studies in human relations in executive level</td>
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<tr>
<td></td>
<td>job performance.</td>
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</tr>
</tbody>
</table>
BTE 4366
Business Correspondence: Originating written business correspondence to include letters, memoranda, and business forms. (Typewriting skill recommended.)

BTE 4392
Business Instructional Analysis II: PR: EDG 4341. Techniques, materials, and instructional media; psychological principles, evaluation and current trends in shorthand and related instruction.

BTE 4392L
Shorthand Laboratory for Instructional Development: CR: BTE 4392. Practical application of shorthand theory in the competency-based and traditional classroom. For Business Education majors only.

BTE 4393

BUL 3111

BUL 3112
Business Law I: PR: BUL 3111. Analysis of statutory and common law principles involved in the formation, operation and termination of recognized business organizations.

BUL 3121

BUL 3301

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 3001
Computer Fundamentals for Business Applications: Hardware/software for business data processing; survey of business applications program; study of prewritten programs (batch and interactive); writing programs in high level language. Not open to Computer Science Majors.

CAP 3002
Business Applications Programming: PR: CAP 3001 or equivalent. Basic programming concepts and techniques, algorithm design, programming for selected business applications using a high level language (e.g. BASIC). Not open to Computer Science majors.

CAP 3006
Survey of Hardware: PR: CAP 3002. Assembly programming; survey of hardware available in today’s market; techniques of hardware comparison. Not open to Computer Science majors.

CAP 3007

CAP 3106
Microcomputer Applications in the Classroom: An introduction to the microcomputer as it applies to classroom instruction. Includes a survey of software appropriate for the K-12 classroom.

CAP 4401
Computerized Health Information Systems: PR: CAP 3001 or equivalent. Analyses of computerized health information systems with emphasis upon the design and implementation phases. Onsite visitations of several local computerized health information systems. Not open to Computer Science majors.

CAP 5101
Applications of Computers in Education: PR: At least Senior standing in College of Education. Computer programming; computer assisted instruction, computer-managed instruction; simulation and games; computerizing teachers’ records. Not open to Computer Science majors.

CAP 5612
Computer Based Educational Systems: PR: COP 4550 or equivalent. The design and implementation of computer based educational systems. Selected projects using high-level programming languages.

CAP 5623
Heuristic Programming: PR: COP 4550, COT 4001. An introduction to basic artificial intelligence concepts including problem solving, knowledge based systems, natural language understanding by computer.

CAP 5670
Introduction to Intelligent Systems: PR: COP 4550 or equivalent. Origin/evolution of machine intelligence; heuristic and epistemological approaches to artificial intelligence; what computers can and cannot do; symbiotic role of human and computers.
Computer Graphics Systems I: PR: COP 3404 or equivalent. Architecture of graphics processors; display hardware; principles of programming and display software; problems and applications of graphic systems.

Simulation/Performance of Computer Systems: PR: CDA 5106 and COP 5613. Performance measurement of hardware and software systems, simulation techniques, monitoring programs.

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

Introduction to Criminal Justice: A survey of the field of criminal justice including crime, the history and structure of the criminal justice system, and basic steps in the criminal process.

Crime in America: A survey of crime and criminality in the United States with emphasis on crime data, its weaknesses, and types of criminal behavior.

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

Prosecution and Adjudication: Examination of structures and goals of offices and prosecution and criminal trial courts, and of the processes of charging, adjudicating and sentencing defendants.

The Corrections and Penology: Theories, structures and methods of institutional and non-institutional processing and treatment of convicted criminals and juvenile offenders.

Community Treatment Modes: Treatment techniques and practices in the community setting. Builds upon modes covered in prerequisite course and may include practicum experience in a community setting.

The Criminal Justice Manager: PR: C.I. Elements of first-line supervision and executive development. Administrative leadership; its nature; methods and traits. Recent theories and research in leadership.

Justice System Technology: Examination of the relevance of scientific and technological developments to justice systems and their applicability to the operations and management of the systems.

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.

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.

Corrective Administration: Organizational and administrative theory and its application in various correctional settings. Examines specific problems in management and meeting conflicting needs and expectations.

Social Conflict and Justice Policy: The effects of social conflicts and political decisions on the administration of justice, stressing the law enforcement role in dealing with social problems.

Police and the Community: PR: CCJ 2020. Examination of the dynamics of public expectations of police, the impact of community demographic changes and police alienation from the community.

Delinquency Control: Examination of programs and institutions including juvenile court process, intake services, and remedial procedures and practices.

Comparative Justice Systems: A survey of contemporary foreign criminal justice and differences emerging from various political, cultural and legal systems.

Criminal Justice Internship: PR: C.I. Internship in municipal, county, state or federal criminal justice agency. Includes assignments in police, courts, corrections components.

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 4012 \hspace{1cm} AS 3(2,2)

Computer Interfacing for Scientists: PR: CHM 2046, or Phy 3049, or Phy 2051C, or equivalent, or C.I. Hands-on laboratory embracing simple gate, flip flop decoding and counting circuits, digital logic. Interfacing to a microcomputer for data logging and experimental control.

CDA 4102 \hspace{1cm} AS 3(3,0)

Introduction to Computer Architecture: PR: Computer Science Major or C.I. and COP 3404 and EEL 3341C. Survey of machine instructions, processor characteristics, and microprogramming concepts.

CDA 4142 \hspace{1cm} AS 3(2,2)

Microcomputer Fundamentals: PR: Computer Science Major or C.I., COP 3404 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 4143 \hspace{1cm} AS 3(2,2)

Microprocessor Interface: PR: Computer Science Major or C.I. and CDA 4142. Interfacing of CPU to various devices, CPU support devices, peripheral devices and controllers, BUS concepts and standards, single chip computers.

CDA 4144 \hspace{1cm} AS 3(2,2)

Microprocessor Application: PR: Computer Science Major or C.I. and CDA 4142. Total system design methodology and applications, advanced topics on microprocessors, patent search and applications.

CDA 4161 \hspace{1cm} AS 3(3,0)

Programming for Large Scale Digital Systems: PR: Computer Science Major or C.I. and COP 3404. Programming techniques and instruction sets for large scale digital computers.

CDA 5106 \hspace{1cm} AS 3(3,0)

Advanced Computer Architecture I: PR: CDA 4102. Evolution of computer architecture; memory organization; cache; virtual memory; highspeed processor design; pipeline multi-functional and array machines; special architecture case studies; overview of channel architecture.

CDA 5182 \hspace{1cm} AS 3(3,0)

Architecture and Design of VLSI Systems: PR: CDA 4102 or equivalent. Overview of VLSI technology. Stick diagrams; logical design of basic subsystems; integrated system design tools; design of a VLSI computer system.

CDA 5186 \hspace{1cm} AS 3(3,0)

VLSI Design Tools: PR: CDA 5182, 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 5188 \hspace{1cm} AS 3(3,0)

VLSI Testing and System Integration: PR: CDA 5182. Test vectors; fault models; design for testability; LSSD; Languages for testing; performance measurements; interrupts, BUS concepts and standards; testing and systems integration.

CES 4124 \hspace{1cm} EN 3(2,2)


CES 4144 \hspace{1cm} EN 3(3,0)


CES 4605 \hspace{1cm} EN 3(2,2)

Structural Steel Design: PR: CES 4124 or C.I. Design of steel structural members. Selected topics in beam design, column design, plastic design, connections and built-up members.

CES 4609 \hspace{1cm} EN 1(0,2)

Steel Design: PR: CES 4605. Project course on design of steel structures using steel and structural analysis methodologies.

CES 4704 \hspace{1cm} EN 3(2,2)

Structural Concrete Design: PR: CES 4124 or C.I. Principles of designing reinforced concrete members. Selected topics in concrete mixes, beams, columns, and ultimate analysis.

CES 4709 \hspace{1cm} EN 1(0,2)

Concrete Design: PR: CES 4704. Project course on design of concrete structures using concrete and structural analysis methodologies.

CES 5107 \hspace{1cm} EN 3(3,0)

Matrix Structural Analysis: PR: CES 4144 or equivalent. Optimization and matrix methods applied to the design of real structures.

CHM 1034 \hspace{1cm} AS 3(3,0)

General Chemistry: PR: MAC 1104, MGF 1202 or equivalent. An introductory study of the fundamental concepts of chemistry, primarily oriented toward COH and Biology Education majors.

CHM 2045 \hspace{1cm} AS 4(3,1)

Chemistry Fundamentals I: PR: High School Chemistry or CHM 1034. Basic Physical theory of chemical reactivity, atomic structure, chemical bonding, periodicity, stoichiometry, equilibrium, thermodynamics, and kinetics.

CHM 2046 \hspace{1cm} AS 3(3,0)

Chemistry Fundamentals II: PR: CHM 2045. Continuation of CHM 2045.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
<td>PR: CHM 1034 or CR: CHM 2046.</td>
<td>1(0,3)</td>
</tr>
<tr>
<td></td>
<td>Introduction to Organic and Biochemistry</td>
<td>PR: CHM 1034 or equivalent.</td>
<td>5(5,0)</td>
</tr>
<tr>
<td>CHM 3121C</td>
<td>Analytical Chemistry</td>
<td>PR: CHM 2046, 2046L.</td>
<td>5(3,6)</td>
</tr>
<tr>
<td>CHM 3210</td>
<td>Organic Chemistry I</td>
<td>PR: CHM 2046. Theory and applications of organic chemistry: structure, bonding, kinetics, thermodynamics, reaction mechanisms, synthesis, and stereochemistry. Structure elucidation via spectrometric techniques.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CHM 3211</td>
<td>Organic Chemistry II</td>
<td>PR: CHM 3210. Continuation of CHM 3210.</td>
<td>2(0,6)</td>
</tr>
<tr>
<td>CHM 3211L</td>
<td>Organic Laboratory Techniques I</td>
<td>PR: CHM 3210. An introduction to the laboratory techniques of organic chemistry including the preparation, reaction, and analysis of organic compounds.</td>
<td>2(0,6)</td>
</tr>
<tr>
<td>CHM 3212L</td>
<td>Organic Laboratory Techniques II</td>
<td>PR: CHM 3211 and 3211L. Open-end laboratory to develop synthesis techniques and structure elucidation skills.</td>
<td>2(0,6)</td>
</tr>
<tr>
<td>CHM 3410</td>
<td>Physical Chemistry I</td>
<td>PR: CHM 2046, PHY 3049, and MAC 3312. Rigorous treatment of atomic and molecular structure, thermodynamics, kinetics, and chemical bonding.</td>
<td>4(3,1)</td>
</tr>
<tr>
<td>CHM 3411</td>
<td>Physical Chemistry II</td>
<td>PR: CHM 3410. Continuation of CHM 3410.</td>
<td>4(3,1)</td>
</tr>
<tr>
<td>CHM 4130C</td>
<td>Advanced Analytical Laboratory Technique</td>
<td>PR: CHM 3211, CHM 3121C and CHM 3411. A lecture-laboratory course designed to give in-depth coverage to modern methods of analysis including electrochemistry, spectroscopy, and separation techniques.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CHM 4220</td>
<td>Advanced Organic Chemistry I</td>
<td>PR: CHM 3211 and CR: CHM 3410. Theoretical and physical organic concepts of organic systems from the perspective of modern structural theory, thermodynamics and kinetics.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CHM 4221</td>
<td>Advanced Organic Chemistry II</td>
<td>PR: CHM 3211 and CR: CHM 3410. A survey of organic reaction mechanisms and their application to synthetic chemistry.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CHM 4580</td>
<td>Advanced Physical Chemistry</td>
<td>CR: 3411 and PR: MAC 3313. Selected topics of thermodynamics, kinetics, quantum mechanics, and structure.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CHM 5710</td>
<td>Chemical Structure I</td>
<td>CR: CHM 3411. A discussion of descriptive inorganic chemistry based on various bonding theories, thermodynamics and kinetics.</td>
<td>2(0,0)</td>
</tr>
<tr>
<td>CHS 1440</td>
<td>Fundamentals of Chemistry for Engineers</td>
<td>PR: One year of high school chemistry or CHM 1034. Basic concepts of chemistry with emphasis on problem solving and engineering applications. Atomic and molecular structure, states of matter, stoichiometry, equilibria, electrochemistry and thermodynamics.</td>
<td>4(3,1)</td>
</tr>
<tr>
<td>CHS 3501</td>
<td>Introduction to Forensic Science</td>
<td>PR: CHS 3505 or C.I. The study of the polarized light microscope and its use in the identification and comparison of trace evidence.</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>CHS 3505</td>
<td>Forensic Microscopy</td>
<td>CR: CHM 2046 or C.I. The study of the polarized light microscope and its use in the identification and comparison of trace evidence.</td>
<td>3(1,6)</td>
</tr>
<tr>
<td>CHS 3511</td>
<td>Trace Evidence</td>
<td>PR: CHS 3505. An advanced study of the techniques used to identify and compare trace evidence.</td>
<td>3(1,6)</td>
</tr>
</tbody>
</table>
Forensic Analysis of Controlled Substances: PR: CHM 3121C. The study of the presumptive tests, isolation, and instrumental techniques used in identification of controlled substances.

Nuclear and Radiochemistry: PR: CHM 3121C 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.

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.

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.

Chemical Dynamics I: PR: CHM 3411 or equivalent. Dynamics of chemical reactions and physical processes including equilibrium systems catalysis, transport processes and physical phenomena at interfaces.

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

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.

Chemical Synthesis II: PR: CHS 5250. Continuation of CHS 5250.

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

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.

Data Processing Systems Implementation: PR: Computer Science Major or C.I. and CIS 4323. System implementation project. Students experience the task of implementing a large computing system.

Information and File Systems Analysis: PR: CIS 4112 or equivalent. Logic and physical information system design. Analysis of file systems. Introduction to data management systems.


Computational Techniques in Management Information Systems: PR: CIS 4112. Computers in management information systems; analysis, design approaches, processing methods and data management; use of state of the art software in design and development.


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.


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

Advanced Abnormal Psychology: Consideration of Classification, causation, management & treatment of emotional disorders. Review of Theories & Research In the Field. Lecture-Laboratory.
CNM 5142 AS 3(3,0)
Computational Methods/Linear Systems: PR: CNM 4110 and MAS 3113. Mathematical models for linear systems, linear programming, the simplex method, integer and mixed-integer programming, introduction to nonlinear optimization and linearization.

CNM 5148 AS 3(3,0)
Computational Methods/Applications: PR: CNM 4110. Computational solution techniques for algebraic equation, ODE and PDE Models of applications selected from science, engineering, applied mathematics, and computer science.

COC 1100 AS 3(3,0)
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.

COC 3024 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.

COM 1000 AS 3(3,0)
Basic Communication: Survey of basic factors affecting human interaction through communication; theories and models of communication; contributions of behavioral sciences and related arts; mass media in society.

COM 3110 AS 3(3,0)
Business and Professional Communication: PR: SPC 1014 or C.I. Theoretical and practical training in effective presentational speaking for business and professions.

COM 3120 AS 3(3,0)
Organizational Communication: A study of communication functions and problems within the contexts of hierarchies.

COM 3311 AS 3(3,0)
Communication as a Behavioral Science: PR: English proficiency examination. Basic principles of the behavioral science approach to the study of contemporary communication.

COM 4020 AS 3(3,0)
Informational Communication: An examination of available communication systems (non-technical) and their utilization within business, educational, entertainment, industrial, medical and military organization.

COM 4463 AS 3(2,1)
Communication and Court Room Advocacy: A study of the application of communication theory and practice to the judicial setting.

COP 1110 AS 3(3,0)
Computer Programming: PR: College Algebra and Trigonometry or equivalent. Problem definitions, algorithms, flow charts, digital computer programming using a higher level language (FORTRAN). Not open to Computer Science Majors.

COP 2510 AS 3(3,0)
Programming I: PR: College algebra and college trigonometry. Techniques of algorithm development; structured programming concepts; algorithms for searching and sorting procedures; computer experience with a procedure-oriented language.

COP 2511 AS 3(3,0)
Programming II: PR: COP 2510. Continuation of COP 2510; recursion; simple data structures; program verification; continued experience with a procedure-oriented language.

COP 3120 AS 3(3,0)
Business Programming in COBOL: PR: CAP 3002 or equivalent. COBOL programming; fundamental concepts of data processing; system design; processing of sequential, indexed, and random files; programming project.

COP 3215 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.

COP 3402C AS 3(3,2)
Assembly Language: PR: COP 2511 or equivalent programming experience. Computer structure, number systems, data representation, arithmetic and logic instructions, addressing schemes, looping techniques, sequential input/output, subroutines, macros, and other topics.

COP 3404 AS 3(3,2)
Computer Systems Concepts/Programming: PR: COP 3402C. Linker, loader, assembler design and development. Detailed examinations of one computer's operating system and its associated architecture. Advanced topics in assembly language including file input/output.

COP 3530 AS 3(3,0)
Data Structures: PR: COP 3402 and COT 3000. Basic concepts of data and abstract data types (arrays, linear lists, trees, etc.) and their possible implementations. Searching, sorting and other applications.
COP 4124
COBOL Environment: PR: Computer Science Major or C.I. and Computer Science core. Basic and advanced features; creation of user libraries; system utilities; file processing; sub-program linkage; programming efficiencies; compiler study; assembly interfaces and JCL.
COP 4550
Programming Languages I: PR: Computer Science Major, C.I. and Computer
3530. Survey of programming languages (LISP, MODULA, SIMULA, SMALLTALK, ADA, CLU). Basic concepts underlying programming languages: data typing, data abstraction, binding, parameter evaluation, concurrency, functional programming.
COP 4620
Programming Systems: PR: Computer Science Major or C.I. and COP 3530. The function and organization of operating systems. Design and implementation considerations regarding operating systems, compilers, assemblers and loaders.
COP 5554
Programming Languages II: PR: COP 4550 and COT 4001. Introduction to compiler construction, parsing, parser generators, attributed grammars and the Implementation of block structures and recursion. Students write a high-level language translator.
COT 5632
Operating System Design Principles: PR: COP 4620 or equivalent. The structure and functions of operating systems, process communications techniques, scheduling algorithms, deadlocks, memory management, virtual systems, protection and security.
COT 5682
Software Engineering: PR: COP 4550. Study of design techniques for large software systems, modularization, task assignment, management techniques, implementation techniques, testing quality control, documentation and maintenance.
COT 5662
Software Tools: PR: COP 4620 and COP 5554. Systems programming languages, concurrent programming, design and implementation of software development/maintenance tools. A large programming project is required.
COT 3000
COT 4001
Discrete Computational Structures: PR: Computer Science Major or C.I. and COT 3000, MAC 3313. Review of discrete structures, introduction to automation theory, computational complexity, analysis of algorithms, computability theory, and formal languages.
COT 5127
Formal Languages and Data Theory: PR: COP 4550 and COT 4001. Classes of formal grammars and their relation to automata, normal forms, closure properties, decision problems, LR(K) grammars.
COT 5305
COT 5314
Computational Complexity: PR: COT 4001. Properties of algorithms, computational equivalence of machines, time-space complexity measures, examples of algorithms of different complexity, classification of algorithms, classes P and NP.
COT 5344
Computability Theory: PR: COT 4001. Models of computable procedures. Equivalence of models; unsolvable problems; hierarchies of unsolvability; applications including formal languages, automata theory, operating systems, automated theorem proving program verification.
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 4024
Non-Western Politics: Examination of the political system of one or two non-western nations, including the relationship of socio-cultural and historical environment to the political system.
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 AS 4(4,0)
Comparative Latin American Politics: Comparative analysis of politics, society and culture in Latin America and selected countries of the region.

CPO 4643 AS 4(4,0)
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; its influence on domestic and foreign policy formation and implementation.

CRM 5115 AS 3(3,0)
Economics of Computers: PR: CIS 5012. The computer industry, terms and conditions of sale and rental, cost and effectiveness of computer systems. Determining value, demand and price of computer services.

CRM 5131 AS 3(3,0)
Managing the Computer Professional: PR: CIS 5012 and MAN 5051; or C.I. The programming group, team and project tasks, personality factors, motivating, training, experience.

CRW 2000 AS 3(3,0)
Principles of Creative Writing: An exploratory course in the several types of creative writing; group analysis of original writing; critical reading of established authors.

CRW 2100 AS 3(3,0)
Introduction to Fiction Writing: Practice in writing the short story; group analysis and criticism of work produced by individual students.

CRW 2300 AS 3(3,0)
Introduction to Verse Writing: Practice in writing poetry; group analysis and criticism of work produced by individual students.

CRW 3001 AS 3(3,0)
Creative Writing Workshop I: PR: C.I. Practice in established forms: essay, short story and poetry.

CRW 3002 AS 3(3,0)
Creative Writing Workshop II: PR: CRW 3001 or C.I. Individualized practice in writing in one of the established forms; analytic study of the work of pertinent authors.

CRW 3310 AS 3(3,0)
Structure of Verse: Intensive study of the structural characteristics of English, poetry, metrical systems, rhyme, scansion, and poetic rhetorical devices.

CRW 3410 AS 3(3,0)
Writing Scripts: Theory and practice of writing scripts for theatre, film and TV.

CRW 4940 AS 3(3,0)
Writing Practicum I: PR: C.I. Intensive writing practice in fiction, non-fiction, or verse.

CRW 4941 AS 3(3,0)
Writing Practicum II: PR: CRW 4940. Continuation of CRW 4940.

CRW 5932 AS 3(3,0)
Teaching Creative Writing: PR: Senior standing or C.I. Creative writing practicum.

DEP 3464 AS 3(3,0)
Psychology of Aging: PR: PSY 2013. An examination of basic psychological processes related to the aging process with emphasis on the applied implications of changes in perceptual-motor, social-emotional and cognitive-intellectual function.

DEP 5057 AS 3(2,2)
Developmental Psychology: PR: Graduate admission or C.I. Psychological aspects of development including intellectual, social and personality factors.
Principles of Behavior Modification: PR: EXP 3404. An examination of the control of behavior through applications of principles and theories of learning. Examples are drawn from clinical and social psychology and from child rearing. Lecture/Practicum.


Applied Behavior Analysis with Children and Youth: PR: DEP 5057 and EXP 5445 or C.I. Advanced survey of principles, procedures and techniques of applied behavior analysis, with special attention to applications with children and youth.

Introductory Aerodynamics: PR: EML 4709. Basic aerodynamic analysis of wings and bodies in incompressible and compressible flows including airplane performance, stability and control.


Civil Engineering Materials: PR: C.I. The characterization of materials used in civil engineering works to include concrete, soils, bituminous, polymers and composite materials.

Engineering and Environmental Geology: PR: EGN 3704. Principles of physical geology with emphasis on engineering and environmental topics. Study of land forms, geologic maps, geologic structure, weathering, groundweather, mass wasting, and earthquakes.

Construction Engineering: PR: C.I. Project specifications, negotiations, contracts, unions, planning, insurance and safety with methods and equipment related to Civil Engineering.

Geotechnical Engineering I: PR: EGN 3331C and EGN 3353C. Engineering properties and classification of soils. Design considerations for compaction, seepage, consolidation, and settlement analysis.

Construction Cost Engineering: PR: C.I. Construction cost planning, equipment productivity and methods. Heavy construction, building construction techniques, estimating production, operation analysis, material take off.

Construction Project Management: PR: C.I. Strategic planning, management, development, design, and production of complex construction projects. Total building process, value engineering, project funding and cash flow.

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

Geotechnical Engineering II: PR: ECI 4305C. Continuation of ECI 4305 with emphasis on shear strength and design factors for earth pressures bearing capacity, and slope stability.

Pavement Design: PR: ECI 4305C. Pavement types, wheel loads, stresses in pavement components, design factors such as traffic configurations, environmental, economic.

Geotechnical Engineering Design: PR: ECI 4305C and ECI 5306. Project course on design of Foundations and other soil structures using geotechnical design methodologies.

Engineering Mathematical Analysis: PR: MAP 3302. The application of mathematical methods to engineering problems. Vector and tensor fields, state space, coordinate systems, orthogonal functions.

Mathematical Modeling for Engineers: PR: MAP 3302 and EGN 3703. Formulation of mathematical models in engineering—continuous and discrete systems.


Mini-Computers in Engineering Systems: PR: COP 3215 or equivalent, EEL 3342C or EEL 3341C. Organization of the computer processor, memory and I/O. Assembly level programming, input-output using programmed transfer and interrupt type I/O, Mini-computer orientation.


Engineer Math Analysis I: PR: MAP 3302. Topics in advanced engineering mathematics including systems of differential equations, phase plane, linear algebra and vector differential calculus.

Microcomputer-based Monitoring and Control Systems: PR: EEL 3342C or equivalent, COP 3215 or equivalent. Machine-language programming; software development aids; interfacing considerations.

Software Engineering I: PR: COP 3215, ECM 4504 or equivalent. Design reliability, testing, and implementation of engineering software.

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.

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.

Intermediate Price Theory: PR: ECO 2023 and ECO 2013. Theoretical study of the behavior of households, firms and the markets in which they operate with issues and applications.


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.

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

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.

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.

The Economics of Regulated Industries: PR: ACG 2001, ACG 2011, or ACG 3023, and ECO 2013, or C.I. A study of the economic, legal, and administrative foundations of regulatory policy in a broad range of industries in the American economy.

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.

Urban and Regional Economic Problems: PR: ECO 2023 and ECO 2013. Analysis of the location, organization and problems of urban and regional economic activities.

Managerial Economics: PR: Junior standing. ACG 2011 or ACG 3023, ECO 2023, ECO 2013 and ECO 3411. The uses of economic analysis in economic decision making and business policy formulation.


Junior Student Teaching-Elementary: PR: EDG 4341. Student teaching assignment in an elementary school under the supervision of a certified classroom teacher.

Junior Student Teaching-All K-12 Majors: PR: EDG 4341. Student teaching under the supervision of a certified teacher. Half in elementary, half in secondary.


Senior Student Teaching-Elementary: PR: EDE 3942 or EDE 3943. Student teaching in an elementary school under the supervision of a certified classroom teacher.

Individual 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.


Analysis of Educational Foundations: PR: Junior standing or C.I. Analysis of and participation in general and specific dimensions of teaching with socioeconomic, historical and philosophical factors emphasized.

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.

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.

Applications of Technology in Education: Classroom applications of instructional media including computers. Includes experiences with equipment, commercial and teacher made media, and their uses.

Teaching in the Schools: PR: Teaching Strategies or C.I. Selected dimensions of teaching; teaching skills; reading and writing in content areas; problem solving, school organization and professional ethics.

Teaching Strategies: Analysis of the learning environment; emphasis on planning for instruction, skill development and measurement and evaluation.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDP 3004</td>
<td>Educational Psychology: PR: PSY 2013. Application of psychological principles and research methods to classroom behavior and learning.</td>
<td>ED 3(2,1)</td>
</tr>
<tr>
<td>EDS 5356</td>
<td>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.</td>
<td>ED 3(2,1)</td>
</tr>
<tr>
<td>EEC 4204</td>
<td>Early Childhood Screening and Curriculum Development: A study of screening requirements and procedures; kindergarten through grade three; preventive, development, and enrichment materials and strategies; perception and readiness; organization; teacher-aides.</td>
<td>ED 3(3,0)</td>
</tr>
<tr>
<td>EEC 5205</td>
<td>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.</td>
<td>ED 3(3,0)</td>
</tr>
<tr>
<td>EEC 5206</td>
<td>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.</td>
<td>ED 3(3,0)</td>
</tr>
<tr>
<td>EEC 5208</td>
<td>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.</td>
<td>ED 4(4,0)</td>
</tr>
<tr>
<td>EED 4011</td>
<td>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.</td>
<td>ED 4(4,0)</td>
</tr>
<tr>
<td>EED 4212</td>
<td>Curriculum and Program Adaptations, E.H.: PR: Senior Standing. Development of highly specialized techniques and materials to be used with exceptional students.</td>
<td>ED 4(4,0)</td>
</tr>
<tr>
<td>EEL 3122</td>
<td>Electrical Networks: PR: EGN 3375C and MAP 3302. Analysis and design of linear circuits, transients, network function. Laplace transform.</td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>EEL 3307C</td>
<td>Electronic Engineering: PR: EGN 3375C and MAP 3302. Electronic devices and circuits design including small signal amplifiers, and switching circuits.</td>
<td>EN 4(3,3)</td>
</tr>
<tr>
<td>EEL 3341C</td>
<td>Introduction to Digital Circuits: PR: COP 2510 and PHY 3049. Logic gates, memory devices, combinational and sequential subsystems. Karnaugh Maps. Intended primarily for computer science majors.</td>
<td>EN 3(2,3)</td>
</tr>
<tr>
<td>EEL 3342C</td>
<td>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.</td>
<td>EN 4(3,3)</td>
</tr>
<tr>
<td>EEL 33470</td>
<td>Electromagnetic Fields: PR: EGN 3375C and MAP 3302. Introduction to electric and magnet fields and electromagnetic waves.</td>
<td>EN 3(0)</td>
</tr>
<tr>
<td>EEL 4309C</td>
<td>Active Circuits: PR: EEL 3307C: Analysis and synthesis of transfer functions. Analog active filters. Design of nonlinear circuits, function generators, and oscillators.</td>
<td>EN 4(3,3)</td>
</tr>
<tr>
<td>EEL 4343C</td>
<td>Sequential Circuits and Systems: PR: EEL 3342C or C.I. Synchronous and asynchronous circuits, compatible states, hazards, races, and state equivalence and minimization techniques. Applications to design of synchronous sequential systems.</td>
<td>EN 3(2,3)</td>
</tr>
<tr>
<td>EEL 4370</td>
<td>Microwaves: PR: EEL 3470. Microwave devices and systems and measurement techniques.</td>
<td>EN 4(3,3)</td>
</tr>
<tr>
<td>EEL 4512C</td>
<td>Communication Systems: PR: STA 3032, EEL 3552 and EEL 3307C. Information transmission, modulation, and noise; design and comparison systems in the presence of noise.</td>
<td>EN 4(3,3)</td>
</tr>
</tbody>
</table>
EEL 4570C

Data Communications Engineering: PR: EEL 4701C or ECM 4504. Analysis, design and operation of Data Communications Systems. Applications in remote computing networks and process monitoring.

EEL 4701C


EEL 4702C

Digital Systems Design: PR: EEL 4701C or C.I. Continuation of EEL 4701C. Microprocessor and LSI based approaches to the design of digital systems. Current topics in the design of control communications, and display systems.

EEL 4800C


EEL 5173


EEL 5260

Electric Power Generation and Distribution: PR: EGN 3375C or equivalent. Concept of complex power in single and three phase systems. Synchronous machines, power transformer, and transmission lines system design.

EEL 5355C

Fabrication of Solid-State Devices: PR: EEL 4308C. Fabrication of microelectronic devices, processing technology, ion implantation and diffusion, device design and layout. Laboratory includes device processing technology.

EEL 5365

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

EEL 5441

Coherent Optics Applications: PR: PHY 3421C and EEL 3470 or C.I. Coherent optical radiation and propagation. Design and analysis of optical components and systems.

EEL 5499L

Electro-Optics Lab Techniques: PR: EEL 3552, EEL 3470. Laboratory experiments in holography, optical data processing, laser characteristics, fiber optics, and optical communications.

EEL 5542


EEL 5563


EEL 5630

Digital Control Systems: PR: EEL 5173 and EEL 3342C. Real time digital control system analysis and synthesis. Digital compensation of control systems such as high accuracy positional control systems with encoder feedback sensors.

EES 3104


EES 4202

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 4204


EES 4404

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 5210

Potable Water Treatment: PR: EES 4202 and 4204. Engineering application of potable water chemistry involving coagulation, softening, filtration, corrosion, disinfection quality and drinking water.

EEX 3010

Orientation to Special Education: Definition, characteristics, theories, current trends, and controversies in the various categories of exceptional education.

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EEX 3102 Language Development and Common Disorders: PR: Junior standing. Interdisciplinary approach to language development, identification and remediation of common disorders.

EEX 3221 Assessment of Exceptional Learners: PR: RED 3012 and MAE 3112. Diagnosis of learning problems of exceptional students; assessing performance and determining appropriate placement and programming.

EEX 3241 Methods for Academic Skills for Exceptional Students: PR: RED 3012 and MAE 3112. 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 4040 Teaching the Young Handicapped Child: Teaching strategies for regular educators concerning problems of exceptional students in the mainstream.

EEX 4240 Techniques for the Exceptional Adolescent-Adult: A study of strategies, skills and alternative procedures when teaching adolescents and adults.

EEX 4601 Behavioral Management: Study of management techniques based on behavioral management (applied behavioral analysis) principles for modifying the effective behavior of exceptional students.

EEX 5051 Exceptional Children in the Schools: PR: Senior standing or C.I. Characteristics, definitions, educational problems, and appropriate educational programs for the exceptional children in schools.

EGC 5005 Introduction to Guidance and Human Services: PR: Completion of Phase II of Educ. Prof. Prep. or Certificate or C.I. A basic course presenting an overview of the philosophy, organization, administration and operation of guidance and human services.

EGC 5033 Guiding Human Relationships: PR: Senior standing or Certificate. A course to teach human relationship skills which will enhance intra- and inter-personal relating skills.


EGN 1510 Introduction to Engineering: PR: C.I. Role of the engineer as a creative design professional. Emphasis on understanding the creative process and the factors that influence it. Engineering orientation and case studies.

EGN 2382 Engineering Concepts: PR: MAC 3311 and one year of high school physics or PHY 2050C. Introduction to the basic phenomena essential to understanding of engineering structures, machines, processes and systems. Primary emphasis on mechanics, materials behavior, and thermofluid mechanics phenomena.


EGN 3311 Engineering Analysis-Statics: PR: EGN 2382 and 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 3311 and MAC 3313. Kinematics and kinetics of particles and rigid bodies; mass and acceleration, work and energy impulse and momentum.


EGN 3363C

EGN 3373

EGN 3375C

EGN 3383
Electrical Science: PR: EGN 2382; CR: MAC 3313. General concepts of electricity and magnetism; development of fundamental laws of electrical engineering; introduction to basic circuit elements.

EGN 3613

EGN 3703

EGN 3704
Engineering and the Environment: PR: CHS 1440 and MAC 3312. Process engineering for air, energy, water and land environment and the role of engineering in control of these environments.

EGN 4032
Professionalism, Practice and Ethics: PR: Junior or senior standing. Study of the professional engineer’s role, practice and responsibility to act in the interests of public health, safety and welfare.

EGN 4033
Technology and Social Change: 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.

EGN 4420

EGN 4624
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.

EGN 4811
Canadian Engineering And Technology: Historic and contemporary Canadian achievements in engineering and technology.

EGN 4813
Science In History: Examination of the reciprocal relations of science and society from ancient to recent times.

EGN 4814
Engineering and Technology in History: Important developments in engineering and technology and their effect on society and our socio-economic processes.

EGN 4815
Historical Architecture: Architecture as the realization of changing aesthetic and cultural ideals and the expression of changing forms of society. Development of understanding of our physical environment through a study of the forms, functions and determinants of architecture.

EGN 4818
Technology in America: Episodes and periods of significant American technological change with emphasis on nineteenth and early twentieth century developments.

EGN 4823
Topics In Urban Development: Production, distribution and consumption of various commodities. Engineering relationships to distribution, internal structure, function of urban developments, interrelationships of engineering, social, economic and cultural phenomena.

EGN 4824
Energy and Society: Investigation of available energy forms; energy resources versus requirements in an increasingly complex technological society; possible solutions and future predictions.
EGN 4825  EN 3(3,0)
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.

EGN 4832  EN 3(3,0)
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.

EGN 4843  EN 3(3,0)
Systems Modeling: PR: COC 1100 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.

EGN 4844  EN 3(3,0)
Man and Machine: The influence and interrelationship of invention and technical progress on the evolution of social forms and institutions.

EGN 5032  EN 3(3,0)
Engineering and Public Works: PR: C.I. The purposes, function, and role of engineering within public works.

EGN 5035  EN 2(2,0)
Topics in Technological Development: PR: C.I. Case studies of selected topics in the engineering and technological development of western civilization. The weight-driven clock, steam engine, electric power, radar, electronics, etc.

EGN 5036  EN 2(2,0)

EIN 3106  EN 3(3,0)
Engineering Law: PR: Junior standing. Influence of contract, property and tort law, upon engineering activities; contracts, agency, partnerships, corporations, liens and expert testimony. Patents and licensing.

EIN 3315C  EN 3(2,2)

EIN 4116  EN 3(3,0)
Industrial Information Systems: PR: COP 3215, EIN 4332. Study of computerized information systems applied in industrial environment. Emphasis on development of automated information systems for control of men, materials and equipment.

EIN 4118  EN 3(2,3)
Industrial Engineering Applications of Computers: PR: COP 3215. Survey of computer methods in industrial engineering practice. Topics include simulation, information systems, dedicated processors systems control. Lab exercises.

EIN 4142  EN 2(2,0)
Industrial Engineering Senior Project Design: PR: Senior standing. Capstone design course, application of IEMS techniques to real problems via case studies.

EIN 4214  EN 3(3,0)
Safety Engineering and Administration: Analysis of accidents in the industrial operating environment. Application of fault trees, OSHA requirements. Consideration of accident costs and organizational aspects of accident prevention.

EIN 4243  EN 3(2,2)
Human Engineering: PR: Senior standing. Man-machine systems; design and conduct of human engineering studies.

EIN 4284  EN 3(3,0)
Industrial Hygiene and Occupational Health: Identification and analysis of health hazards in the industrial environment. Occupational hazard control via engineering design and safety programs.

EIN 4332  EN 3(2,3)

EIN 4364C  EN 3(2,2)
Industrial Facilities Planning and Design: PR: EIN 3315C. Comprehensive design of industrial production systems including interrelationships of plant location, process design, and materials handling. Laboratory assignments.

EIN 4383  EN 3(3,0)

EIN 4391C  EN 3(2,2)

EIN 4395C  EN 3(2,2)
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EIN 5117</td>
<td>Management Information Systems I</td>
<td>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.</td>
</tr>
<tr>
<td>ELD 4011</td>
<td>Introduction to Specific Learning Disabilities</td>
<td>PR: Senior standing. Development and practice of appropriate cognitive, affective and motor strategies for selected categories, levels and degrees of severity of exceptional population.</td>
</tr>
<tr>
<td>ELD 4242</td>
<td>Program Planning for Specific Learning Disabilities</td>
<td>PR: Senior Standing. Development of highly specialized techniques and materials to be used with exceptional students.</td>
</tr>
<tr>
<td>EMA 5126</td>
<td>Physical Metallurgy</td>
<td>PR: EML 3236. Study of strengthening mechanisms and phase transformations in metals and alloys.</td>
</tr>
<tr>
<td>EMA 5626</td>
<td>Mechanical Metallurgy</td>
<td>PR: EML 3234. Study of the microscopic mechanical behavior of metals and alloys with emphasis on fracture, fatigue and creep.</td>
</tr>
<tr>
<td>EME 4006</td>
<td>Utilizing Media and Library Resources</td>
<td>PR: Junior standing, completion of Basic General Education requirements. Planning, producing and utilizing media for effective presentation. Use of the library, resources, and services. Research methods and bibliographic skills.</td>
</tr>
<tr>
<td>EME 5054</td>
<td>Instructional Technology</td>
<td>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.</td>
</tr>
<tr>
<td>EME 5208</td>
<td>Media and Methods in Teaching</td>
<td>PR: Regular Certificate or C.I. Practicum on various media in the classroom with emphasis on student film making and production.</td>
</tr>
<tr>
<td>EML 3106</td>
<td>Thermodynamics of Mechanical Systems</td>
<td>PR: EGN 3343. Applied thermodynamics, availability analysis, thermodynamics of reactive and non-reactive mixtures, thermodynamic relations of properties. Thermodynamic design analysis of complete mechanical systems.</td>
</tr>
<tr>
<td>EML 3236</td>
<td>Structure and Properties of Alloys</td>
<td>PR: EGN 3363C. Relation of properties to microstructure of major ferrous engineering alloys.</td>
</tr>
<tr>
<td>EML 4272</td>
<td>Dynamics of Machinery</td>
<td>PR: EML 3262, EML 4222. Critical speeds and response of flexible rotor systems, whirl, gyroscopic effects; balancing of rotating and reciprocating masses; cam dynamics.</td>
</tr>
<tr>
<td>EML 4411</td>
<td>Mechanical Power Systems</td>
<td>PR: EML 3106. Analysis and design of large power generating systems and components with emphasis on steam plants utilizing both chemical and nuclear fuels.</td>
</tr>
<tr>
<td>EML 4412L</td>
<td>Mechanical Engineering Laboratory</td>
<td>PR: EML 3303 and EML 4142. Experimental studies of phenomena and performance of fluid flow, heat transfer, thermodynamic and mechanical power systems.</td>
</tr>
</tbody>
</table>
Engineering Design: PR: EML 3106, 3502. Application of the design process in the solution of a state of the art problem. Fluid, thermal or mechanical problems are considered.

Computer-Aided Design: PR: EML 3106, 3502. Introduction to computational methods in mechanical and thermal systems design.


Acoustics: PR: MAP 3302, PHY 3421C. 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.

Advanced Mechanics of Materials: PR: EGN 3331C and MAP 3302. Elements of plane elasticity; Failure theories; curved beams; columns; bending and torsion of thin-walled structures; theory of thin plates; applications to design.

Tribology: Principles of fluid film lubrication; bearing design and application; friction and wear of materials.

Advanced Dynamics: PR: EGN 3321, 3331C. Dynamics of particles, distributed mass systems, and rigid bodies from an advanced viewpoint. Virtual work. Lagrange's and Euler's equations. Hamilton's equations.


Energy Conversion: PR: EML 3106 and PHY 3421C. Unconventional methods of energy conversion; particular emphasis on fuel cells, thermoelectrics, thermionics, solar energy, photovoltaics and magnetohydrodynamics.

Energy Analysis: PR: Consent of instructor. Examination of energy demands and potential supply, computer simulation of resource depletion, alternate energy resources, transportation systems, economic and environmental constraints.

Photovoltaics: PR: EGN 3383, MAP 3302, or C.I. Basic operational principles, design, and current developments in solar cells.

Energy Conservation: PR: EML 4142. Analysis of energy use in economic sectors and design of conservation methodologies to reduce energy use. Heating and cooling loads, passive building designs will be presented.

Environmental Thermodynamics: PR: EML 3106. Thermodynamics of the environment emphasizing analysis and design of thermal systems. Building heating and cooling load calculations and energy conservation technologies analyzed.

Introduction to Mental Retardation: PR: Senior standing. Development and practice of appropriate cognitive, affective and motor strategies for selected categories, levels and degrees of severity of exceptional population.

Curriculum Method and Materials for Retarded Persons: PR: Senior Standing. Development of highly specialized techniques and materials to be used with exceptional students.

Basic Writing: PR: C.I. A course in basic English writing to provide intensive practice in writing effective sentences and paragraphs. Students who fail to demonstrate proficiency in writing skills must successfully complete ENC 1001 before enrolling in ENC 1101.

Composition I: Expository writing with emphasis on effective communication. Writing topics to be based on selected readings.

Composition II: PR: ENC 1101. Frequent writing based on the analysis of short stories, dramas, poems, and a novel.
Note on Freshman English Program:
ENC 1101 and 1102 must be taken before enrolling in any English course numbered above 1102.

ENC 2290 AS 1(1,0)

Careers in Writing: An examination of career opportunities in technical writing, emphasizing industrial, commercial, and governmental opportunities.

ENC 3210 AS 3(3,0)


ENC 3241 AS 3(3,0)

Science Report Writing: PR: ENC 1102. Instruction and practice in scientific writing including preparation of scientific reports in the student's particular field.

ENC 3283 AS 3(3,0)

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 AS 3(3,0)

Writing Skills: 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 AS 3(3,0)

Expository Writing: PR: ENC 1102. Practice of expository writing directed to general reader.

ENC 3330 AS 3(3,0)

Rhetoric and Organization: PR: ENC 3310; ENC 3311 or C.I. An analysis of rhetoric and organization that proceeds from principles and major types to practice writing.

ENC 3341 AS 3(3,0)

Magazine Writing I: 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 4215 AS 3(3,0)

Techniques of Technical Publications: Study of new publishing technology, stressing composition and printing; word processing, automated text processing, methods of reproduction. Introduction of graphics; style, format, layout, and boardwork. Should be taken concurrently with ENC 4294.

ENC 4218 AS 3(3,0)

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 4245 AS 3(3,0)

Writing from Engineering Documents: Introduction to reading and interpretation of basic engineering charts: specs, vocabulary, design and the writing techniques necessary for clear translation.

ENC 4254 AS 3(3,0)

Technical Writing and the Uses of Imagination: PR: ENC 3310 or ENC 3311 or ENC 3341. An analysis of and practice in imaginative approaches to scientific or technical ideas.

ENC 4280 AS 1(1,0)


ENC 4293 AS 3(3,0)

Technical Documentation I: 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 AS 3(3,0)

Technical Documentation II: Practical application of editing theory to large ongoing projects from the student's particular field. Should be taken concurrently with ENC 4215.

ENC 4295 AS 3(3,0)

Technical Documentation III: 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 AS 3(3,0)

Practical Criticism: PR: ENC 1102. Student evaluation of selected fiction, poetry and drama through practical exercises in literary criticism.

ENG 5018 AS 3(3,0)

Literary Criticism: PR: Graduate standing or C.I. Historical survey of major critics from classical antiquity to the modern era.

ENG 5028 AS 3(3,0)

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.

ENG 5029 AS 3(3,0)

English Literature I: PR: ENC 1102. Beowulf to 1660.

ENG 3021 AS 3(3,0)

English Literature II: PR: ENC 1102. From 1660 to 1870.

ENL 3273 AS 3(3,0)

Survey of British Literature Since 1914. PR: ENC 1102

201
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENL 3334</td>
<td>Shakespeare Texts and Film: PR: ENC 1102. An introduction to the art of William Shakespeare through comparative analysis of selected plays and their representation in film.</td>
</tr>
<tr>
<td>ENL 4311</td>
<td>Chaucer: PR: ENC 1102. The Canterbury Tales, Troilus and Criseyde, and other works.</td>
</tr>
<tr>
<td>ENL 4330</td>
<td>Shakespeare Studies: PR: ENC 1102. Reading, analysis, and discussion of Shakespeare's plays. May be repeated for credit.</td>
</tr>
<tr>
<td>ENL 4353</td>
<td>18th Century Studies: PR: ENC 1102. Reading, analysis and discussion of literature in English: 1660-1880. May be repeated for credit.</td>
</tr>
<tr>
<td>ENL 5176</td>
<td>Restoration and 18th Century English Drama. PR: Senior standing or C.I.</td>
</tr>
<tr>
<td>ENL 5226</td>
<td>Renaissance Poetry and Prose: PR: Senior standing or C.I. The course will examine selected poetry and prose of Wyatt, Surrey, Sidney, Spenser, Marlowe, Raleigh, Daniel, Shakespeare, Chapman, Lyly, and others.</td>
</tr>
<tr>
<td>ENL 5236</td>
<td>The Age of Dryden and Pope: PR: Senior standing or C.I. Prose, poetry, drama and literary traditions of British neoclassicism.</td>
</tr>
<tr>
<td>ENL 5335</td>
<td>Studies in Shakespeare: PR: Senior standing or C.I. A selection of representative plays with emphasis on Shakespeare's development as an artist: aesthetics of dramatic literature.</td>
</tr>
<tr>
<td>ENU 4103</td>
<td>Nuclear Engineering: PR: EGN 3343 and PHY 3101. Introduction to the principles of nuclear engineering, nuclear chain reactions, reactor systems and control, health physics, radiation shielding and applications of nuclear energy.</td>
</tr>
<tr>
<td>ENU 5005</td>
<td>Nuclear Reactor Engineering: PR: ENU 4103. Application of thermodynamics, fluid mechanics, heat transfer, and materials to nuclear reactor design. Emphasis placed on reactors for electric power production.</td>
</tr>
<tr>
<td>ENV 4119</td>
<td>Air Pollution: PR: EGN 3704. Sources, causes, and effects of air pollution. Engineering standards, analysis, and design considerations.</td>
</tr>
<tr>
<td>ENV 4355</td>
<td>Solid and Hazardous Wastes: PR: EGN 3704 or C.I. Engineering design, planning, and analysis problems associated with storage, collection, processing, and disposal of solid and hazardous wastes.</td>
</tr>
<tr>
<td>ENV 4404</td>
<td>Hydrology and Hydraulics: CR: EGN 3353C. Water resources, hydrologic cycle, runoff predictions, pipe flow, open channel flow, flow measurements, pumps, storage, and engineering design applications.</td>
</tr>
<tr>
<td>ENV 4433</td>
<td>Water Resources Design: PR: ENV 4404. Project course on designs of large and small water transmission systems using local and state regulations.</td>
</tr>
<tr>
<td>ENV 4434</td>
<td>Environmental Engineering Systems Design: PR: ENV 4504. Project course on design of water and waste-water treatment plants, solid waste and atmospheric controls.</td>
</tr>
<tr>
<td>ENV 4504</td>
<td>Environmental Engineering—Process Design: PR: EGN 3704 and EGN 3353C. Water treatment and wastewater treatment design considerations with effluent and sludge handling, treatment and disposal.</td>
</tr>
<tr>
<td>ENV 4651</td>
<td>Urban Systems Engineering: PR: C.I. Theories and history of city development with administrative, planning, management and maintenance of municipal services.</td>
</tr>
<tr>
<td>ENV 5045L</td>
<td>Research Methods in Environmental Engineering: PR: STA 3032, ENV 4504 or C.I. Experimental design and modeling of environmental engineering systems using fundamental concepts of computer programming, probability and statistics.</td>
</tr>
</tbody>
</table>
ENV 5615 EN 3(3,0)
Environmental Impact Assessment: PR: C.I. Evaluation, estimating, and predicting the effects of structures, processes, and systems upon the environment and the effects of environmental changes upon human populations.

ENV 5625 EN 3(3,0)

ENY 4004C AS 3(2,4)

EPH 5335 ED 3(3,0)
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 ED 3·16(0,3·16)
Junior Student Teaching — Secondary Level: PR: EDG 4341. Student teaching in a secondary school under the supervision of a certified classroom teacher.

ESE 4943 ED 7·12(0,3·35)
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.

ESE 5214 ED 3(3,0)
Secondary School Curriculum Improvement: PR: Regular Certificate or C.I. Secondary School self studies for curriculum projects, accreditation reports, or staff development.

ESE 5335 ED 3(3,0)
Teaching the Non-English Student: PR: FLE 3063 or C.I. Bilingual and nonlinguistic instruction in curriculum areas and in English as a second language.

ESI 4144 EN 3(3,0)

ESI 4234 EN 3(3,0)
Engineering Reliability and Quality Assurance: PR: STA 3032 or C.I. Design and management of reliability programs and quality assurance systems; mathematics of reliability.

ESI 4314 EN 3(3,0)
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 4524 EN 3(3,0)
System Simulation with Digital Computers: PR: COP 3215 or equivalent. Methods and procedures for simulating large scale systems with digital computers. FORTRAN, CSMP and GPSS programming languages are used.

ESI 5170 EN 3(2,3)
Microcomputer Practicum: PR: Graduate standing or C.I. Survey of personal computer programming and use in decision support applications in engineering.

ESI 5575 EN 3(3,0)

ESL 1141 AS 3(3,0)
Basic Writing: PR: C.I. A course in basic English writing, designed primarily for the international student, to provide intensive practice in writing effective sentences and paragraphs.

ETC 4410C EN 3(2,2)

ETC 4415 EN 3(2,2)
Applied Structural Design II: PR: ETC 4410C. Design applications of continuous beams, single span frames, and tapered members.

ETE 3208 EN 2(2,0)
Electronics in the Health Professions: To provide students in the health professions with basic knowledge of electronic equipment associated with hospitals and laboratory use.

ETE 3632C EN 3(2,2)

ETE 3663C EN 3(2,2)
Microprocessor Electronics: PR: ETE 4111C or equivalent. Introduction to the Electronics of Basic Microprocessing.

ETE 3666C EN 4(3,2)
Applied Microprocessor Technology: PR: ETE 3663C. Analysis and design of machine language controlled microprocessor interfacing in a real world environment.
ETE 4111C
Electricity and Electronics: PR: MAC 1104 and MAC 1114. Basic principles of electric circuits and electronic amplifiers. Introduction to integrated circuits.

ETE 4112
Electrical Network Analysis: PR: ETE 4111C or equivalent. Analysis of linear network laws and theorems, time and frequency response of circuits. Introduction to computer-aided design.

ETE 4122C
Linear Integrated Circuits: PR: ETE 4112. Study of linear integrated circuits and design of electronic systems.

ETE 4162L
Senior Systems Laboratory: PR: ETE 4422C and ETE 4650C. Experiments covering topics in electronics module. Use of latest integrated circuit function blocks.

ETE 4326
Feedback Control: PR: ETE 4112 and MAC 3254. LaPlace transform analysis of electrical networks and feedback control systems. Analysis and design techniques, control system components, and applications to practical control systems.

ETE 4422C
Electronic and Digital Communications: PR: ETE 4112. The study of active RF circuits and modulation/demodulation systems. Introduction to digital and data communications.

ETE 4423C
Satellite Communication Systems: PR: ETE 4422C. Analysis of communications satellites and how they affect systems design; technology, tradeoffs, design strategies.

ETE 4432C
Antennas and Propagation: PR: ETE 4112. Basic theory and technology used in high frequency transmission lines and waveguides, propagation and radiation, antennas.

ETE 4541

ETE 4562

ETE 4605

ETE 4650C

ETE 4655C
Microcomputer Electronics II: PR: ETE 4650C. Continuation of microcomputer electronics. Use of network microcomputers and programming applications.

ETE 4661C
Applied Computer Systems I: PR: ETE 4650C. Design and analysis of computational circuitry, memory, computer interfaces, displays, and I/O devices.

ETE 4664C
Microprocessor Electronics II: PR: ETE 3663C. A continuation of ETE 3663C with emphasis on Applications of Microprocessor applications in Engineering Technologies.

ETE 4667C
Applied Computer Systems II: PR: ETE 4661C. Continuation of computer systems with emphasis on advanced hardware and I/O devices.

ETE 4673

ETE 4675
Applied Microcomputer Operating Systems: PR: ETE 4650C. Analysis of limitations and strengths of commercial mass storage operating systems in industry.

ETE 4735C
Electro-Mechanical Design: PR: ETE 4111C. Introduction to mechanical and electromechanical devices and their applications in industry.

ETG 3520

ETG 4530
Strength of Materials: PR: ETG 3520. Relationship between external forces and action of members of a structure. Topics include stress and strain, beams, trusses, columns, fatigue and modes of loading.

ETI 3421C
Materials and Processes: PR: MAC 1104 and 1114 or equivalent. Relation between structure and properties of metals, wood, ceramics and polymers. Testing and inspection, casting, forming and working of metals, heat treatment, and joining.
ETI 3440
Product Design: Principles of layout and dimensions for production. Consideration of design factors, standards, specifications and codes with emphasis on productibility.

ETI 3651
Computer Methods in Industry: PR: COP 1110 or equivalent. Industrial application of a high level (BASIC) language to various static, dynamic, electrical and economic problems.

ETI 3671

ETI 3690
Technical Sales: Application of technical knowledge in sales and service. Relationship of technical sales organization to production, customers, and competitors.

ETI 4110

ETI 4690
Applied Servomechanisms and Robotics: PR: ETE 4664C. Analysis and design of servo devices and systems. Real-time industrial robotics applications.

ETI 4611
Plant Layout, Material Handling & Work Analysis: Covers plant layout, material handling, space allocations, work simplification and methods. Improvements in manufacturing operations.

ETI 4650
Process Planning and Estimating: Estimating manufacturing and construction costs, materials and services, planning and control of operations with applications of CPM concepts.

ETI 4700
Occupational Safety: Accident prevention and the operation of an industrial safety program. Basic requirements of the Occupational Safety and Health Act standards.

ETM 3314
Hydraulics and Hydrology: PR: Junior standing. Applied hydraulics and hydrology including design of closed and open channel flow, rainfall, runoff, seepage, ground water, storage and impoundments, wells, etc.

ETM 4220

ETM 4310

ETM 4403C

ETM 4512C
Applied Design of Machine Elements: PR: ETG 3520 and 4530. Design of basic machine elements including cams, gears, bearings and coupling taking into account loads, stresses, and strength of materials.

ETM 4590
Design Integration: PR: ETI 3440. Project design involving planning, control, prototype construction, testing and evaluation.

ETM 4750

EUH 2000
Western Civilization I: A survey of western civilization from ancient to 1648.

EUH 2001
Western Civilization II: A survey of western civilization from 1648 to present. May be taken before EUH 2000.

EUH 2545
Introduction to Anglo-American Law: PR: EUH 2000 and 2001 or C.I. A historical survey of the development of the principles and processes of the American law from its origins in English common law to the present.

EUH 3121
Age of Transition: PR: EUH 2000 and 2001 or C.I. A survey of social, economic, political, religious, and cultural developments in Europe from the fall of Rome to the 10th century.

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 3281

The Rise and Fall of Napoleon: PR: EUH 2000 and 2001 or C.I. Cause and course of the revolution; the rise and fall of Napoleon; impact on the thought and action of Western Europe.

EUH 4284

The Age of Revolution and Napoleon: PR: EUH 2000 and 2001 or C.I. Cause and course of the revolution; the rise and fall of Napoleon; impact on the thought and action of Western Europe.

EUH 3268

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 Eastern Europe; Western reconstruction, and prosperity.

EUH 3401


EUH 3453


EUH 3412

The Enlightenment and the philosophies: secularism, cosmopolitanism and individualism. The rise and development of East Central Europe; Western reconstruction, and prosperity.

EUH 4284

The French Revolution: religious revival, and the beginning of romanticism.

EUH 4530

The Romantic Movement: PR: EUH 2000 and 2001 or C.I. Romanticism and Realism; the birthplace of modern technology, militarism, the First World War, Paris Peace Conference, popular culture, and new democratic institution east of the Rhine.

EUH 3242


EUH 4621


EUH 4571

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 World 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, & the outbreak of World War I.

EUH 4573
Colloquium Europe from 1815-1848: PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics in European history from 1815-1848.

Colloquium Europe from 1848-1914: PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics in European history from 1848-1914.

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.

Colloquium in Europe since WW II: PR: Senior standing or C.I. Selected topics in the historical literature of Europe from the end of WW II and the beginning of the Cold War to the present.

Colloquium in Spanish History: PR: Senior standing and C.I. Readings and discussions of important events in the history of Spain.

Colloquium in Tudor-Stuart England: PR: Senior standing or C.I. Intensive reading and class discussion on selected topics during the Tudor-Stuart era.

Colloquium in 18th Century England: PR: Senior standing or C.I. An examination of the literature of selected topics in Hanoverian Britain.

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.

Colloquium in Czarist Russia: PR: Senior standing or graduate status. Selected topics on the literature of Russia under the Czars prior to 1917.

Colloquium European Intellectual History: PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics of European Intellectual history.

Wastewater & Treatment Plant Analysis and Control: PR: None. Techniques applicable to collection and distribution of wastewater, effluent and sludge. Lab analysis, control measure, and operation of water and wastewater treatment plants.

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.

Solid Waste Management: Techniques applicable to solid waste composition, collection and disposal. Solid wastes programs, laws, rules and regulations.

Professional Role of the Vocational Teacher: PR: EVT 3371 or C.I.

Preparation for Clinical Teaching in Vocational Education: PR: EVT 3371 or C.I. Teacher competencies in planning for clinical instruction preparing self, students, and agency for clinical instructional activities.

Methods of Training in Vocational Subjects: PR: EVT 3371 or C.I. Study, practice and achievement of basic teaching techniques specifically applicable to vocational education.

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.

Essential Teaching Skills in Vocational Education: Study, practice, and achievement in selected essential teaching skills for beginning vocational instructors.

Special Needs of Vocational Students: PR: EVT 3371 or C.I. Achievement of teacher competency in meeting the special educational needs of the handicapped, culturally different, slower learner, and those with reading deficiencies.

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.

Advanced Teaching Techniques for Vocational Education: PR: EVT 3365 or C.I. Study, practice, and achievement of higher level teaching techniques, especially those involving interaction and higher cognitive levels.

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.

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.

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.

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.

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.

Competency-Based Vocational Education: PR: Regular Certificate or C.I. Achievement of teacher competencies unique to the installation and management of competency-based vocational training programs in secondary and post-secondary schools and community colleges.

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.


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.

Film Production: Pre-production planning, shooting, and editing of film.

Film Documentary: The uses and analysis of the non-fiction film.

Film Production II: Advanced pre- and post-production techniques including sound mixing and dubbing.

Personal Finance and Investments: PR: Junior standing. Fundamentals of managing and investing one's money and of acquiring, safeguarding and disposing of one's assets. Not usable for BSBA Degree Credit.


Financial Institutions: PR: FIN 3403. A study of financial institutions, their role, regulation and of how they obtain and use their funds; also a study of funds flows in the economy.
Commercial Bank Administration: PR: FIN 3403. Administrative areas of a commercial bank including organization, management of bank assets and liabilities, lending policies, and fiduciary activities, international and regulatory aspects.

Business Finance: PR: ACG 2011 or ACG 3023 and STA 3023 or equivalent. With the balance sheet as a reference point, this course provides an introduction and overview of the acquisition, financing, and management of business assets.

Financial Models: PR: FIN 3403, ECO 3411. Mathematical models applied specifically to financial problems, including those models suitable for representation and solution on computers.

Investments: PR: FIN 3403. A survey of the investments area including an introduction to security markets, investment vehicles, the investment environment, economic and security analysis, and portfolio management.

Asset Selection Management: PR: FIN 3403. Decisions related to use of funds for working capital and fixed assets.

Financial Structure Management: PR: FIN 3403. Funding decisions and the effects of these decisions on the value of the firm.

Security Analysis and Portfolio Management: PR: FIN 3502. A detailed investigation into the techniques of fundamental and technical security analysis as well as industry and economic analysis. Further, examines portfolio construction and evaluation.


Financial Concepts: PR: Acceptance into the graduate program, ACG 5005 and EGO 5413 or equivalents. Effects of financial decisions upon the firm, interrelationships of these effects and alternatives available to financial managers in making these financial decisions.

Foreign Language as Human Behavior: PR: Or CR: LIN 3010 or C.I. Nature of language, language learning and teaching basic skills. Weekly laboratory.

Foreign Language Instructional Analysis: EDG 4341. Objectives for a school curriculum and of methods and materials for teaching foreign language.

French Diction: This course is especially designed for music and voice students with an emphasis on musical terms, French songs and opera libretti.

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

Elementary French Language and Civilization II: PR: FRE 1101 or equivalent. Continuation of FRE 1100.

Elementary French Language and Civilization Abroad: Elementary French language and civilization taught in the native environment.


Intermediate French Language and Civilization II: PR: FRE 2200 or equivalent. Continuation of FRE 2200 with emphasis on French civilization.

Intensive French Conversation: PR: One Year of French or equivalent. Practical use of the language leading toward fluency and correctness in speaking.


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.
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>FRE 3420</td>
<td>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.</td>
</tr>
<tr>
<td>FRE 4421</td>
<td>Advanced French Conversation: PR: FRE 3240. Advanced conversation on directed topics from various disciplines. Literature, art, psychology, philosophy, music, business and the sciences.</td>
</tr>
<tr>
<td>FRE 4422</td>
<td>Advanced French Composition: PR: FRE 3420. Readings and written limitations of modern literary styles in the form of themes, sketches, poems and original stories.</td>
</tr>
<tr>
<td>FRE 4500</td>
<td>French Civilization and Culture: PR: FRE 3240 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.</td>
</tr>
<tr>
<td>FRE 4780</td>
<td>French Phonetics and Diction: PR: FRE 3240 or equivalent. French phonology with emphasis on phonic groupings.</td>
</tr>
<tr>
<td>FRW 3100</td>
<td>Survey of French Literature I: PR: FRE 2201 or equivalent. Main literary currents and works from the Middle Ages through the eighteenth century.</td>
</tr>
<tr>
<td>FRW 3101</td>
<td>Survey of French Literature II: PR: FRE 2201 or equivalent. Main literary currents and works of the nineteenth and twentieth centuries.</td>
</tr>
<tr>
<td>FRW 3370</td>
<td>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.</td>
</tr>
<tr>
<td>FRW 4310</td>
<td>Seventeenth Century French Theatre: PR: FRW 3100. Corneille, Racine, and Molliere. A study of the lives and principal works of the authors.</td>
</tr>
<tr>
<td>GEA 3300</td>
<td>Geography of Middle America: Basic elements of physical, cultural, and economic geographies as they relate to the development of Middle America.</td>
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<tr>
<td>GEA 4206</td>
<td>Physical Geography of North America: Analysis of the North American landscape as affected by climate, vegetation, and geomorphology.</td>
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<tr>
<td>GEA 4410</td>
<td>Geography of South America: Analysis of the integrated physical, cultural and economic geographies of South America and interpretation of their impact on modern development of the area.</td>
</tr>
<tr>
<td>GEB 3004</td>
<td>Management: PR: Junior standing. The Interdisciplinary application of the managerial functions of planning, organizing, leading and controlling. For Non-Business Majors ONLY.</td>
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<tr>
<td>GEO 1200</td>
<td>Physical Geography: Basic physical elements of geography including climate, landforms, soils, natural vegetation, minerals and their integrated patterns of world distribution.</td>
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<tr>
<td>GEO 3370</td>
<td>Resources Geography: Analysis of basic principles and problems associated with</td>
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<td>development, use, conservation, and management of natural resources with special</td>
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<td>emphasis on the United States.</td>
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<td>GEO 3470</td>
<td>World Political Geography: Analysis of factors which affect power relations</td>
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<td>among nations including area, location, political styles, ethnic divisions, and</td>
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<td>the politics of energy.</td>
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<td>GEO 3602</td>
<td>Urban Geography: The city as a geographical phenomenon created by human</td>
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<td>effort, its historical development; patterns of land use as related to</td>
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<td>economic, sociological and political influences.</td>
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<tr>
<td>GER 1005</td>
<td>German Diction: This course is especially designed for music and voice</td>
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<td>students with an emphasis on musical terms, German songs and opera libretti.</td>
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<tr>
<td>GER 1100</td>
<td>Elementary German Language and Civilization I: Designed to initiate the</td>
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<td>student to the major language skills: listening, speaking, reading, and</td>
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<td>writing.</td>
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<tr>
<td>GER 1101</td>
<td>Elementary German Language and Civilization II: PR: GER 1100 or equivalent.</td>
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<td></td>
<td>Continuation of GER 1100.</td>
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<tr>
<td>GER 2200</td>
<td>Intermediate German Language and Civilization I: PR: GER 1101 or equivalent.</td>
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<tr>
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<td>Designed to continue development of language skills at the intermediate</td>
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<td></td>
<td>level, together with a review of grammar.</td>
</tr>
<tr>
<td>GER 2201</td>
<td>Intermediate German Language and Civilization II: PR: GER 2200 or equivalent.</td>
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<tr>
<td></td>
<td>Continuation of GER 2200 with emphasis on German civilization.</td>
</tr>
<tr>
<td>GER 2210</td>
<td>Intensive German Conversation: PR: One year of German or equivalent. Practical</td>
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<tr>
<td></td>
<td>use of the language leading toward fluency and correctness in speaking.</td>
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<tr>
<td>GER 3240</td>
<td>German Conversation: PR: GER 2201 or equivalent. Development of skills in</td>
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<tr>
<td></td>
<td>conversation and comprehension through practice.</td>
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<tr>
<td>GER 3420</td>
<td>German Composition: PR: GER 2201 or equivalent. Development of skills in</td>
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<tr>
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<td>composition.</td>
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<tr>
<td>GEW 3100</td>
<td>Survey of German Literature I: PR: GER 2201 or equivalent. Main literary</td>
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<tr>
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<td>currents and works from the Middle Ages through the Nineteenth Century</td>
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<td>Romanticism.</td>
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<tr>
<td>GEW 3101</td>
<td>Survey of German Literature II: PR: GER 2201 or equivalent. Main literary</td>
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<tr>
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<td>currents and works from Nineteenth Century Realism to the present.</td>
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<tr>
<td>GEW 3370</td>
<td>Short Story: PR: GER 2201 or equivalent. German short prose works of the</td>
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<td>19th and 20th centuries.</td>
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<tr>
<td>GLY 1000</td>
<td>Geology and its Applications: Geologic applications and hazards including:</td>
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<tr>
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<td>gemstones, geothermal energy, fossil fuels, groundwater, sinkholes, beach</td>
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<td>erosion, landslides, earthquakes, “tidal” waves, volcanism.</td>
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<tr>
<td>GLY 3451</td>
<td>Geophysics: PR: PHY 3049 and MAP 3302. Introduction to the methods and</td>
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<td>techniques used in applied geophysics. Seismic wave propagation, flow</td>
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<td>through porous media, electromagnetic remote sensing, gravitation.</td>
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<tr>
<td>GLY 4005</td>
<td>Rocks and Minerals: PR: GLY 1000 or GLY 4006. Their identification and</td>
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<tr>
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<td>significance as indicators of geologic processes.</td>
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<tr>
<td>GLY 4006</td>
<td>Geology of Our National Parks and Monuments: Unique geologic features</td>
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<td>preserved in our national park system and the processes that gave rise to</td>
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<td></td>
<td>these features.</td>
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<tr>
<td>GLY 4100</td>
<td>Historical Geology: PR: GLY 1000. Lunar and planetary histories, evolution</td>
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<tr>
<td></td>
<td>of earth’s crust including drifting continents and fossil fuels, mountain</td>
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<td>building, evolution of life as reconstructed from fossils.</td>
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<tr>
<td>HIS 3462</td>
<td>History of Scientific Thought: PR: EUH 2000 and 2001 or C.I. History of</td>
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<td>science from the Greeks to Modern Times.</td>
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<tr>
<td>HIS 4150</td>
<td>History and Historians: PR: C.I. A study of European and/or American</td>
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<tr>
<td></td>
<td>historiography. May be repeated once for credit.</td>
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<tr>
<td>HIS 4970</td>
<td>Senior Thesis: Original research paper available to advanced history majors,</td>
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<td>topics to be selected in consultation with a directing professor.</td>
</tr>
</tbody>
</table>
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.

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.

Medical Self Assessment: Development of clinical skills and understanding of one's health to encourage active participation of the individual in his own health care.

Health Law: Principles of law as applied to the health field with special reference to health practices.

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.

Medical Terminology: A study of the language of medicine and allied health specialties, including work construction, definitions and application of terms.

Health Care Needs of the Elderly: Overview of the physical and emotional needs of the elderly including the institutional health care available.
**HUM 4906**
Supervised Special Training: Supervised special work experience. Open to students combining a major in Humanities and Fine Arts with Business Administration. Must be arranged in advance of registration.

**HUN 3011**
Human Nutrition: Essentials of nutrition related to the life cycle, including the physiological, psychosocial and cultural aspects of nutrition and the inter-relationship with disease.

**INP 3004**
Industrial/Organizational Psychology: PR: PSY 2013 and PSY 3204. Psychological principles of personnel selection, training, and administration; motivational methods for individuals and groups in organizations; use of behavioral science in helping organizations become more effective.

**INP 3102**

**INR 3002**
International Relations-Theory and Practice: Analysis of the fundamental principles and factors affecting interstate relations and their application to contemporary global developments.

**INR 3024**
Nationalism: A Systematic Approach: Theory and practice of modern nationalism as a world-wide political phenomenon including forms of political agitation, rebellions, and secessionist movements.

**INR 4035**
International Political Economy: The international politics of regional and global economic interdependence with emphasis upon North-South relations, the New International Economic Order, OPEC and multinational corporations.

**American Foreign and Defense Policy**: Development of American foreign and defense policy with emphasis on the role and policies of the United States in the contemporary world.

**Contemporary International Politics of Asia**: Examinations of the foreign policies of major and secondary powers in Asia, with particular attention to China and Japan.

**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.

**International Politics of the Middle East**: The external politics of the Middle East from a regional-global perspective with particular attention to the region's impact upon the relations of major powers.

**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.

**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.

**International Organizations**: The study of the structure and workings of international organizations of cooperation including the UN, its affiliates, and various regional organizations.

**Italian Diction**: This course is especially designed for music and voice students with an emphasis on musical terms, Italian songs and opera libretti.

**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.

**Elementary Italian Language and Civilization II**: PR: ITA 1100 or equivalent. Continuation of ITA 1100.

**Elementary Italian Study Abroad**: Elementary Italian language and civilization taught in the native environment.

**Intermediate Italian Language and Civilization I**: PR: ITA 1001 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITA 2201</td>
<td>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.</td>
<td></td>
<td>4(4,0)</td>
</tr>
<tr>
<td>ITA 2210</td>
<td>Intensive Italian Conversation: PR: One year of Italian or equivalent. Practical use of the language leading toward fluency and correctness in speaking.</td>
<td></td>
<td>4(4,0)</td>
</tr>
<tr>
<td>ITA 3240</td>
<td>Intermediate Italian Study Abroad: PR: Elementary Italian. Intermediate Italian language and civilization taught in the native environment.</td>
<td></td>
<td>3(3,0)</td>
</tr>
<tr>
<td>ITA 3420</td>
<td>Italian Conversation: PR: ITA 2201 or equivalent. Development of skills in conversation and comprehension with an introduction to Italian culture.</td>
<td></td>
<td>3(3,0)</td>
</tr>
<tr>
<td>JOU 3100</td>
<td>History of American Journalism: Development of mass media, leading innovators and the media's role in the nation's history.</td>
<td></td>
<td>4(2,2)</td>
</tr>
<tr>
<td>JOU 3100</td>
<td>News Reporting: PR: English proficiency examination and ability to type 30 wpm. 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.</td>
<td></td>
<td>4(2,2)</td>
</tr>
<tr>
<td>JOU 3200</td>
<td>News Editing: PR: English proficiency examination; minimum grade of C in JOU 3100; ability to type 30 wpm. Fundamentals of copy editing for printed media, including selection, processing and display of news.</td>
<td></td>
<td>3(3,0)</td>
</tr>
<tr>
<td>JOU 3800</td>
<td>Photojournalism: PR: VIC 3001. Learning darkroom procedures in 35mm black-and-white photography.</td>
<td></td>
<td>4(2,2)</td>
</tr>
<tr>
<td>JOU 4300</td>
<td>Public Affairs Reporting: PR: English proficiency examination and minimum grade of C in JOU 3100 and ability to type 30 wpm. Reporting on the activities of city, county and state government, courts and schools.</td>
<td></td>
<td>4(2,2)</td>
</tr>
<tr>
<td>JOU 4300</td>
<td>Feature Writing: PR: English proficiency examination and a minimum grade of C in JOU 3100 and ability to type 30 wpm. Writing of feature articles for newspapers and magazines.</td>
<td></td>
<td>3(1,2)</td>
</tr>
<tr>
<td>JOU 4300</td>
<td>Editorial and Column Writing: PR: English proficiency examination and a minimum grade of C in JOU 3100 and ability to type 30 wpm. Building the editorial page, backgrounding and interpreting the news.</td>
<td></td>
<td>3(1,2)</td>
</tr>
<tr>
<td>JOU 4300</td>
<td>Technical and Scientific Writing: PR: English proficiency examination and a minimum grade of C in JOU 3100 and ability to type 30 wpm. Practice in gathering of materials for technical and scientific articles; digesting of technical information into more readable forms.</td>
<td></td>
<td>3(1,2)</td>
</tr>
<tr>
<td>JOU 4300</td>
<td>Critical Writing: PR: English proficiency examination and a minimum grade of C in Jou 3100 and ability to type 30 wpm. Writing reviews of movies, plays, television program, concert, books and other cultural works.</td>
<td></td>
<td>3(1,2)</td>
</tr>
<tr>
<td>JOU 4310</td>
<td>Freelance Writing: PR: English proficiency and evidence of satisfactory writing skills and ability to type 30 wpm. A study of the techniques and procedures of freelance writing, including the preparation of several manuscripts.</td>
<td></td>
<td>4(2,2)</td>
</tr>
<tr>
<td>JOU 4802</td>
<td>Color Photography for the Mass Media: PR: JOU 3600. Taking pictures, photo essays in color; developing and printing via the Cibachrome process.</td>
<td></td>
<td>4(2,2)</td>
</tr>
<tr>
<td>JOU 4802</td>
<td>The Newspaper in the Classroom: Study of the use of the newspaper as a teaching aid in the classroom. Designed for persons currently teaching or majoring in education.</td>
<td></td>
<td>3(3,0)</td>
</tr>
<tr>
<td>LAE 3335</td>
<td>English Instructional Analysis: PR: EDG 4341. Course objectives for a school curriculum and methods and materials which have special application for teaching English.</td>
<td></td>
<td>3(3,0)</td>
</tr>
<tr>
<td>LAE 3414</td>
<td>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.</td>
<td></td>
<td>3(3,0)</td>
</tr>
<tr>
<td>LAE 4314</td>
<td>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.</td>
<td></td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>
LAE 4342 Teaching Language and Composition: PR: EDG 4341. Techniques and methods in teaching of dialects, semantics, the various grammars. A survey of composition and rhetorical methods of selected authors.

LAE 5372 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.

LAE 5464 Literature for Adolescents: PR: Senior standing or C.I. Selecting and evaluating books for adolescents with emphasis on the use of literature in the development of young people.


LAH 3022 Latin American History II: PR: EUH 2000 and 2001 or C.I. The national period.

LAH 3400 History of Mexico and Central America: PR: EUH 2000 and 2001 or C.I. A survey of Mexican and Central American history from Pre-Columbian times to the present.

LAH 3470 History of the Caribbean: PR: EUH 2000 and 2001 or C.I. History of Cuba, Puerto Rico, Dominican Republic and Haiti from Pre-Colombian times to the present.

LAH 5713 Colloquium in U.S.—Latin American Relations: PR: Senior Standing and C.I. The course will analyze U.S.-Latin American relations from an historical perspective. It will be presented through readings and discussion of selected materials.

LAT 1100 Elementary Latin Languages and Civilization I: Designed to develop Latin language skills at the elementary level: listening, speaking, reading, and writing, in addition to an introduction to Roman culture.

LAT 1101 Elementary Latin Language and Civilization II: PR: LAT 1100 or equivalent. Continuation of LAT 1100.

LEA 3001 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.

LEA 3011 Legal Research and Writing: PR: LEA 3001 or C.I. The student learns how to find and use material in a law library and how to write a legal memorandum and brief.

LEA 3101 Civil Practice and Procedure: PR: LEA 3001 or C.I. The student becomes familiar with the Florida civil procedure before trial and acquires the ability to prepare basic pleadings.

LEA 3151 Compensation for Injuries (Torts): PR: LEA 3001 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.

LEA 3201 Property and Real Estate Law: PR: LEA 3001. Study of the law of real and personal property; real estate transactions and conveyances; closing procedures and title problems.

LEA 3601 Criminal Procedure: PR: LEA 3001 or CCJ 2020 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.

LEA 4106 Evidence: PR: LEA 3001 and 3101 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.

LEA 4204 Land Use and Environmental Law: PR: LEA 3001, 3201. 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.

LEA 4211 Estates and Trusts: PR: LEA 3001, 3201. A study of wills and trusts, and applicable legal principles of administration of estates through the processes of the Probate Court.

LEA 4301 Contracts and Agency: The course studies the basic law of contracts and agency as developed in Anglo-American common law and as changed by modern statute, especially the Uniform Commercial Code.

LEA 4312 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.
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<tr>
<th>Course Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>LEA 4501</td>
<td>Domestic Relations Law: PR: LEA 3001, 3201. Role of the legal assistant in all phases of family and juvenile law. Fundamental procedures and principles applied by the courts to family problems.</td>
</tr>
<tr>
<td>LEA 4801</td>
<td>Administrative Law: PR: LEA 3001 or PAD 3003 or MMC 4200. The law regarding governmental administrative agencies with emphasis on the administrative process, the administrative procedure act, and special problems of state administrative law.</td>
</tr>
<tr>
<td>LEA 5008</td>
<td>Legal Institutions: PR: C.I. Overview of the American legal system including the court system, major areas of substantive law and principles of procedure.</td>
</tr>
<tr>
<td>LEI 3434</td>
<td>Recreation and Intramurals: Principles and techniques of general and school recreation programs.</td>
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<tr>
<td>LIN 1340</td>
<td>Grammar Review: A systematic review of basic English grammar to improve clarity and accuracy in writing.</td>
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<tr>
<td>LIN 2701</td>
<td>Psychology of Oral Communication: Psychological principles involved in the communicative process with application to individuals and groups.</td>
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<tr>
<td>LIN 3200</td>
<td>English Phonetics and American Dialects: Physiological description and visual notation of speech sounds; regional dialects of American English.</td>
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<tr>
<td>LIN 3710</td>
<td>Foundations of Language: This course is designed to explore contributions to language from disciplines of Biology, Neurology, Psychology &amp; Sociology.</td>
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<tr>
<td>LIN 4020</td>
<td>Anthropological Linguistics: PR: ANT 3000 or ANT 3410. Survey of anthropological linguistic field techniques in non-native cultures and application of linguistic theories to study of socio-cultural systems.</td>
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<tr>
<td>LIN 4202</td>
<td>Phonetics: Study of the sounds of language from an articulatory perspective.</td>
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<tr>
<td>LIN 4341</td>
<td>Modern English Grammar: PR: Sophomore standing. Emphasis upon the analysis and comparison of traditional, structural and transformational grammar.</td>
</tr>
<tr>
<td>LIN 4712</td>
<td>Normal Language Development: Students will study language development and develop skill in eliciting language samples, describing language use, and analyzing language samples through demonstrations and problem solving experience.</td>
</tr>
<tr>
<td>LIN 4801</td>
<td>Language and Meaning: PR: 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.</td>
</tr>
<tr>
<td>LIN 5137</td>
<td>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.</td>
</tr>
<tr>
<td>LIN 5705</td>
<td>Psycholinguistics: Foundations of language in affective consciousness and the human nervous system. Pragmatic analysis of word meaning and its precise scientific measurement. Implications for Communicative Disorders.</td>
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<tr>
<td>LIS 3016</td>
<td>Introduction to Media Services: Role and scope of media center. Major concepts, standards, trends, and media specialist functions emphasized.</td>
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</tbody>
</table>
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 4428

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/UV guidance, promotion and inservice techniques. Lab TBA.

LIS 4510

LIS 4540
Interaction Techniques in Media Services: PR: C.I. Interpretation skills and communication processes applied to working with administrators, teachers, parents, and students in the media program.

LIS 4601
Reference Sources and Services: PR: C.I. Development of skills in locating information and providing reference services.

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.

LIS 5312
Advanced Production Techniques: Advanced skills in graphic, photographic, and audio production. Integration of media into instructional packages.

LIS 5454
Administrative Principles in Media Centers: Planning, organizing, directing, supervising and budgeting in school media center. Personnel, public relations, facilities design, and evaluation.

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 3000
Literary Analysis: PR: ENC 1102. Analysis of fiction, drama, and verse in terms of major elements; plot conflict, characterization, viewpoint, rhetorical and poetic devices, figurative language, meter, rhyme, verse forms.

LIT 3081
Literature of Modern Man: PR: ENC 1102. Reading and discussion of types and forms of modern literature.

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 3120
World Literature II: PR: ENC 1102. Readings from Moliere, Voltaire, Goethe, Pushkin, Balzac, Tolstoy, Ibsen, Mann, Kafka, Camus, and others.

LIT 3313
Science Fiction: PR: ENC 1102. An investigation of science fiction as a literary form, together with selected readings.

LIT 3383

LIT 4312
Fantasy: PR: ENC 1102. A survey of the literature of fantasy with emphasis on such figures as C.S. Lewis.

LIT 4354
Ethnic Literature in America: Contributions of linguistic and ethnic groups of non-English origin to the literature of the United States.
Studies in Contemporary Fiction: PR: Senior standing or C.I. Fiction in the last 20 years in the United States and Britain.

LIT 5309
Media and Popular Literature: PR: Senior standing or C.I. Study of the literary content of contemporary media and of popular fiction. Application to classroom teaching.

LIT 5366
The Romantic Revolt (19th Century Literature): PR: Senior standing or C.I. The romantic revolt in poetry and prose; English, American and Continental literature. 1798-1832.

LIT 5367
The Victorian Age: PR: Senior standing or C.I. Study of poets and essayists from 1837 to 1900, including Tennyson, the Browns, Arnold, Hopkins, Carlyle, Mill; emphasizing Dickens, George Eliot, the Brontes, and Hardy.

MAA 4226

MAA 4227
Introduction to Analysis II: PR: MAA 4226 or C.I. Continuation of MAA 4226.

MAA 5211

MAA 5405

MAC 1104
College Algebra: PR: MAT 1033 or 2 years of high school algebra or C.I. Algebraic equations and inequalities in one variable. Functions and graphs. Polynomial, rational, exponential and logarithmic functions. Systems of equations.

MAC 1114
College Trigonometry: PR: MAT 1033 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 including 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 3312
Calculus with Analytic Geometry II: PR: MAC 3311 or C.I. Continuation of MAC 3311.

MAC 3313
Calculus with Analytic Geometry III: PR: MAC 3312 or C.I. Continuation of MAC 3312.

MAD 4104
Combinatorics and Graph Theory: PR: MAC 3312 and STA 3023. Counting principles, inclusion/exclusion principle, recurrence relations, generating functions, Polya's enumeration formula, properties of graphs and digraphs, trees, path problems, coloring, planarity, connectiveness applications.

MAE 1810
Mathematics for Elementary School Teachers I: PR: Two years of high school mathematics and C.I. Algorithms for arithmetic operations. Number systems. Geometry. Open only to majors in elementary education.
MAE 2811 Mathematics for Elementary School Teachers II: PR: MAE 1810 and C.I. The system of real numbers, binary operations, functions, transformation geometry, probability, statistics and number theory. Open only to majors in elementary education.

MAE 3112 Instruction of Mathematics in the Elementary School: PR: Associate of Arts degree or C.I. Concepts, learning sequences, algorithms, error pattern analysis, and problem solving techniques appropriate for the elementary school teacher.

MAE 3330 Mathematics Instructional Analysis: PR: EDG 4341. Study of course objectives for the high school curriculum and survey of methods and materials which have special application for teaching mathematics.

MAE 3817 Mathematics Topics for Elementary School Teachers: PR: One college mathematics course and C.I. An accelerated course covering the systems of whole numbers, integers, rational numbers, real numbers, binary operations, functions, transformation geometry, probability statistics and number theory. Open only to majors in elementary education.

MAE 4326 How Children Learn Mathematics: PR: MAE 1810 and 2811, or MAE 3112; or C.I.; and admission to Phase II. Instructional strategies learning activities, the use of manipulatives, lesson planning, evaluation of mathematical learning, and diagnostic techniques.

MAE 5318 Current Methods in Elementary School Mathematics: PR: Regular Certificate or C.I. Strategies of instruction of computation & concepts of number, geometry, and measurement; instructional materials. (Meets Elementary Education certification requirements.)

MAE 5395 Teaching the Metric System: PR: Regular Certificate or C.I. Linear, area, volume, mass, force, and temperature measures from the metric system will be studied in relation to teaching aids, methods, and content. (K-12).

MAE 5637 Laboratory Programs in Mathematics: PR: Regular Certificate or C.I. Design and development of special materials and projects for mathematics independent study. Emphasis teaching and applying the metric system. (Meets certification requirements for secondary mathematics.)

MAN 3025 Management of Organizations: PR: Junior standing, ACG 2011 or 3023, ECO 2023, ECO 2013. Introduction to the theory and practice of managing formal organizations including planning, organization behavior, and control.

MAN 3301 Personnel Management: PR: Junior standing, MAN 3025 or C.I. Systematic analysis of personnel functions in organizations.

MAN 3504 Production/Operations Management: PR: Junior standing, STA 3023. Introduction to the management of systems for the creation, distribution and maintenance of goods and services required for modern society.

MAN 3705 Business Concepts: PR: Junior standing. An introductory course in concepts, techniques, opportunities, decisions, and problems in American business. For non-business majors only.

MAN 4120 Business and Society: PR: MAR 3023, FIN 3403, MAN 3025. A study of the interrelationship between the institution of business and other institutions of our society.

MAN 4150 Human Relations in Management: PR: MAN 3025. The study of individual, interpersonal, group and intergroup problems in business organizations through the use of cases and experimental exercises.

MAN 4201 Organization Theory: PR: MAN 3025. Introduces the basic theoretical concepts of integrating both micro and macro approaches to effective management of organizations.

MAN 4310 Personnel Management Issues: PR: Junior standing, MAN 3301. An application-oriented course to give students in the area experiences generally reserved for practitioners in the field of personnel and labor relations.

MAN 4401 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.

### 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.

### 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.

### Information Systems Analysis
PR: Junior standing, MAN 3025, CAP 3001. Introduction to the fundamentals of management information systems development, needs analysis and systems requirements.

### Implementing Information Systems
PR: MAN 4722 and CAP 3001. Study of organizational information needs and systems for planning and control.

### Management Science
PR: MAN 3025 and MAN 3504 and ECO 3411 and CAP 3001. 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.

### Introduction to Production/Operations Management
PR: Acceptance into the graduate program and ECO 5413 or equivalent. Introduction to the fundamental concepts, processes and institutions involved in the production of goods and services required by modern society.

### 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.

### Differential Equations

### Problem Analysis
PR: MAC 3253 and COP 1110 or equivalent. Applications of computational techniques to selected problems in the practice of engineering technology. Problems relating to specific option areas.

### Applied Boundary Value Problems I

### 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.

### 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.

### 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.

### Marketing
PR: Junior standing. Study of functions, institutions and basic problems in marketing of goods and services in our domestic economy and abroad.

### Advertising Management
PR: MAR 3023. Analysis of field of advertising; techniques, media, organization, and role of research; economic and social aspects of advertising.

### Sales Management
PR: MAR 3023. An overview of the sales management process. Emphasis on sales program formulation and implementation.

### Consumer Behavior
PR: MAR 3023. Analysis of the buying process, the psychological, social, and economic influences affecting consumer choice.

### 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 demonstrated.

### Product Management
PR: MAR 3023. Components of product management including analysis, strategy formulation and implementation are examined.

### Retailing Management
PR: MAR 3023. Analysis of the field of retailing. Emphasis on planning for profit through management, inventory control, etc.
Marketing Channel Systems: PR: MAR 3023. Marketing functions and relationships within marketing channel systems, primary focus on the needs for interorganizational cooperation and coordination between channel organizations.

International Marketing: PR: MAR 3023, GEB 4351, or C.I. Investigates strategy, policy and the variables in international marketing decisions.

Contemporary Marketing Issues: PR: Senior standing, marketing major, C.I. Cultural, social, political, economic, and competitive developments and their effects upon marketing activities.

Marketing Strategy: PR: Senior standing and marketing courses completed or C.I. Marketing problems are explored with emphasis on strategy formulation and integrative marketing decision making.

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.

Internship: PR: Permission of Dept. Chairperson. Provides qualified undergraduate marketing majors with educational experience not gained in class setting.

Marketing Concepts: PR: Acceptance into the graduate program. Study of functions, institutions and basic marketing of goods in the U.S. economy.

Small Business Consulting: PR: ACG 2001, 2011, ECO 2023, 2013, MAN 3025, MAR 3023, or graduate status. Provides students opportunity to apply knowledge learned in classroom to real business situations. Open to undergraduate majors in the College of Business Administration with approval of the department chairman.

Linear Algebra: PR: MHF 2300 or C.I. A study of finite dimensional vector spaces and linear transformations.


Introduction to Number Theory: PR: MHF 2300 or C.I. The course will include the following topics: inductive reasoning, factorization, the division algorithm and congruences.

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.

Algebraic Structures: PR: MHF 2300 or C.I. An introduction to groups, rings and fields.

Intermediate Algebra: PR: MAT 1024 or one year of high school algebra or C.I. Linear and quadratic equations, systems of equations, inequalities, exponents, radicals and logarithms.

General Microbiology: PR: A college course in chemistry and in basic biological sciences. Fundamentals of microbiology, including microbial structure and function, metabolism, growth, genetics, virology, environmental control, ecology, pathogenicity; and laboratory techniques.

Microbial Systematics and Diagnosis: PR: MCB 3013C, MCB 3203C. Microbial classification, rules of taxonomy, and nomenclature. Techniques for identifying non-pathogens and bacteria pathogenic to man.

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.

Environmental Microbiology: PR: PCB 3043 and MCB 3013C. Interrelationships between the biological activities of microorganisms and their terrestrial and aquatic environments.

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.

Meteorology for Engineers: PR: MAC 3313. Studies of the atmospheric processes from physical thermodynamics and synoptic viewpoints.

MGF 1124

Principles of Mathematics: PR: Two years of high school mathematics or C.I. Selected topics in mathematics with primary emphasis on developing conceptual understanding and broadening insight into mathematics. Not intended for students in business, engineering or science.

MGF 1202


MIS 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.

MIS 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 4404


MIS 5306

Logic: PR: COT 4001 or MAS 3103 or MAS 4301 or C.I. Propositional and predicate calculus; completeness and compactness; undecidability of arithmetic.

MIS 1031

Basic Military Science: Organization of the Army and ROTC. Career opportunities, significance of military courtesy, discipline, customs, and traditions. Analysis of weapons, equipment and historical growth of Army.

MIS 1400

Fundamentals of Leadership Development: Development of leadership abilities through practical exercises. Fundamentals of Land navigation will be discussed. Field training exercises will allow student practical application of leadership techniques.

MIS 2120

The Threat: Comparison of the United States Army with foreign armies. To include current threat and potential use of nuclear, biological and chemical warfare. Introduction to Communications.

MIS 2300

Small Unit Tactics: Small Unit tactics with emphasis on patrolling. Advanced map reading, including military geography, land navigation, use of the compass, and military symbols will be discussed.

MIS 3301

The Small Unit Leader: Analysis of the leader's role in directing and coordinating efforts of small units in tactical operations. Includes geography, weapon systems, intelligence, and internal defense.

MIS 3410


MIS 4421

Military Law: A study of military law; the Army's maintenance management system; and a study of the obligations and responsibilities of the newly commissioned officer.

MIS 4430

Advanced Military Science: Study of the decision-making process; staff organization, estimating process, and staff studies. Analysis of administration, personnel and Army supply system.

MLS 3220C

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 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.

MLS 4334C

Clinical Pathogenic Microbiology: PR or CR: MCB 3203C and admission to the professional phase of the MLS program. Isolation & pathogenic bacteria & serological methods; interpretation of abnormal results, with correlation to disease.
MLS 4420C  
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.

MLS 4431C  
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.

MLS 4511  
Clinical Serology: PR: Admission to the professional phase of the MLS program or C.I. Clinical laboratory instruction in serologic procedures including syphilis, mononucleosis, febrile agglutinins, rheumatoid arthritis, hepatitis.

MLS 4550  
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.

MLS 4625C  
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.

MLS 4630C  
Advanced Clinical Chemistry II: PR: MLS 4625C. Autoanalyzer, flame photometry, blood gases, RIA.

MLS 4831C  
Clinical Practice I: PR: Admission to the professional phase of the MLS program or rotation in one or more of the following areas: Hematology, Chemistry, Microbiology, Blood Bank, Serology-Coaulation, Clinical Microscopy, Nuclear Medicine.

MLS 4832C  
Clinical Practice II: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4830C.

MLS 4833C  
Clinical Practice III: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4831C.

MLS 4834C  
Clinical Practice IV: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4832C.

MLS 4835C  
Clinical Practice V: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4833C.

MLS 4910  
Clinical Research Projects: PR: Admission to professional phase of Medical Technology Program or C.I. Individual projects, requiring library research and laboratory investigation, culminating in a written report and presentation.

MMC 2000  
Introduction to the Mass Media: A description of the various media, their roles, responsibilities, and functions.

MMC 4200  
Mass Communication Law: The legal rights and responsibilities of the mass media.

MMC 4300  

MMC 4602  
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.

MMC 4609  
Opinion and the Mass Media: Role of the media in influencing public attitudes on both the domestic and international levels.

MMC 4700  
Mass Media and Popular Culture: An impact of mass media upon American culture past to present.

MMC 4945  
Communication Internship: PR: C.I. Internship in radio, television, film, journalism, public relations, advertising and speech involving practicum at selected communication organizations for one quarter.

MRE 3000  
Introduction to Medical Records: PR: Acceptance into upper division limited access MRA program. Introduction to profession; POMR; release of information; record analysis.

MRE 3110  
Medical Record Organization and Management: PR: MRE 3000 or C.I. Accrediting/approving agencies; Medical Record Administrator's role in hospital/medical staff organization; policy and procedure manuals; job descriptions; utilization review; health and vital statistics.
MRE 3202

MRE 3800
Directed Practice I: PR: MRE 3000. Interdepartmental experience in selected health care facilities. Quantitative and qualitative record analysis numbering and filing, etc. in the laboratory and selected health care facilities.

MRE 3810
Directed Practice II: PR: MRE 3800; C.I. Quantitative and qualitative analysis, census, microfilming; release of information; coding; indexing; abstracting; committees; utilization review; performed in a health care facility.

MRE 4102
Medical Word Processing and Transcription: PR: MRE 4830 and HSC 3531. Basic principles, concepts, and applications of word processing in the medical setting. Laboratory experience in medical transcription.

MRE 4206

MRE 4304

MRE 4402
Fundamentals of Medicine II: PR: MRE 3000; HSC 4511; C.I. A study of the nature, causes and treatment of specific diseases.

MRE 4420

MRE 4500

MRE 4830
Directed Practice III: PR: MRE 3810. Continuation of MRE 3810.

MRE 4832
Directed Practice IV: PR: MRE 4830 and MRE 4400. Management of activities in DPI, II, III. Budget; Audit; Statistics; Computer Applications. Assignment to a hospital and other health care facilities.

MRE 4835
Management Affiliation: PR: MRE 4830. Assignment to a selected health care facility serving in an administrative capacity under the direction of a Registered Record Administrator; lab exercises; comprehensive exam.

MUE 4330
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 4350  
Secondary School Music Instructional Analysis: PR: MUE 4330 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 5611  
Trends in Elementary School Music Education: PR: MUE 3401 or equivalent, or C.I. Advanced study of instructional strategies and materials; integration of music education experiences with classroom activities; personal musical skill development; current research and new curricula.

MUG 3101  
Basic Conducting: Fundamental techniques and practice in conducting.

MUG 3201  
Choral Conducting: PR: MUG 3101. Fundamental principles of choral conducting and rehearsal techniques. May be repeated for credit.

MUG 3301  
Instrumental Conducting: PR: MUG 3101. Fundamental principles of instrumental conducting and rehearsal techniques. May be repeated for credit.

MUG 4102  
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: MUG 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.

MUL 2011  
Enjoyment of Music: Only non-music majors. Designed to develop an understanding of musical principles and techniques for listening to music.

MUL 3401  
Piano Literature I: PR: Major in Music or C.I. Survey of stringed keyboard literature from the sixteenth century to the present with emphasis on technical, formal and performance problems.

MUL 3402  
Piano Literature II: PR: MUL 3401. Continuation of MUL 3401.

MUL 3622  
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 3624  
Song Literature II: PR: MUL 3622. Continuation of MUL 3622.

MUL 3640  
Reading Chorus: CR: MUG 3201. Open to all students. A survey of junior and senior high school choral literature.

MUL 3670  

MUN 3107  
Pep Band: PR: C.I. Preparation for appearance at basketball games and special occasions.

MUN 3110  
Major Performing Organizations-Marching Band: PR: Admission by audition. Preparation for appearance at football games and special occasions.

MUN 3120  
Major Performing Organizations-Concert Band: Open to all students with audition. Study and performance of music for large ensembles. May be repeated for credit.

MUN 3140  
Major Performing Organizations-Wind Ensemble: Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.
Major Performing Organizations-Community Orchestra: PR: C.I. Open to all students. Study and performance of music for large ensembles. May be repeated for credit.

MUN 3310
Major Performing Organizations-University Choir: Open to all students by audition. Study and performance of large ensemble music. Possible tours. May be repeated for credit.

MUN 3340
Chamber Music Ensembles-Madrigal Singers: Open to all students by audition. Extra rehearsals and Madrigal Dinners required. Tours. May be repeated for credit.

MUN 3341
Chamber Music Ensembles-Chorus: Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3380
Major Performing Organizations—Oratorio Choir: Open to all students, faculty, and members of the community for performance of large works. May be repeated for credit.

MUN 3410
String Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3420
Woodwind Ensemble: Open to all students. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3430
Brass Ensemble: Open to all students. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3440
Percussion Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3450
Piano Ensemble: Open to Music Majors or C.I. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3710
Chamber Music Ensembles-Jazz Lab: PR: C.I. Open to all students by audition. Study and performance of music for jazz ensembles. May be repeated for credit.

MUS 1011
Music Forum: A series of special musical events required of music majors. Includes lectures and recitals by faculty, students, and guest artists.

MUS 3420

MUT 1210
Ear Training I: PR: MUT 2111 or C.I. Aural comprehension of elements of music-rhythm, melody, harmony, form. May be repeated for credit.

MUT 1211
Ear Training II: PR: MUT 1210 or C.I. Continuation of MUT 1210. May be repeated for credit.

MUT 1221
Sight Singing I: PR: MUT 2111 or C.I. Visual/oral comprehension of elements of music-rhythm, melody, harmony, form. May be repeated for credit.

MUT 1222
Sight Singing II: PR: MUT 1221 or C.I. Continuation of MUT 1221. May be repeated for credit.

MUT 2110
Music Theory IA: Open to all students. Writing, performance, analysis of music of various stylistic periods.

MUT 2111
Music Theory IB: PR: MUT 2111. Continuation of MUT 2111.

MUT 3011
Music Theory of Non-Majors: Not open to students majoring or minoring in music. Develops fundamental skills in reading and writing music.

MUT 3116
Music Theory IIA: PR: MUT 2112. Continuation of MUT 2111-2112; writing, performance, and analysis of music of various stylistic periods.


MUT 3353: Jazz Skills I: PR: C.I. Elements of jazz improvisation. Emphasis on listening, harmony, basic arranging and jazz forms.

MUT 3354: Jazz Skills II: PR: MUT 3353 or C.I. Continuation of Jazz Skills I.

MUT 4031: Review of Music Theory: PR: C.I. A comprehensive review of harmonic and analytic skills. May be repeated for credit.

MUT 4275: Review of Sight-Singing and Ear Training: An intensive review of aural skills. May be repeated for credit.


MUT 4431: Music Theory III: PR: MUT 3117. Continuation of MUT 3116-3117; writing, performance, and analysis of music of various stylistic periods.


MVB 1211: Secondary Trumpet: Private and/or class instruction in beginning trumpet playing.

MVB 1212: Secondary French Horn: PR: Major in music or consent of chairperson; audition. Private and class instruction in beginning horn playing.

MVB 1213: Secondary Trombone: Private and/or class instruction in beginning trombone playing.

MVB 1214: Secondary Baritone: Private and/or class instruction in beginning baritone playing.

MVB 1215: Secondary Tuba: Private and/or class instruction in beginning tuba playing.

MVB 2311: Trumpet I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.

MVB 2312: French Horn I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.

MVB 2313: Trombone I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.

MVB 2314: Baritone I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.

MVB 2315: Tuba I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.

MVB 3321: Trumpet II: PR: MVB 2311 and competence determined by faculty jury. Continuation of MVB 2311. May be repeated for credit.

MVB 3322: French Horn II: PR: MVB 2312 and competence determined by faculty jury. Continuation of MVB 2312. May be repeated for credit.

MVB 3323: Trombone II: PR: MVB 2313 and competence determined by faculty jury. Continuation of MVB 2313. May be repeated for credit.

MVB 3324: Baritone II: PR: MVB 2314 and competence determined by faculty jury. Continuation of MVB 2314. May be repeated for credit.

MVB 3325: Tuba II: PR: MVB 2315 and competence determined by faculty jury. Continuation of MVB 2315. May be repeated for credit.

MVB 4331: Trumpet III: PR: MVB 3321 and competence determined by faculty jury. Continuation of MVB 3321. May be repeated for credit.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVB 4332</td>
<td>French Horn III</td>
<td>2(1,1)</td>
<td>PR: MVB 3322 and competence determined by faculty jury. Continuation of MVB 3322. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4333</td>
<td>Trombone III</td>
<td>2(1,1)</td>
<td>PR: MVB 3323 and competence determined by faculty jury. Continuation of MVB 3323. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4334</td>
<td>Baritone III</td>
<td>2(1,1)</td>
<td>PR: MVB 3324 and competence determined by faculty jury. Continuation of MVB 3324. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4335</td>
<td>Tuba III</td>
<td>2(1,1)</td>
<td>PR: MVB 3325 and competence determined by faculty jury. Continuation of MVB 3325. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4341</td>
<td>Trumpet IV</td>
<td>2(1,1)</td>
<td>PR: MVB 4331 and competence determined by faculty jury. Continuation of MVB 4331. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4342</td>
<td>French Horn IV</td>
<td>2(1,1)</td>
<td>PR: MVB 4332 and competence determined by faculty jury. Continuation of MVB 4332. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4343</td>
<td>Trombone IV</td>
<td>2(1,1)</td>
<td>PR: MVB 4333 and competence determined by faculty jury. Continuation of MVB 4333. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4344</td>
<td>Baritone IV</td>
<td>2(1,1)</td>
<td>PR: MVB 4334 and competence determined by faculty jury. Continuation of MVB 4334. May be repeated for credit.</td>
</tr>
<tr>
<td>MVB 4345</td>
<td>Tuba IV</td>
<td>2(1,1)</td>
<td>PR: MVB 4335 and competence determined by faculty jury. Continuation of MVB 4335. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 1111</td>
<td>Class Piano I</td>
<td>1(0,2)</td>
<td>PR: MVK 1111 or C.I. Not open to music majors whose major performing medium is piano. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 1121</td>
<td>Class Piano II</td>
<td>1(0,2)</td>
<td>PR: MVK 1111 or C.I. Not open to music majors whose major performing medium is piano. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 1131</td>
<td>Class Piano III</td>
<td>1(0,2)</td>
<td>PR: MVK 1121 or C.I. Preparation for the piano proficiency examination. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 1141</td>
<td>Class Piano IV</td>
<td>1(1,1)</td>
<td>PR: Satisfactory piano proficiency examination and C.I. Individualized instruction. Open to non-music majors. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 1213</td>
<td>Secondary Organ</td>
<td>1(1,1)</td>
<td>Private and/or class instruction in beginning organ playing.</td>
</tr>
<tr>
<td>MVK 2311</td>
<td>Piano I</td>
<td>2(1,1)</td>
<td>PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 2313</td>
<td>Organ I</td>
<td>2(1,1)</td>
<td>PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 3321</td>
<td>Piano II</td>
<td>2(1,1)</td>
<td>PR: MVK 2311 and competence determined by faculty jury. Continuation of MVK 2311. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 3323</td>
<td>Organ II</td>
<td>2(1,1)</td>
<td>PR: MVK 2313 and competence determined by faculty jury. Continuation of MVK 2313. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 4331</td>
<td>Piano III</td>
<td>2(1,1)</td>
<td>PR: MVK 3321 and competence determined by faculty jury. Continuation of MVK 3321. May be repeated for credit.</td>
</tr>
<tr>
<td>MVK 4333</td>
<td>Organ III</td>
<td>2(1,1)</td>
<td>PR: MVK 3323 and competence determined by faculty jury. Continuation of MVK 3323. May be repeated for credit.</td>
</tr>
</tbody>
</table>
MVK 4341
Plano IV: PR: MVK 4331 and competence determined by faculty jury. Continuation of MVK 4331. May be repeated for credit.
MVK 4343
Organ IV: PR: MVK 4333 and competence determined by faculty jury. Continuation of MVK 4333. May be repeated for credit.
MVK 4640
Plano 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
Plano Pedagogy II: PR: C.I. Continuation of MVK 4640. Emphasis on intermediate through advanced levels. May be repeated for credit.
MVK 5351
Organ V: PR: C.l.
MVO 1214
Secondary Recorder: Private and/or class instruction in beginning recorder playing.
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: Private and/or class instruction in beginning percussion playing.
MVP 2311
Percussion I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVP 3321
Percussion II: PR: MVP 2311 and competence determined by faculty jury. Continuation of MVP 2311. May be repeated for credit.
MVP 4331
Percussion III: PR: MVP 3321 and competence determined by faculty jury. Continuation of MVP 3321. May be repeated for credit.
MVP 4341
Percussion IV: PR: MVP 4331 and competence determined by faculty jury. Continuation of MVP 4331. May be repeated for credit.
MVP 5351
Percussion V: PR: C.I.
MVS 1211
Secondary Violin: Private and/or class instruction in beginning violin playing.
MVS 1212
Secondary Viola: Private and/or class instruction in beginning viola playing.
MVS 1213
Secondary Cello: Private and/or class instruction in beginning cello playing.
MVS 1214
Secondary Bass: Private and/or class instruction in beginning bass playing.
MVS 1215
Secondary Harp: Private and/or class instruction in beginning harp playing.
MVS 1216
Secondary Guitar: Private and/or class instruction in beginning guitar playing.
MVS 1876
Class Guitar I: Open only to non-music majors. Class instruction in beginning guitar playing.
MVS 2311
Violin I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVS 2312
Viola I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVS 2313
Cello I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVS 2314
Bass I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVS 2315 Harp I: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVS 2316 Guitar I: PR: Major in music or consent of chairperson; audition. Private and class lessons. 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 3321 Violin II: PR: MVS 2311 and competence determined by faculty jury. Continuation of MVS 2311. May be repeated for credit.
MVS 3322 Viola II: PR: MVS 2312 and competence determined by faculty jury. Continuation of MVS 2312. May be repeated for credit.
MVS 3323 Cello II: PR: MVS 2313 and competence determined by faculty jury. Continuation of MVS 2313. May be repeated for credit.
MVS 3324 Bass II: PR: MVS 2314 and competence determined by faculty jury. Continuation of MVS 2314. May be repeated for credit.
MVS 3325 Harp II: PR: MVS 2315 and competence determined by faculty jury. Continuation of MVS 2315. May be repeated for credit.
MVS 4331 Violin III: PR: MVS 3321 and competence determined by faculty jury. Continuation of MVS 3321. May be repeated for credit.
MVS 4332 Viola III: PR: MVS 3322 and competence determined by faculty jury. Continuation of MVS 3322. May be repeated for credit.
MVS 4333 Cello III: PR: MVS 3323 and competence determined by faculty jury. Continuation of MVS 3323. May be repeated for credit.
MVS 4334 Bass III: PR: MVS 3324 and competence determined by faculty jury. Continuation of MVS 3324. May be repeated for credit.
MVS 4335 Harp III: PR: MVS 3325 and competence determined by faculty jury. Continuation of MVS 3325. May be repeated for credit.
MVS 4336 Guitar III: PR: MVS 3326 and competence determined by faculty jury. Continuation of MVS 3326. May be repeated for credit.
MVS 4337 Violin IV: PR: MVS 4331 and competence determined by faculty jury. Continuation of MVS 4331. May be repeated for credit.
MVS 4338 Viola IV: PR: MVS 4332 and competence determined by faculty jury. Continuation of MVS 4332. May be repeated for credit.
MVS 4339 Cello IV: PR: MVS 4333 and competence determined by faculty jury. Continuation of MVS 4333. May be repeated for credit.
MVS 4340 Bass IV: PR: MVS 4334 and competence determined by faculty jury. Continuation of MVS 4334. May be repeated for credit.
MVS 4341 Harp IV: PR: MVS 4335 and competence determined by faculty jury. Continuation of MVS 4335. May be repeated for credit.
MVS 4342 Guitar IV: PR: MVS 4336 and competence determined by faculty jury. Continuation of MVS 4336. May be repeated for credit.
MVS 5351 Violin V: PR: C.I.
MVS 5352 Viola V: PR: C.I.
MVS 5353 Cello V: PR: C.I.
MVS 5354 Bass V: PR: C.I.
MVS 5355  AS 2(1,1)
Harp V: PR: C.I.
MVS 5356  AS 2(1,1)
Guitar V: PR: C.I.
MVV 1211  AS 1(1,1)
Class Voice: Private and/or class instruction in beginning voice. May be repeated for credit.
MVV 2311  AS 2(1,1)
Voice I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVV 3321  AS 2(1,1)
Voice II: PR: MVV 2311 and competence determined by faculty jury. Continuation of MVV 2311. Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVV 4341  AS 2(1,1)
Voice IV: PR: MVV 4331 and competence determined by faculty jury. Continuation of MVV 4331. May be repeated for credit.
MVV 4640  AS 1(1,0)
Voice Pedagogy I: PR: C.I. Methods, materials for vocalists; teachers, conductors; voice production; diagnosis of problems and correction; demonstration and observation of teaching; beginning to intermediate levels. May be repeated for credit.
MVV 4641  AS 1(1,0)
Voice Pedagogy II: PR: C.I. Continuation of MVV 4640. Intermediate to advanced levels. May be repeated for credit.
MVV 5351  AS 2(1,1)
Voice V: PR: C.I.
MVW 1211  AS 1(1,1)
Secondary Flute: Private and/or class instruction in beginning flute playing.
MVW 1212  AS 1(1,1)
Secondary Oboe: PR: MVW 1211 and MVW 1213. Private and/or class instruction in beginning oboe playing.
MVW 1213  AS 1(1,1)
Secondary Clarinet: Private and/or class instruction in beginning clarinet playing.
MVW 1214  AS 1(1,1)
Secondary Bassoon: PR: MVW 1211 and MVW 1213. Private and/or class instruction in beginning bassoon playing.
MVW 1215  AS 1(1,1)
Secondary Saxophone: PR: MVW 1211 and MVW 1213. Private and/or class instruction in beginning saxophone playing.
MVW 2311  AS 2(1,1)
Flute I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVW 2312  AS 2(1,1)
Oboe I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVW 2313  AS 2(1,1)
Clarinet I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVW 2314  AS 2(1,1)
Bassoon I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVW 2315  AS 2(1,1)
Saxophone I: PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.
MVW 3321  AS 2(1,1)
Flute II: PR: MVW 2311 and competence determined by faculty jury. Continuation of MVW 2311. May be repeated for credit.
MVW 3322  AS 2(1,1)
Oboe II: PR: MVW 2312 and competence determined by faculty jury. Continuation of MVW 2312. May be repeated for credit.
MVW 3323  AS 2(1,1)
Clarinet II: PR: MVW 2313 and competence determined by faculty jury. Continuation of MVW 2313. May be repeated for credit.
MVW 3324  AS 2(1,1)
Bassoon II: PR: MVW 2314 and competence determined by faculty jury. Continuation of MVW 2314. May be repeated for credit.
MVW 3325
Saxophone II: PR: MVW 2315 and competence determined by faculty jury. Continuation of MVW 2315. May be repeated for credit.

MVW 4331
Flute III: PR: MVW 3321 and competence determined by faculty jury. Continuation of MVW 3321. May be repeated for credit.

MVW 4332
Oboe III: PR: MVW 3322 and competence determined by faculty jury. Continuation of MVW 3322. May be repeated for credit.

MVW 4333
Clarinet III: PR: MVW 3323 and competence determined by faculty jury. Continuation of MVW 3323. May be repeated for credit.

MVW 4334
Bassoon III: PR: MVW 3324 and competence determined by faculty jury. Continuation of MVW 3324. May be repeated for credit.

MVW 4335
Saxophone III: PR: MVW 3325 and competence determined by faculty jury. Continuation of MVW 3325. May be repeated for credit.

MVW 4341
Flute IV: PR: MVW 4331 and competence determined by faculty jury. Continuation of MVW 4331. May be repeated for credit.

MVW 4342
Oboe IV: PR: MVW 4332 and competence determined by faculty jury. Continuation of MVW 4332. May be repeated for credit.

MVW 4343
Clarinet IV: PR: MVW 4333 and competence determined by faculty jury. Continuation of MVW 4333. May be repeated for credit.

MVW 4344
Bassoon IV: PR: MVW 4334 and competence determined by faculty jury. Continuation of MVW 4334. May be repeated for credit.

MVW 4345
Saxophone IV: PR: MVW 4335 and competence determined by faculty jury. Continuation of MVW 4335. May be repeated for credit.

MVW 5351
Flute V: PR: C.I.

MVW 5352
Oboe V: PR: C.I.

MVW 5353
Clarinet V: PR: C.I.

MVW 5354
Bassoon V: PR: C.I.

MVW 5355
Saxophone V: PR: C.I.

NUR 3050

NUR 3134C
Scientific Theories of Nursing II: PR: NUR 3207C. Principles of maternal and infant health with application in selected clinical settings. The family approach to the birthing process is emphasized.

NUR 3135
Nursing Seminar II: CR: NUR 3134C. An opportunity to explore maternal/infant, fathering, sibling and family relationships.

NUR 3207C
Scientific Theories of Nursing I: PR: NUR 3618C. Theories/nurses role in health maintenance, preventive, acute and rehabilitative care with individuals of all ages in varied clinical settings.

NUR 3208
Nursing Seminar I: CR: NUR 3207C. Discussion of current issues related to nursing practice. Exploration of specific problems associated with NUR 3207C.

NUR 3618C
Concepts Basic to Nursing Practice: PR: Acceptance into upper division limited access nursing program. Beginning principles and concepts of nursing theory and practice utilizing the nursing process in selected clinical settings.

NUR 3725C
Pathophysiology and Physical Assessment: Clinical concepts of disease processes integrated with physical assessment of clients.

NUR 3740
Physical Assessment: Theory and skills of physical/mental assessment of clients.

NUR 4411C
NUR 4412  

NUR 4660C  
Special Nursing Topics: PR: NUR 3134C. Comprehensive nursing care to individuals with complex and critical problems.

NUR 4905C  
Nursing Independent Study: PR: NUR 4411C. An opportunity for in-depth study in an area of special interest to the student.

NUU 3111  
Introduction to Baccalaureate Nursing: Overview of baccalaureate nursing philosophy, objectives, conceptual framework, scope of practice, history, legal and ethical issues.

NUU 4225C  
Scientific Theories of Nursing IV: PR: NUR 4411C. Scientific Theories and principles of leadership and management of patient care. Application of the decision-making process in selected clinical experiences.

NUU 4226  

NUU 4300  
Critical Inquiry: A study of approaches to problematic situations in nursing. Selected experiences in investigating, analyzing, and interpreting nursing research.

OCE 1012  
Oceanography and Space: Fundamentals of oceanography and space with emphasis on the engineering aspects and uses.

ORI 3001  
Interpretation I: Analysis of thought, development of imagination; several oral presentations of a variety of literary forms. (Recommended for students majoring in English and preparing to teach literature.)

ORI 3002  
Interpretation II: PR: ORI 3001 or C.I. Selecting and abridging literary material for platform use; preparation and presentation by individual groups of programs for special and general occasions.

ORI 3210  
Interpretation III: PR: ORI 3001. Practice in interpretation by individuals and groups with particular emphasis on planned presentation for all age audiences, with special emphasis on children.

PAD 3003  
Public Administration: An examination of the basic environment, culture, and organization of public administration in the United States.

PAD 4034  
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.

PAD 4040  
Ethics and Values in Public Administration: Examination of the issues of ethics in the public sector—basis for public concern, past practice, present patterns of response; individual/social aspects of ethical behavior.

PAD 4104  
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.

PAD 4110  
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.

PAD 4204  
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.

PAD 4414  
Public Personnel Administration: The history, operating components, structural characteristics and increasing impact of laws and related sanctions on personnel practices of public agencies.

PAD 4424  
Labor Relations in the Public Sector: A study of current trends and developments in employment relations in the public sector, especially employee organization, negotiations, and the collective bargaining process.

PAD 4941  
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.

PAD 5806  
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, is examined through the case study mode.

Cell Physiology: PR: 8 hours in biological sciences or C.I. CR: CHM 3211. Basic physiological processes, cellular organization, exchange of materials conversion of energy, irritability and contractibility.

Principles of Ecology: 8 hours in biological sciences. Elements of ecosystems, biogeochemical cycling, environmental factor interactions, population dynamics and community development.


Genetics: PR: BSC 2010C. Basic principles of heredity as applied to prokaryotes and eukaryotes.

Genetics Laboratory: CR: PCB 3063. Introduction to laboratory techniques of genetics.

Immunology and Serology: PR: BSC 2010C. Basic principles of the immune reaction, antigens antibody formulation, hypersensitivity and autoimmunity; serological and immunological laboratory techniques.

Human Physiology: PR: BSC 2010C or equivalent. The physiology and interrelationships of organ systems of the human body.

Microtechnique: PR: 1 yr. biology. Preparation of plant and animal tissue of microscopic study.

Limnology I: PR: PCB 3043 or C.I. Introduction to limnology and methods for freshwater ecology with respect to physical, chemical and biological parameters.

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.

Animal Physiology: PR: PCB 3023 or C.I. Functions of body processes occurring in animals with emphasis on vertebrate physiology.

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.


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.

Endocrinology: PR: PCB 4723 and BCH 4053 or C.I. Mechanisms of action of hormones; interrelationships between the nervous and endocrine systems.

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.

Beginning Golf: Performance and application of basic skills, rules and etiquette. Physiological and social values accruing from this lifetime sport.

Beginning Tennis: Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.

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.

Intermediate 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, etiquette. Physiological and social values accruing from this lifetime sport.
Body Development: An in-depth study of individual physical (musculo-skeletal, neuromuscular, cardiorespiratory) fitness. Emphasis on individual diagnosis, principles, procedures, and conduct of related exercise programs.

Elementary Swimming: For non-swimmers and beginning swimmers. Development and study of technique in the basic skills of water safety and swimming.

Advanced Swimming: PR: PEN 1121 or equivalent competency. Development and study of advanced techniques, endurance in basic water safety and swimming skills; Intermediate technique and endurance in a wide variety of ancillary skills.

Aquatics: PR: PEN 2122 or equivalent competency. Development and study of techniques and principles of aquatic swimming activities—safety, strokes, fitness, water polo, synchronized swimming, skin diving, springboard diving, canoeing, and family instruction methods.

Life Saving: Instruction, training and certification in basic life saving swimming skills.


Instructional Analysis of Individual Activities: Analysis of individual sports for purposes of teaching and coaching. Includes techniques, conditioning, strategy.

Instructional Analysis of Performer Centered Activities: Analysis of gymnastics, tumbling, wrestling and weight training for purposes of teaching and coaching. Includes techniques, conditioning, strategy.

Instructional Analysis in Aquatics: PR: Sophomore standing or C.I. Analysis of aquatic activities for purposes of teaching and coaching. Includes techniques, conditioning, strategy.

Water Safety Instruction: PR: PEN 3113 or equivalent competency. Methods of teaching water safety. Includes practical application and certification.

Sports Psychology: A review of principles of psychology related to the enhancement of satisfaction and performance in sports.

Coaching Theory: Theory and methods of coaching athletic sports.

Teaching Physical Education in the Elementary School: PR: Admission to Junior Block or C.I. Organization, practice and conduct of elementary school physical education with emphasis on teaching methods.

Physical Education in Secondary School: PR: Admission to Junior Block, or C.I. Study of course objectives for the secondary school curriculum and survey of methods and materials having special application for teaching Physical Education.

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.

Anatomic and Mechanical Kinesiology: CR: PET 4320C. Anatomic and mechanical principles involved in producing skilled human movement; with applications.


Exercise Physiology-Cardiovascular: Central and peripheral cardiovascular mechanisms that facilitate, and are affected by exercise. Related principles of testing, training, and exercise strategy.

Exercise Physiology-Respiratory: PR: PET 4360C. Physiological mechanisms of metabolism, gas transport, and pulmonary function that facilitate, and are affected by exercise. Related principles of testing, training, and exercise strategy.

Organization and Administration of Typical and Atypical Physical Education Program: Administering and organizing physical education programs for instruction of typical and atypical students within the total school physical education program.

PET 4622C  ED 2(1,1)

PET 4640  ED 2(2,0)
Adapted Physical Education: Principles and methods of adapting physical education activities and programs for atypical participants, mainstreaming rationale and methods analyzed.

PET 5635C  ED 3(2,1)
Therapeutic Exercise/Therapeutic Modalities. This course will include specific rehabilitative exercises and the operation of rehabilitative equipment. Instruction will be given for therapeutic modalities.

PHH 3100  AS 3(3,0)
Ancient Philosophy: Foundations of Western philosophy in ancient Greek thinking about man and nature, including the pre-Socratics, Socrates, Plato, Aristotle.

PHH 3400  AS 3(3,0)
Modern Philosophy: Challenges of science and religion to philosophy. Responses of faith, reason, relativism, and atheism.

PHH 3600  AS 3(3,0)

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 2130  AS 3(3,0)
Formal Logic I: Analysis of logical form and of procedures used in deductive inference, of the kind underlying mathematical reasoning.

PHI 3131  AS 3(3,0)
Formal Logic II: PR: PHI 2130. Systematic study of propositional and first-order predicate logic; logistic systems and axiomatic methods; problems of metatheory, including consistency, completeness and decidability.

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 3800  AS 3(3,0)
Practical Moral Dilemmas: Probes practical moral problems arising out of advancement and complexities in modern professional life. Considers one or more of the following: medicine, business, technology, law.

PHI 3700  AS 3(3,0)
Aesthetics: An investigation into the nature of human artistic experience with special reference to questions of form, perception and style.

PHI 3800  AS 3(3,0)
Philosophy and Creativity: A companion course to PHI 3800, Aesthetics. Examines the empirical and metaphysical claims made for creativity; attempts to account for intuition, genius and intelligence.

PHI 4220  AS 3(3,0)
Philosophy of Language: PR: PHI 2010 and 2130. Develops philosophically illuminating descriptions of certain general features of language, such as reference, truth meaning, and necessity.

PHI 4360  AS 3(3,0)
Theory of Knowledge: PR: PHI 2010 and PHI 2130. The study of knowledge: What is it? Can we have it? Topics include skepticism, "other minds," certainty, and belief.

PHI 4400  AS 3(3,0)
Philosophy of Science: An examination of the conceptual foundations and methodology of modern science.

PHI 4500  AS 3(3,0)
Metaphysics: PR: PHI 2010 and PHI 2130. Investigates "first principles" and inquiries into the ultimate nature of reality through consideration of being, substance, essence, space, time, cause and effect.

PHI 4770  AS 3(3,0)
Atheism: A study of the principal theoretical and practical objections to theism.

PHM 3100  AS 3(3,0)
Social Philosophy: Philosophical analysis and evaluation of selected issues arising from interaction of the individual, society, and the state.
PHM 3350  Introduction to Marxist Philosophy: A study of the fundamental principles of Marxist philosophy, developed by Marx, Engels and Lenin.

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.


Computer Methods in Physics: PR: PHY 3048 and COP 1110 or C.I. Nonanalytical problems in physics and astronomy solved by approximation with computer assistance.

Physical Basis of Music: PR: MUT 2112 or C.I. Lectures, demonstrations, and student practicum; covers topics in wavemotion, acoustics of musical instruments, musical scales, timbre, architectural acoustics, human ear, sound reproduction.


Plasma Physics: PR: PHY 4043, PHY 3044, or C.I. Introduction to theory and experimental basis of both weakly and highly ionized plasmas. Instabilities, plasma waves, nonlinear effects, controlled thermonuclear fusion.

College Physics I: PR: MAC 1104 or MGF 1202. Kinematics, Newton’s Law, circular motion, torque, center of gravity, work, energy, power, machines, waves, sound, electricity, currents, magnetism, induction, generators, motors, geometrical optics, eye, camera, telescope, microscope.

College Physics II: PR: PHY 2050C or one year of high school physics. Fluids, Bernoulli, viscosity, kinetic theory, osmosis, heat, thermodynamics, latent heat, conduction, convection, radiation, DC-AC circuits, instrumentation, semiconductors, physical optics, interference, polarization, X-rays, radioactivity, detectors, shielding, dosimetry.

Project Physics I: “Hand-on” lecture-laboratory course, particularly for Elementary Education majors and prospective Junior High science teachers. Weather forces, motion, energy, solids, liquids, gases, heat, solar energy.

Project Physics II: Naked eye astronomy, waves, sound, electricity, magnetism, motors, light, color, photography, nuclear radiation.

Physics of Science Fiction: PR: PSC 1512 or C.I. Study and discussion of physical principles which form the basis of selected science fiction themes.


Physics for Engineers and Scientists I: PR: MAC 3311, PHY 2050C or high school physics. Mechanics, properties of matter, fluids, thermodynamics.

Physics Laboratory for Engineers and Scientists I: CR: PHY 3048. Laboratory experiments covering selected topics in physics related to PHY 3048.

Physics for Engineers and Scientists II: PR: PHY 3048, MAC 3312. Optics, light, sound, electricity, magnetism, alternating current.

Physics Laboratory for Engineers and Scientists II: CR: PHY 3049. Laboratory experiments covering selected topics in physics related to PHY 3049.

Modern Physics: PR: PHY 3049 or C.I. Thermal radiation, quanta, photoelectric effect, Compton effect, Bohr theory, de Broglie, Schrodinger equation, barrier and square well potentials, applications to atomic, molecular, solid state and nuclear physics.

Optics and Modern Physics: PR: PHY 3049 or C.I. Geometric optics, ray diagrams, polarization, diffraction, interference, atomic, molecular, nuclear, solid state physics, spectroscopy, x-rays, nuclear radiation.

Thermodynamics: PR: PHY 3049 and MAP 3302 or C.I. Introduction to equilibrium thermodynamics. Equations of state, enthalpy, entropy, internal energy, free energy, phase transitions.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>PHY 3802L</td>
<td>Intermediate Physics Laboratory: PR: PHY 3101 or C.I. Laboratory work in basic measurements of physical constants; experiments in electronics, modern physics, nuclear physics, optics and solid state physics. May be repeated for credit.</td>
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<tr>
<td>PHY 4424</td>
<td>Optics: PR: PHY 3101 and PHY 3044. Wave optics, absorption, stimulated emission, lasers, transforms, coherence, holography.</td>
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<tr>
<td>PHY 4604</td>
<td>Wave Mechanics: PR: PHY 3101. Basic concepts of Schrodinger wave mechanics, the quantum theory. Forms of wave function under boundary conditions. Application to the one electron atom and many particle systems.</td>
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<tr>
<td>PHY 5304</td>
<td>Nuclear Physics: PR: PHY 4604. Nuclear forces, structure, models, reactions, radioactivity, fission, fusion, strange particles.</td>
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<tr>
<td>PHY 5346</td>
<td>Electrodynamics I: PR: PHY 3044, 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.</td>
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<tr>
<td>PHY 5606</td>
<td>Quantum Mechanics: 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, perturbation theory.</td>
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<tr>
<td>POS 2041</td>
<td>American National Government: A study of the dynamics of American nation government, including its structure, organization, powers, and procedures.</td>
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<tr>
<td>POS 3122</td>
<td>State Government and Public Policy: A comparative study of American state governments, political processes, and public policies, with emphasis on Florida.</td>
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<tr>
<td>POS 3173</td>
<td>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.</td>
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<tr>
<td>POS 3233</td>
<td>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.</td>
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<tr>
<td>POS 3235</td>
<td>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.</td>
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<tr>
<td>POS 3253</td>
<td>Contemporary Revolution and Political Violence: Theories and cases of revolutionary change and political violence in the contemporary world.</td>
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<tr>
<td>POS 3273</td>
<td>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.</td>
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</table>
POS 3413 The American Presidency: PR: POS 2041 or C.I. Examination of historical and contemporary role of the presidency, including presidential selection process and the office's evolution in status, powers, administrative responsibilities, leadership, and decision-making.

POS 3424 Congress & the Legislative Process: PR: POS 2041 or C.I. Examination of the Congress as an institution undergoing dynamic change; emphasis upon recruitment of legislators, institutional and informal rules, the committee system, legislative procedures.

POS 3443 Political Parties & Processes: PR: POS 2041 or C.I. In depth study of the American political party system in the context of changing American politics; topics include: development, organization, reforms, legislative and executive roles.

POS 3703 Scope and Methods of Political Science: Introduction to the scope and methodology of political analysis. Extensive examination of the discipline, research design and methodology.

POS 4142 Metropolitan Politics: Analysis of political patterns, processes, and issues in American communities. Intergovernmental relations and structural and political arrangements in the existing and emerging metropolitan areas.

POS 4206 Political Psychology: The psychological analysis of political behavior with emphasis on the individual rather than the political system; includes political attitudes and communication, leadership, and personality influences on politics.

POS 4246 Political Socialization: PR: POS 2041 or C.I. Analysis of recruitment and socialization processes. Identification of the agents and processes of political socialization in national and cross-cultural contexts.

POS 4252 Politics of the Future: Exploration of possible political processes of the future by examining both visions of the future and specific problem areas such as ecological and technological challenges.

POS 4261 Political Corruption: An examination of official corruption at each level of government: a focus on the who, what, when, where and how of public corruption.

POS 4265 Power and Policy in the U.S.: PR: POS 2041 or C.I. Examination of the bases of political power in the U.S. In depth study of socio-economic political linkages in the policy-making process.

POS 4284 Judicial Process & Policies: Study of the formal and informal judicial process. Legal culture, bureaucratic model, judicial recruitment and outputs, comparative judicial behavior.

POS 4412 Presidential Campaigning: PR: C.I. Introduces the process of candidate selection, convention behavior, actual campaign process and the transition of power.

POS 4603 American Constitutional Law: PR: POS 2041 or C.I. Development of American federalism and national power, commerce clause and nationalization of the economy.

POS 4604 American Constitutional Law II: PR: POS 2041 or C.I. Development of civil liberties and civil rights in the American federal system.

POS 4941 AS 3-10(0,3-10) 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.

POT 3302 Modern Political Ideologies: A study of modern ideologies since the French Revolution including liberalism, conservatism, capitalism, nationalism, Fascism and anarchism.

POT 4003 Political Theory: PR: POS 2041 or C.I. Examination of various normative approaches to the study of political science, stressing contemporary developments in the field.

POT 4045 Ancient, Medieval and Early Modern Political Philosophy: Study of the development of political and social ideas in western thought from early Greece through the 17th century.

POT 4054 Modern Political Philosophy: Study of the development of political and social ideas from the 18th century to the present. May be taken independently of POT 4045 (Ancient, Medieval and Early Modern Political Philosophy).

POT 4314 Contemporary Democratic Theory: PR: POS 2041 or C.I. Study of democratic theories emphasizing liberal democracy and its critics, elitist theories, participatory democracy, citizen participation and relevance of empirical research to democratic theory.
PPE 3003 \ AS 3(3,0)  
**Personality Theory:** PR: PSY 2013. A survey of theory and research on the development of personality characteristics.

PSB 3002 \ AS 4(4,0)  
**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.

PSB 3442 \ AS 3(3,0)  
**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.

PSB 4013C \ AS 4(2,2)  
**Introduction to Neuropsychology:** PR: PSB 3002. Study of brain function with particular emphasis on human behavior. Lecture-Lab.

PSB 4103C \ AS 3(2,2)  
**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. Lecture-Lab.

PSC 1512 \ AS 3(3,0)  
**Physical Science:** PR: MAC 1104 or MGF 1202. 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.

PSC 1512L \ AS 1(0,2)  
**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.

PSY 2013 \ AS 3(3,0)  
**General Psychology:** An introductory survey of the basic principles, theories, and methods of contemporary psychology.

PSY 2023 \ AS 1(1,0)  
**Careers in Psychology:** PR: PSY 2013. An examination of various career opportunities in Psychology including educational entry requirements, and related professional issues.

PSY 3204 \ AS 4(3,2)  
**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.

PSY 3214 \ AS 4(3,2)  

PSY 3302 \ AS 3(3,0)  
**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.

PSY 3303 \ AS 3(3,0)  
**Applied Testing:** PR: PSY 3302: A critical review of the substantive and psychometric properties of selected psychological tests; procedures for the construction of psychological instruments.

PSY 3624 \ AS 3(3,0)  
**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.

PSY 3951 \ AS 3(1,5)  
**Undergraduate Field Work:** PR: C.I. Placement in a community agency for supervised experience in applications of psychology to community problems.

PUP 3314 \ AS 3(3,0)  
**History and Systems of Psychology:** PR: EXP 3404 and PPE 3003. Historical development of psychology with emphasis on classical theoretical positions.

PUP 3314 \ AS 4(4,0)  
**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.

PUP 4003 \ AS 4(4,0)  
**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.

PUP 4009 \ AS 4(4,0)  
**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.

PUP 4323 \ AS 4(4,0)  
**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.

Politics of Health: PR: C.I. Analysis of public health policies. Primary focus upon political processes, policy makers, interest group interventions including consumers, and policy outcomes. Comparative health policies.

Public Relations: Principles and practice of Public Relations including: techniques, research, tools, publicity and management.

Public Relations Campaigns: PR: PUR 4000. Planning and execution of public relations campaigns for profit and non-profit organizations.

Radiation Oncology I: Malignant conditions, their etiology, methods of TX, diagnosis and the effects of continued therapies. Radiation TX: application, dose measurement, verification and machine calibration.

Radiation Oncology II: Continuation of Radiation Oncology I.

Reading Skills: PR: C.I. A course to improve competence in reading comprehension, rate, vocabulary and study skills.

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.

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.

Developmental Reading: PR: Regular Certificate or C.I. Principles, procedures, organization, and current practices in the elementary reading program. Materials and methods of instruction.

Reading in the Secondary School: PR: Basic Teacher Certification or C.I. Nature of the adolescent reader; organizational patterns, principles and procedures; diagnostic and remediation materials.

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.

Real Estate Investment Analysis: PR: REE 3040. Focus on real estate decision making in the private sector utilizing tools of financial and economic analysis.

World Religions: Basic features and historical background on Confucianism, Taoism, Hinduism, Buddhism, Judaism, Christianity and Islam.

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

The Hebrew and Christian Heritage: The Old and New Testaments as religious documents; their socio-political context in the Ancient Near East.

Religions of China and Japan: A study of basic concepts in Shinto, Taoism, Confucianism, Buddhism, and Zen.

Hinduism: A study of Hindu religious ideas and scriptures; the Vedas, the Upanishads, the Bhagavad Gita, and later works.

Islam: An inquiry into the foundations and development of Islamic thought from earliest times to modern in various parts of the world.

The Prophets: Ancient and Modern: Ancient prophets (e.g. Moses, Buddha, Jesus, Mohammed) as originators of new faiths, the role of men like Ghandi and Mao as prophets in the modern world.
REL 3506: Studies in Christianity: An inquiry into the foundations and development of Christian thought in various parts of the world.

REL 3600: Studies in Judaism: An inquiry into the foundations and development of Jewish thought in various parts of the world.

REL 4182: Mysticism: The models and aims of the mystic, both Eastern and Western, as seen in art, music, and literature.

REL 4187: World Myths and Their Meaning: A comparative study of myths from various cultures; common themes and their archetypal meaning.

REL 4420: Modern Theology: Explores the evolution in religious thought prompted by Kierkegaard, Tillich, Barth, Niebuhr, and Bonhoeffer, and the secular trends suggested by Nietzsche, Altizer, Cox, and Hamilton.

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 3244C: Life Support Systems: PR: RET 3026C. Lecture-laboratory, measures utilized to support the critically ill patient, intubation, airway maintenance, arterial line insertion and care, post operative care are all covered.

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 - 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-demonstration.


RET 4284C: Cardiopulmonary Diagnostics I: PR: RET 3442 and RET 3244C. Non-invasive cardiac diagnostics including echocardiography, nuclear cardiology and stress testing.

RET 4285C: Cardiopulmonary Diagnostics II: PR: RET 3442, RET 3244C and RET 4284C. Invasive cardiac diagnostic and therapeutic measures including cardiac catheterization, PTCA, streptokinase use and heart surgery.

RET 4414C: Pulmonary Function Studies: PR: RET 3026C. Detailed procedures and tests to provide information for diagnosis of pulmonary disease, lecture-laboratory.


RET 4933: Medical Research Seminar: PR: Sta 3023. Introduction to research methods used in medicine. Use of statistical and computer tools in problem solving.
Selected Topics In Respiratory Therapy: PR: C.I. Current topics of adult critical care, as they apply to the advanced study of respiratory therapy.

Chest Medicine: PR: APB 3263. Disease states treated medically in conjunction with one or more modalities of respiratory therapy.

Principles of Risk and Insurance: PR: STA 2014 or STA 3023, Junior standing or C.I. Emphasis is on insurance as a risk handling device, with attention given to risk assumption, risk avoidance and loss prevention also.


Pathophysiology: PR: C.I. The study of radiologic science in the diagnosis and treatment of disease.

Environmental Monitoring Techniques: A study of the techniques and procedures used to measure environmental exposure. Guidelines for air, food and water protection are discussed as well as nuclear reactor safety and accident management.

Radiation Monitoring Instrumentation: A study of the principle of operation and application of radiation detection and measuring devices used in external beam and radioisotopes counting techniques.

Medical Physics: PR: RTE 3684C or C.I. The clinical application of physics in radiation medicine; detection, measurements, techniques and equipment, radiation protection and safety; state and federal regulations; radiation biology.

Inspection and Compliance Evaluation: A study of the state and federal standards for the inspection and compliance testing of radiographic facilities, compliance testing of radiographic facilities, shielding design, requirements and dose calculations.

Principles of Radiographic Exposure I: An introduction to properties of electromagnetic radiation, X-ray production, exposure factors, X-ray equipment and accessory devices.

Principles of Radiographic Exposure II: PR: RTE 3412C or C.I. Continuation of RTE 3212C with emphasis on exposure technique, evaluation and use of imaging accessories, processing techniques.

Radiographic Procedures I: PR: Admission to the professional phase of the RAS program or C.I. A study of patient positioning, equipment manipulation and quality evaluation of radiographic studies of the appendicular skeleton, chest, and abdomen.

Radiographic Procedures II: PR: RTE 3528C or C.I. A study of patient positioning, equipment manipulation and quality of radiographic studies of the organ systems, skull and facial bones, contrast studies.

Physics of Image Production: PR: College Physics II. Physics of Diagnostic Radiology, including radiation production, physical principles of generator operation and characteristics of electromagnetic radiation.

Anatomy for the Medical Imager: A study of the normal anatomical structures and interrelationships of structures as demonstrated in a radiographic and cross-sectional imaging reference.

Clinical Education II: PR: RTE 3832L or C.I. Supervised clinical practice in radiographic procedures, radiation protection, patient care, equipment.

Clinical Education III: PR: RTE 3806 or C.I. Supervised clinical practice in performing radiographic or radiation therapy procedures with emphasis on competency evaluation of clinical practices.

Clinical Education IV: PR: RTE 3816 or C.I. Supervised clinical practice in radiographic or radiation therapy procedures, with emphasis on competency evaluation of clinical practices.

Clinical Education Orientation: PR: Admission professional phase of the RAS program, RTE 3002. Orientation to patient care, introduction to areas involving field of radiology and Clinical Orientation to the function of radiologic technologists, chest, abdomen, radiography.
Radiation Monitoring Practicum: Application of health physics principles through on the job experience at medical, governmental and/or industrial facilities under the direct supervision of a qualified expert.

RTE 4205C

Quality Assurance Management: PR: RTE 4569 or C.I. A study of radiological equipment and imaging modalities for specialization, selection and installation of equipment designed for specific functions, quality assurance testing.

RTE 4207

Methods in Radiology Management: Concepts of Radiology department management, including principles, personnel management, evaluation and improvement techniques, budgeting, financial considerations and legal aspects.

RTE 4209

Radiological Administrative Practice: A directed practice in the management of a Radiology department with application of theory and methodology.

RTE 4268L

Directed Study in Clinical Education: PR: HSC 4052 or C.I. Directed activity in classroom instruction in radiologic technology.

RTE 4562

Radiobiology: PR: RTE 3387C. A study of the effects of ionizing radiation on biologic systems. The responses at the cellular and total organism level are investigated.

RTE 4569

Quality Assurance: PR: RTE 3387 or C.I. Quality assurance programs with evaluation of radiographic imaging modalities and information retrieval systems. Tube output evaluation, sensitometry, and flow studies.

RTE 4865L

Clinical Education VII: PR: RTE 4843 or C.I. Supervised Clinical experience in all categories of Clinical Competency evaluation.

RTE 4843

Clinical Education VI: PR: RTE 4876 or C.I. Advanced clinical practice in diagnostic radiography, radiation therapy, nuclear medicine, special procedures, and other diagnostic imaging.

RTE 4876

Clinical Education V: PR: C.I. Supervised clinical practice; emphasis on competency evaluation of routine radiographic examinations.

RTE 3000

Foundations of Broadcasting: Nature of the media, the mechanics of operation, history, economics, programming, and internal and external control.

RTE 3200

Broadcast Techniques: PR: RTV 3000. Introduction to the radio and television studio. Utilization of studio operating techniques and equipment (consoles, recorders, cameras, etc.) for use in educational and commercial broadcasting. Lab TBA.

RTV 3210

Radio Production: PR: RTV 3200 or C.I. The production of music (live and recorded), talk, interview, discussion, sports, and documentary including performance (talent and announcing) and direction.

RTV 3220

Television Production: PR: RTV 3200 or C.I. Emphasis on the coordination of talent, visuals, audio and lighting with the dramatic values of the presentation.

RTV 3231

Broadcast Announcing and Performance: PR: RTV 3200 or C.I. A study of communication problems on camera and microphone. Development of performance skills in announcing, interviewing, narrating, and reporting. Lab TBA.

RTV 3300


RTV 3501

Broadcast Continuity and Programming: PR: English proficiency examination. Preparation of written commercial copy for radio and television. Examination of program practices and traffic systems.

RTV 4206

Television Directing: PR: RTV 3220. Preparation and direction of programs with emphasis on dramatic values of composition. Typing skills required.

RTV 4402

Broadcast Criticism: PR: RTV 3000 for RTV majors; English proficiency examination. Evaluation and criticism of past and present radio and television programs, policies, and critics. Concentration on the problem of criteria development.

RTV 4403

Radio, Television and Society: PR: RTV 3000 for RTV majors. A study of the impact of electronic media upon the habits, customs and thinking of our times. Considerations of internal media problems.
RTV 4404 AS 3(3,0)
International Broadcasting: Comparative analysis of national broadcast systems. World broadcasting as a social, political and economic force.

RTV 4600 AS 4(3,1)
Non-Commercial Broadcasting: The uses of the electronic mass media for the dissemination of non-commercial programming. Public broadcasting and educational uses of the media.

RTV 4700 AS 3(3,0)
Regulation of Broadcasting: PR: RTV 3000. Federal, state, local and self-regulatory agencies and practices which govern electronic media.

RTV 4800 AS 3(3,0)
Broadcast Management: PR: RTV 4700. Consideration of broadcast management problems in station operations at the local, regional, and national levels.

RUS 1100 AS 4(4,1)
Elementary Russian Language and Civilization I: Designed to initiate the student to the major language skills: listening, speaking, reading, and writing.

RUS 1101 AS 4(4,1)
Elementary Russian Language and Civilization II: PR: RUS 1100 or equivalent. Continuation of RUS 1100.

RUS 2210 AS 4(4,0)
Intensive Russian Conversation: PR: One year of Russian or equivalent. Practical use of the language leading toward fluency and correctness in speaking.

RUS 2230 AS 4(4,1)
Intermediate Russian Language and Civilization I: PR: RUS 1101 or equivalent. Designed to continue development of language skills at the intermediate level, together with a review of grammar, idiomatic expressions, extensive reading, and study of Russian culture.

RUS 2231 AS 4(4,1)
Intermediate Russian Language and Civilization II: PR: RUS 2230 or equivalent. Continuation of RUS 2230 with emphasis on Russian civilization.

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.

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 4341 or C.I. Course objectives for a school curriculum and methods and materials.

SCE 5238 ED 3(3,0)

SED 3335 ED 3(2,2)
Speech Instruction Analysis: PR: EDG 4341 or C.I. Study of instructional programs in speech; objectives, materials, techniques, organization for instruction, evaluation procedures, current research.

SED 4371 AS 3(3,0)
Directing Extracurricular Speech Activities: Debate, extemporaneous speech and other speech events; selection and training of contestants, interschool and intramural speech activities.

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.

SLS 3301 ED 3(3,0)
Career Development Analysis: Analysis of job core areas. Community, state and federal information services, educational requirements and employment prospects in selected areas. Application and job interview techniques.

SOP 3004 AS 3(3,0)

SOP 3706 AS 3(3,0)
Television and Behavior: The influence of television viewing on such behaviors as scholastic achievement, aggression, prosocial behavior, sex-role and racial stereotypes, and consumer behavior.

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.
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, sex differences in personality and cognition.


Human Growth and Development: Development of skills in assessing an individual's biological, psychological and social development from birth to death, recognizing influences of culture and other environmental factors.

Assessing Individual Behavior: The development of social work skills in assessing individuals functioning at various life stages from major theoretical perspectives.

Assessing Human Systems: Development of skills in assessing families, groups, organizations and communities and their impact on human functioning and their potential for providing social support.

Social Welfare and Community Resources: Study of social welfare policies, programs and services, including socio-cultural, political, economic and historical forces affecting changes in societal responses to human needs.

Social Welfare Policy, Services, and Issues: PR: SOW 3203 or equivalent. Development of skills needed to critically analyze social welfare goals, structures and practices. Proposes improvements in societal resource systems.


Interpersonal Skills in Social Work Practice: Simulated practice of interviewing, group leadership, written communication, and oral presentations, in consensual as well as conflictual contexts of social work.

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.

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.

Agency Management: Basic administrative practice including planning, staffing, delegating, managing and developing personnel, monitoring services, budgeting and fund raising.

Evaluating Social Work Practice and Service Programs: PR: SYA 3301 or equivalent and SOW 3300. The study of systematic data collection and of measurement of change in individuals, families, groups, programs, and communities.

Field Education: PR: Completion of required courses in major; CR: SOW 4522. Supervised learning experiences in agencies which relate social work practice to theory, involving 420 clock hours in the field.

Field Education Seminar: PR: Completion of required courses in major; CR: SOW 4510. Weekly seminar to examine the field experience and to relate theory with practice situations.

Social Work in Health Settings: Study of social work roles, interventions, and issues related to helping patients in health settings.

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.

Social Services for the Elderly: Development of interventive skills for obtaining, providing, and improving social services in behalf of elderly persons and their families.

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.
Introduction to Communicative Disorders: Etiology, symptoms, and methods of diagnosing and treating communicative disorders. For beginning and prospective majors in communicative disorders.


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.

Physiological Bases of Speech and Hearing: PR: SPA 3001. An introduction to the anatomical, physiological, and physical elements underlying the communication process.

Basic Phonetics: Physiological descriptions and visual notation of speech patterns and regional dialects.

Basic Phonetics Laboratory: Students will have practical experiences in transcription of normal and deviant speech.


Clinical Methods in Communicative Disorders Laboratory: Students will have practical experience in analysis of live and videotaped diagnosis and therapy sessions.

Fundamentals of Speech and Hearing Science: Lectures and demonstrations in basic acoustics and speech acoustics.

Basic Audiology: 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.


Communicative Disorders: Articulation Laboratory: Students will have practical experience in diagnosis and treatment in articulation disorders.


Nonorganic Speech Disorders Laboratory: Students will have practical experience in diagnosis and treatment in nonorganic speech disorders.


Organic Speech Disorders Laboratory: Students will have practical experience in observations of organic speech disorders.


Augmentative Communications Systems: PR: LIN 3710, SPA 4030. Students will learn the rudiments of nonverbal communication systems, for example, Bliss, Rebus, Manual Signing, Language Boards, and finger spelling.


Communicative Disorders: Language Laboratory: Students will have practical experience in diagnosis and treatment in language disorders.

Practicum in Communicative Disorders.
Survey of Communicative Disorders: A survey of speech, language, and hearing disorders for habilitative personnel and other interested professionals.

Physiological Acoustics: PR: Graduate status or C.I. Lectures, readings and experiments pertaining to the subjective reception of sound.

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.

Fluency Disorders Laboratory: PR: Graduate status or C.I. Practical application of clinical skills in fluency disorders.

Differential Diagnosis of Auditory Disorders: PR: Graduate status or C.I. Clinical techniques in pure tone speech, acoustic impedance and electrophysiologic response audiometry.

Aural Habilitation/Rehabilitation: PR: C.I. Principles and procedures involved in speech and language acquisition management, utilization of residual hearing, speech reading and the use of hearing aids.

Therapeutic Communication: PR: Graduate status or C.I. Practical interviewing and counseling in the area of communicative disorders.

Differential Diagnostic in Speech and Language: PR: Graduate status or C.I. Administration and interpretation of evaluation techniques, including standardized tests, will be presented. Emphasis on techniques allowing for differential diagnosis of speech and language disorders.

Differential Diagnosis in Speech and Language Laboratory: PR: Graduate status or C.I. Assignment to diagnostic teams to apply the diagnostic techniques presented in SPA 5553. Experiences include test administration, interviewing, writing diagnostic reports, oral presentations.

Administration and Management of Communicative Disorders Programs: PR: Graduate status or C.I. Methods and techniques for organization and administration of speech-language and hearing disorders in public school, hospital, rehabilitation center and private practice facilities.

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.

Speech Improvement Laboratory: Individual and group practice for students with speech fright and delivery problems and for foreign students who need practice in oral English.

Fundamentals of Oral Communication: Use of the body and voice; participation in various speaking situations; planning, organizing, and delivering public speeches.

Voice and Articulation: An introduction for non-majors to the anatomy and speech production. Analysis of voice and articulation of each student. Exercise for individual improvement.

Speech and Human Relations: Introduction to semantics; symbols and meaning and the relationship with human behavior.

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.

Parliamentary Procedures: Principles and rules governing participation and leadership in the conduct of formal business meetings.

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.

Leadership Through Oral Communication: A theoretical and practical investigation of leadership in oral communication situations, principles of parliamentary law, and approaches to problem solving.

Argumentation and Debate: PR: SPC 1014 or C.I. Study and practice in the preparation and delivery of argumentative speeches emphasizing argument, evidence and organization.
SPC 3542  AS 3(2,1)
Persuasion: Motivation: PR: SPC 1014 or C.I. A study of motivational factors involved in persuasive speaking to secure belief and action.

SPC 3601  AS 3(1,2)
Advanced Public Speaking: PR: SPC 1014 or C.I. Advanced training in selecting and organizing materials for various types of speeches. Practice in thinking and speaking before audiences.

SPC 4330  AS 3(3,0)
Nonverbal Communication: Review of current behavioral research in such areas as proxemics, kinesics, physical characteristics, tactile communication and paralanguage. Lectures are supplemented by frequent nonverbal exercises.

SPC 4350  AS 3(3,0)
Studies in Listening: Analysis of current trends, professional literature, and resource materials bearing upon the teaching of listening. Practice in listening; preparing listening experiences; oral and written reports.

SPC 4440  AS 3(3,0)
Group Dynamics: A study of human behavior in group situations.

SPC 4540  AS 3(3,0)
Attitudes and Communication: PR: English proficiency examination. A survey of the immediate and direct ways in which persuasive communications and social groups come to influence attitudes.

SPC 4633  AS 3(3,0)
Rhetoric of Social and Political Action: PR: Junior standing. A critical investigation of social and political speaking within contemporary American society including agitative rhetoric of political dissent.

SPC 5200  AS 3(3,0)
Evolution of Communication Theory: General Survey: Major communication trends from classical era to the present. Comparison of Aristotelian and non-Aristotelian rhetorics. Contributions of principal figures will be discussed.

SPN 1100  AS 4(4,1)
Elementary Spanish Language and Civilization I: Designed to initiate the student to the major language skills: listening, speaking, reading, and writing.

SPN 1101  AS 4(4,1)
Elementary Spanish Language and Civilization II: PR: SPN 1100 or equivalent. Continuation of SPN 1100.

SPN 1170  AS 8(16,10)
Elementary Spanish Study Abroad: Elementary Spanish language and civilization taught in the native environment.

SPN 2210  AS 4(4,0)
Intensive Spanish Conversation: PR: One year of Spanish or equivalent. Practical use of the language leading toward fluency and correctness in speaking.

SPN 2230  AS 4(4,1)
Intermediate Spanish Language and Civilization I: PR: SPN 1101 or equivalent. Designed to continue development of language skills at the intermediate level.

SPN 2231  AS 4(4,1)
Intermediate Spanish Language and Civilization II: PR: SPN 2230 or equivalent. Continuation of SPN 2230 with emphasis on Spanish civilization.

SPN 2270  AS 8(16,10)

SPN 3240  AS 3(3,0)
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.

SPN 3420  AS 3(3,0)
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.

SPN 4410  AS 3(3,0)
Advanced Spanish Conversation: PR: SPN 3240. Advanced conversation on directed topics from various disciplines: Literature, art, psychology, philosophy, music, business and the sciences.

SPN 4420  AS 3(3,0)
Advanced Spanish Composition: PR: SPN 3420. Readings and written imitations of modern literary styles in the form of themes, sketches, poems and original stories.

SPN 4450  AS 3(3,0)
Stylistics: PR: SPN 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.

SPN 4510  AS 3(3,0)
Spanish Civilization and Culture: PR: SPN 3240 or SPN 3420. A study of Spanish civilization and culture from Pre-Roman times to the present. Conducted in Spanish.
Latin American Civilization and Culture: PR: SPN 3240 or SPN 3420. An overview of the currents in Latin American culture and civilization from the Pre-Columbian period to the present. Conducted in Spanish.

Survey of Spanish Literature I: PR: SPN 2231 or equivalent. Main literary currents and works from the Middle Ages through the Eighteenth Century.

Survey of Spanish Literature II: PR: SPN 2231 or equivalent. Main literary currents and works of the Nineteenth Century to the present.

Survey of Latin-American Literature I: PR: SPN 2231 or equivalent. Main literary currents and works from the colonial period to the Nineteenth Century Romanticism.

Survey of Latin-American Literature II: PR: SPN 2231 or equivalent. Main literary currents and works of the Nineteenth Century from the Realism to the present.

Spanish Short Story: PR: SPN 2231 or equivalent. A study of representative 19th and 20th Century Spanish short stories and their authors.


Nineteenth Century Spanish Literature: PR: SPW 3101. A study of the representative authors and works in Spanish Romanticism, Realism and Naturalism.

Twentieth Century Spanish Literature: PR: SPW 3101. A study of the representative authors and works in drama and the novel.


Cervantes II: PR: SPW 3100. Don Quixote (Part II).


Teaching Social Science in the Elementary School: PR: Admission to Phase II or C.I. Selected themes, problems, and concepts; organizing for instruction; techniques; evaluation procedures.

Social Science Instructional Analysis: PR: EDG 4341 or C.I. Study of instructional programs in Social Sciences; objectives; materials; techniques; organization of instruction; evaluation procedures; current research.

Inquiry in the Social Studies: PR: Regular Certificate or C.I. Teaching by inquiry in the new social studies with a development of inquiry episodes.

Law Education Studies Materials: PR: Senior standing or C.I. Design, organization and development of educational materials relating constitutional law concepts to citizenship education for schools.

Science Fiction and the Social Sciences: A multi-media examination of note-worthy science fiction from the Social Science perspective.


Statistical Methods I: PR: MAC 1104 or MGF 1202. First methods course introducing probability and statistical inference including estimation, hypothesis testing, binomial and normal distributions, sample size.

Probability and Statistics for Engineers: PR: MAC 3313 and COP 3215. Axioms of probability; combinatorial and geometrical probability; probability distributions; measures of location and dispersion; sampling and sampling distributions; estimation and tests of hypotheses; engineering applications.

Statistical Quality Control: PR: STA 3023 or STA 3032. Statistical concepts and methods applied to the control of quality of manufactured products.
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: PR: STA 3023 or STA 3032. Introduction to the application of statistical principles and methods to problems in medical, biological and health sciences.

STA 4202 AS 3(3,0)


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 4442 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 5156 EN 4(4,0)

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 5206 AS 3(3,0)

Statistical Analysis: PR: A course in statistical methods and a course in mathematical statistics or C.I. This course relates the ideas of probability and statistics, including distribution theory, to the collection and analysis of data.

SUR 3101C EN 3(2,3)

Surveying: PR: MAC 3311 and Junior standing. Theory and field practice in surveying measurements, and the reduction and adjustment of field data.

SYA 3110 AS 3(3,0)

The Development of Social Thought: PR: SYG 2000. An overview of theories concerning the nature of man as a "social being." The nature of society from the beginnings of the scientific study of man's life to World War II.

SYA 3120 AS 3(3,0)

Modern Sociological Thought: PR SYG 2000. A study of major European and American contributors to modern sociology since World War II.

SYA 3300 AS 4(3,1)


SYA 3301 AS 3(2,1)


SYA 3400 AS 4(3,1)

Research Methods and Statistics: PR: SYG 2000 and one other sociology course.

SYA 4350 AS 4(2,2)

Social Research Practicum: PR: SYA 4450 and C.I. Application of advanced research designs and data analysis techniques to assigned projects, with an emphasis on data management.

SYA 4450 AS 4(3,1)

Data analysis: PR SYA 3300 and a statistics course.

SYA 4650 AS 3(3,0)


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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYD 3410</td>
<td>Urban Sociology: PR: SYG 2000. Historical roots of urbanization. Analysis and impact of community change on social organizations in modern industrial societies.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYD 3700</td>
<td>Race and Ethnic Minorities in the United States: Theoretical analysis of the emergence, maintenance and disruption of patterns of racial and ethnic stratification.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYD 3730</td>
<td>Afro-American Social Problems: Current Afro-American social problems in the United States.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYD 3700</td>
<td>Sex Roles in Modern Society: The traditional and changing roles of women and men viewed in a cross-cultural perspective.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYD 4020</td>
<td>Population: Concerned with the study of human population, its distribution, composition and change.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYD 4680</td>
<td>Soviet Sociology: Analysis of relations of various Soviet institutions such as education, religion, and the Communist party to society; class structure and social problems.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>General Sociology: Introduction to the sociological perspective and the scientific study of sociological concepts, theories, processes, and methods used in understanding contemporary human behavior in group interaction.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYG 3010</td>
<td>Social Problems: Analysis of major social problems such as mental disorders, sexual deviance, racial discrimination, poverty, community disorganization, and violence.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 3000</td>
<td>Social Institutions: PR: SYG 2000. The application of general sociological principles, theories, and elements to the major social institutions of modern society.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 3300</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 3410</td>
<td>Sociology of Mental Illness: A sociological examination of mental illness as a social problem; legal aspects of mental illness, and the mental health professions.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 3530</td>
<td>Social Stratification: PR: SYG 2000. Study of class, status and power, cultural variations in stratification systems; patterns of mobility and change.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 4100</td>
<td>The Family: PR: SYG 2000. The family viewed functionally as a distinct social and cultural complex in the contemporary United States. Topics include: mate selection, marriage, adjustment, parenthood, post marriage.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 4250</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 4300</td>
<td>Political Sociology: Sociological analysis of political and parapolitical groups; socioeconomic variable of voting behavior, power elites; societies and systems of government.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYO 4370</td>
<td>Sociology of Occupations and Professions: An examination of occupations and professions from the sociological perspective. Emphasized are professional and occupational socialization, marginality and choice as well as women and work.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYP 3300</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYP 3400</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYP 3400</td>
<td>Social change: A Historical and Theoretical Approach: PR: SOC 2000. Concerned with the context and essential sources of social development and change.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYP 3510</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>SYP 3520</td>
<td>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.</td>
<td>AS 3(3,0)</td>
</tr>
</tbody>
</table>
Juvenile Delinquency: Types of delinquency behavior found among juveniles; possible causes and ways society attempts to treat the various forms of delinquency.

Sociology of Alcoholism: Introduction to the nature of alcoholism and review of its impact on society.


Sociology of Drug Abuse: Analysis of the socio-culture elements of the drug culture.

Sociology of Aging: Sociological aspects of aging in America.

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.

Federal Income Tax I: PR: Junior standing and ACG 3113 with a grade of "C" or better or C.I. Concepts and methods of determining taxable income of individuals, and selected topics.

Federal Income Tax II: PR: Tax 4001 and meet departmental admission requirements. Concepts and methods of determining taxable income for partnerships and corporations; and selected topics.


Cinema Survey: A broad cultural approach to cinema as theatre.

Theatre Practicum I: Open to all students interested in participating in productions of University Theatre. May be repeated for credit. Primarily an activity course.

Theatre History I: Development of theatre art from the earliest times through the seventeenth century.

Theatre History II: Development of theatre art from the seventeenth century to the twentieth century.

History of the Motion Picture: Development of the film industry; its social and economic impact. Major films and trends in context.

Theatrical Costume History and Design: History and theory of theatrical costumes.

Drama Development I: Study of dramatic literature from the Greek theatre through the seventeenth century.

Drama Development II: A study of dramatic literature from the 18th through 20th centuries. Continued of THE 3312.

Modern Drama: Drama from Ibsen to Theatre of the Absurd, with reference to developing production styles and dramatic movements.

Theatre Practicum II: PR: THE 2925 and C.I. Primarily an activity course. Student will serve in some position of responsibility in production. May be repeated for credit.

Principles of Motion Picture Art: PR: THE 3251 or C.I. Aesthetic consideration of the motion picture as art. May be repeated for credit.

Film Production: PR: C.I. Professional 16mm film production, scripting, production, sound, and editing of theatre department ensemble films. May be repeated twice.

Modern Motion Picture Technique: PR: THE 3251 or C.I. An examination of the techniques of motion picture as art; directing, acting, editing, writing, cinematography.

Broadway and Regional Theatre Trends: An examination of the influences of the American drama and theatre. Trends in theatrical production and dramatic types.

Contemporary Theatre and Drama: Trends in theatrical production and dramatic literature in Italy, France, Germany, Russia and the Scandinavian countries.
THE 4800 AS 3(2,2)
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 2082 AS 3(2,2)

Stage Properties: Design, construction, operation, and management of stage properties.

TPA 2210 AS 3(2,2)


TPA 3060 AS 3(2,2)

Scene Design I: PR: THE 1020, TPA 2210. Study of and practice of scene design; perspective drawing, fundamentals of design, and techniques of scene painting. (Service on crew as required).

TPA 3220 AS 3(2,2)

Stage Lighting: PR: THE 1020 and TPA 2210. Study of stage lighting techniques, practices, and equipment. (Service on light crew as required).

TPA 3221 AS 3(2,2)

Lighting Design: PR: TPA 3220. Continuation of Stage Lighting with emphasis on theory, style and individual lighting design projects.

TPA 3230 AS 3(2,2)

Theatrical Costume Construction and Technique: A continuation of THE 3260 in which emphasis is placed on design and construction, planning, and execution of costumes.

TPA 3250 AS 3(2,2)

Make-up Technique: Analysis and design of stage make-up.

TPA 3400 AS 3(2,2)

Theatre Management: Study of the development, organization, management, funding, and promotion of Theatre programs.

TPA 4061 AS 3(2,2)

Scene Design II: PR: TPA 3060, 3220. A continuation of TPA 3060 in which the emphasis is placed on independent planning and execution of scene designs.

TPP 2110 AS 3(2,2)

Acting I: Emphasis on movement, motivation, voice, characterizational techniques, makeup, and other basic requirements for acting.

TPP 3111 AS 3(2,2)

Acting II: PR: TPP 2110 or C.I. Continuation of TPP 2110. May be repeated for credit.

TPP 3130 AS 3(2,2)

Classical Mime: PR: TPP 2110 or C.I. Introduction to the art of mime with an emphasis on mask work and illusion.

TPP 3310 AS 3(2,2)

Directing I: Fundamental principles of theatrical directing. Each student is required to direct short scenes for laboratory presentation and criticism.

TPP 3700 AS 3(2,2)

Stage Diction: The role of the voice in the art of acting through practice in vocal characterization.

TPP 4220 AS 3(2,2)

Audition Techniques: Preparation of audition material for musical, dinner, outdoor and repertory theatres, as well as graduate schools. Emphasis on resumes and unions.

TPP 4260 AS 3(2,2)

Acting III: PR: TPP 2110 or C.I. Preparation for professional level work through studio work and field trips. Emphasis on resumes, composites, unions, and audition techniques for the medium.

TPP 4311 AS 3(2,2)

Directing II: PR: TPP 3310. Further theories and techniques of play direction, study of dramatic values, plot structure, style, mood, composition, and directing approach.

TPP 4530 AS 3(2,2)

Stage Combat: PR: TPP 2110 or C.I. Introduction to staged fight sequences from plays. Both armed and unarmed work will be explored.

TTE 4004 EN 3(3,0)

Transportation Engineering: PR: EGN 3613 or 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 4434 EN 1(0,2)

Urban Systems Design. PR: TTE 4004. Project course on design of transportation and urban systems using engineering design methodologies.

TTE 5204 EN 3(3,0)

Traffic Engineering: PR: STA 3032. Study of operator and vehicle characteristics, and design for street capacity, signals, signs and markings.

TTE 5720 EN 3(3,0)

Geometric Designs of Transportation Systems: PR: TTE 4004. Study of geometric and construction design elements in the engineering of transportation systems.
URP 4026
Community Planning and Development: Contemporary planning concepts, roles of the planning practitioner, and the influence of the political, economic, and social environments on public and quasi-public agencies.

VIC 3000
Visual Communication: A study of the visual system of man, and the influences of the visual media on modern society.

VIC 3001
Photo Communication: Photography as a communication device; use of still camera; basic photographic technique. Open to all majors.

ZOO 1020
Biology of Man: An introduction to man as a member of the animal kingdom; his taxonomy, anatomy, growth, reproduction, development, heredity, evolution, behavior, diseases, and population growth.

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 3003C
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 3130C
Comparative Vertebrate Anatomy: PR: ZOO 2010C. The vertebrate animals; relationship of organs and systems; and their phylogentic significance.

ZOO 3131C
Human Anatomy: PR: BSC 2010C or equivalent. Structure of the human body. Not open to students in ZOO 3131 or equivalent.

ZOO 3750C
Vertebrate Histology: PR: ZOO 2010C. Anatomy, structure and function of major cell types and tissues.

ZOO 4203C
Invertebrate Zoology: PR: 8 hours of biology or C.I. Taxonomy, anatomy and ecology of the invertebrate animals.

ZOO 4603C

ZOO 4800C
Fisheries Management: PR: ZOO 2010C or C.I. Fisheries Management of freshwater environments to include identification, sampling methods, framing and hatchery operations, propagation and population estimates.

ZOO 5450C
Ichthyology: PR: ZOO 3303C or C.I. Introduction to the biology of the fishes, their classification, evolution and life histories.

ZOO 5460C
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 5470C
Ornithology: PR: 6 hours of zoology or C.I. Introduction to the biology of birds, their classification, evolution and life histories.

ZOO 5480C
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.

ABBERT, DAVID W., *Professor of Psychology*
(1968), B.A., M.S., Ph.D. (University of Massachusetts)

ABEL, EILEEN M., *Assistant Professor of Social Work*
(1978), A.B., M.S.W. (University of Maryland)

ABRAMOWITZ, BENJAMIN L., *Visiting Instructor of Management*

ACIERNO, LOUIS J., *Associate Professor of Public Health*
(1981), B.S., M.D. (Georgetown University)

ADICKS, RICHARD, *Professor of English*
(1968), B.A.E., M.A., Ph.D. (Tulane University)

ALEXANDER, GEORGE JR., *Assistant Professor of Military Science*
(1981), B.S., M.S., M.B.A. (Central Michigan University)

ALIDINA, MOHAMED, *Assistant Professor of Accounting*
(1983), B.S., M.B.A., M.A., Ph.D. (Temple University)

ALLEN, JEFFREY W., *Visiting Instructor of Hospitality Management*
(1983), B.S.B.A., M.B.A. (University of Central Florida)

ALLEN, WILLIAM D., *Professor of Sociology*
(1969), B.S., M.S.W., Ph.D. (Ohio State University)

ANDREWS, LARRY C., *Professor of Mathematics*
(1972), B.S., M.S., Ph.D. (Michigan State University)

ANTHONY, JOBY M., *Associate Professor of Mathematics*
(1970), B.S., M.A.M., Ph.D. (North Carolina State University)

ARMSTRONG, JOHN H., *Associate Professor of Education*
(1970), B.S., M.S., Ed.D. (Oklahoma State University)

ARMSTRONG, LEE H., *Associate Professor of Mathematics*
(1968), B.S., M.S., Ph.D. (Florida State University)

ARNOLD, ROBERT L., *Director of Instructional Resources and Professor of Communication*
(1968), B.A., M.A., Ph.D. (Ohio University)

ATKINSON, STANLEY M., *Assistant Professor of Finance*

AVERY, CLARENCE G., *Professor of Accounting*

BABU, ADDAGATLA J.G., *Visiting Assistant Professor of Engineering*
(1983), B.S., M.S., M.A., Ph.D. (Southern Methodist University)

BAKER, GRETHE L., *Professor of Chemistry*
(1968), B.S., M.S., Ph.D. (Montana State University)

BARNES, BETH, *Assistant Dean, Undergraduate Studies and Assistant Professor of English*
(1975), B.A., M.A., Ph.D. (University of North Carolina at Chapel Hill)

BARR, CAROL J., *Instructor of Medical Record Administration*
(1980), B.S., RRA (Florida Technological University)

BARR, MURRAY P., *Assistant Professor of Mathematics*
(1968), B.S., M.S. (Adelphi University)

BARR-JOHNSON, VIRGINIA, *Professor of Education*
(1971), B.A., M.Ed., Ph.D. (Florida State University)

BARSCH, KARL-HEINRICH, *Assistant Professor of Foreign Languages*
(1977), B.A., M.A., Ph.D. (University of Colorado)

BASSIOUNI, MOSTAFA, *Assistant Professor of Computer Science*
(1981), B.S., M.S., Ph.D. (Pennsylvania State University)
BAUER, CHRISTIAN S., JR., Acting Chairman, Department of Industrial Engineering and Management Systems and Professor of Engineering, Acting Director, Institute for Simulation and Training (1970), B.S.I.E., M.S.E., Ph.D (University of Florida), P.E. (Florida)

BEADLE, JAMES S., Associate Professor of Education (1968), B.S., M.S., Ph.D. (Michigan State University)

BECK, BARRY F., Associate Professor of Engineering Science and Director, Florida Sinkhole Research Institute (1983), B.S., M.S., Ph.D. (Rice University), P. Geol. (Georgia)

BECK, JAMES K., Associate Professor of Engineering (1970), B.S.A.E., M.S.E. (University of Central Florida), P.E. (Florida)

BECKER, DONALD C., Assistant Professor of Public Service Administration (1976), B.A., M.Ed. (Wayne State University)

BELKERDID, MADJID A., Instructor of Engineering (1979), B.S.E., M.S.E. (University of Central Florida), P.E. (Florida)

BERINGER, ORVILLE M., Preprofessional Coordinator and Professor of Biological Sciences (1981), B.S., M.S., Ph.D. (University of Oregon)

BERRY, WALDRON, Associate Professor of Management (1970), B.S., A.M., M.B.A., Ph.D. (University of Florida)

BIEGEL, JOHN E., Professor of Engineering (1982), B.S.I.E., M.S.E.S., Ph.D. (Syracuse University), P.E. (New Mexico)

BIRD, ROBERT C., Associate Professor of Education (1971), B.S., M.Ed., Ph.D. (Florida State University)

BISHOP, PATRICIA J., Associate Professor of Engineering (1978), B.S.E., M.S.M.E., Ph.D. (Purdue University), P.E. (Florida)

BLAU, BURTON I., Associate Professor of Psychology (1972), B.A., M.A., Ph.D. (Southern Illinois University)

BLEDSOE, CAROL C., Instructor in Communications (1970), B.S., M.A. (University of Oklahoma)

BLEDSOE, ROBERT L., Associate Professor of Political Science (1968), A.B., M.A., Ph.D. (University of Florida)

BLOCK, DAVID L., Director, Florida Solar Energy Center and Professor of Engineering (1969), B.S., M.S., Ph.D. (Virginia Polytechnic Institute), P.E. (Florida)

BLUME, DELORYS M., Assistant Professor of Education (1972), B.S., M.A., Ed.S., Ed.D. (University of Florida)

BOGUMIL, WALTER A., JR., Assistant Professor of Management (1972), B.S., M.B.A., Ph.D. (University of Georgia)

BOLEMON, JAY S., Associate Professor of Physics (1968), B.S., Ph.D. (University of South Carolina)

BOLLET, ROBERT M., Assistant Professor of Education (1973), B.S., M.S., Ed.D. (Ball State University)

BOLTE, JOHN R., Associate Vice President for Academic Affairs and Professor of Physics (1968), B.A., M.A., M.S., Ph.D. (State University of Iowa)

BONDOURANT, FRANK B., Instructor in Management (1979), B.S., M.B.A. (Harvard University)

BOONE, LOUIS E., Professor of Marketing (1979), B.S., M.S., Ph.D. (University of Arkansas)

BOSTON, RALPH C., Director of High School & Community College Relations (1967), B.S., Ed.M. (University of Buffalo)

BRADLEY, CHARLES W., Chairman, Department of Aerospace Studies and Professor of Aerospace Studies (1983), B.S., M.S., Ph.D. (St. Louis University)

BRENNAN, DAVID C., Visiting Assistant Professor of Public Service Administration (1983), B.S., J.D. (University of Florida)

BRENNAN, JOHN J., Associate Professor of Physics (1968), B.S., M.S., Ph.D. (Georgia Institute of Technology)

BRIGHAM, ROBERT C., Associate Professor of Mathematics and Computer Science (1970), B.S., M.S., Ph.D. (New York University)
BRINSON, Verna G., Associate Professor of Nursing (1980), B.S., M.S.N., J.D. (U.C.L.A.)

BROOKS, George H., Professor of Engineering (1982), B.I.E., M.S.I.E., Ph.D. (University of Florida), P.E. (Alabama)

BROPHY, James C., Associate Professor of Psychology (1969), B.A., Ph.D. (Vanderbilt University)

BROWN, WILLIAM R., Chairman, Department of Sociology and Anthropology and Professor of Sociology (1972), B.S., M.S., Ph.D. (Purdue University)

BRUMBAUGH, DOUGLAS K., Professor of Education (1969), B.S., M.Ed., Ed.D. (University of Georgia)

BROOKS, George H., Professor of Engineering (1982), B.I.E., M.S.I.E., Ph.D. (University of Florida), P.E. (Alabama)

BUCHANAN, Raymond W., Jr., Chairman, Department of Communication and Professor of Communication (1970), B.A., M.A., Ph.D. (Louisiana State University)

BULLARD, Barry D., Assistant Professor of Engineering Technology (1977), B.E.E.T., M.T. (Georgia Southern College), P.E. (Florida)

BURNETTE, Charles D., Instructor in Management (1980), B.S., M.B.A. (Northwest Missouri State University)

BURR, D. E. Scott, Assistant Professor of Psychology (1972), B.A., M.A., Ph.D. (University of Colorado)

BURROUGH, WAYNE A., Professor of Psychology (1969), B.A., M.A., Ph.D. (University of Tennessee)

BUTLER, Daniel L., Instructor of Marketing (1982), B.S.B.A., M.B.A. (University of Central Florida)

BUTLER, John F., Assistant Professor of Communication (1971), B.A., M.A. (University of Central Florida)


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LEE, CHANG C., Head, Circulation Department and University
Librarian
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LINSLEY, LAURIE, Associate University Librarian
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LLOYD, LUCILLE, Associate University Librarian
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MAHAN, CHERYL G., Associate University Librarian
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McELHANEY, PAMELA P., Assistant University Librarian
(1981), B.A., M.L.S. (University of Tennessee)

PFARRER, THEODORE R., Associate University Librarian
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RONDESTVEDT, HELEN, Visiting Instructor Librarian

ROSSI, PETER, Head, Cataloging Department and Associate
University Librarian
(1973), A.B., M.L.S. (State University of New York at Genesco)

ST. CLAIR, NORBERT, Associate University Librarian
(1968), B.M.S., B.A., M.L.S. (Western Michigan)

STILLMAN, JUNE A., Head, Reference Department and University Librarian
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YOUNG, JUDY, Associate University Librarian
(1979), B.A., M.A. (Florida State University)

EMERITUS

WALKER, LYNN W.
(1967), B.A., M.A. (Florida State University)
Director of Libraries Emeritus

FACULTY WITH EMERITUS STATUS

BROWNE, ROLAND A.
(1968), B.A.M.A., C.E.F. (Queen's University, Canada)
Professor Emeritus of English

CRAIG, ALBERT
(1970), B.S., M.A., Ed.D. (Florida State University)
Professor Emeritus of Education
HUBLER, J. W.  
(1967), B.S.C.E., C.E., M.S.E., M.S.C.E. (Yale University), P.E. (Florida and 18 other states)  
Professor Emeritus of Engineering Technology

LYTLE, ERNEST J.  
(1968), B.S., M.A., Ph.D. (University of Florida)  
Professor Emeritus of Mathematical Sciences

FOWLER, EARL C.  
Professor Emeritus of Education

McLELLON, WALDRON M.  
(1969), B.S., B.C.E., M.C.E., M.S. (Physics), M.S. (Env.Engr.), Ph.D. (Rensselaer Polytechnic Institute)  
Professor Emeritus of Engineering

MILLICAN, CHARLES N.  
(1965), B.S., M.A., Ph.D. (University of Florida)  
President Emeritus

REIDENBACH, RICHARD C.  
Professor Emeritus of Management

WRIGHT, BURTON  
(1970), B.S., M.S., Ph.D. (Florida State University)  
Professor Emeritus of Sociology

HONORARY DEGREES AWARDED

December, 1969  Kurt H. Debus, Doctor of Engineering Science
December, 1969  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
August, 1980  Howard Phillips (Posthumous), Doctor of Public Service
August, 1980  Thelma Dudley, Doctor of Humanities
December, 1981  Gene Burns, Master of Letters
April, 1982  John, Ferdinand, and Andrew Duda, Doctor of Agricultural Service
April, 1982  Robert J. Whalen, Doctor of Engineering Science
July, 1982  William E. Davis and Mary Jo Stroud Davis, Doctor of Public Service
December, 1982  Joseph A. Boyd, Doctor of Engineering Science
April, 1983  J. W. Hubler, Doctor of Engineering Science

COURTESY APPOINTMENTS

ALBERT, JONATHON C., RRT, Clinical Faculty, Respiratory Therapy  
B.S. (University of Central Florida)

ALEXANDER, GREGOR, Clinical Faculty, Respiratory Therapy  
M.D. (Javeriana University)

ARIA, DORALYS, Clinical Faculty, Public Health  
M.D. (University of Miami School of Medicine)

BALDWIN, ERIKA, Clinical Faculty, Medical Record Administration  
RRA, B.S. (Florida Technological University)

BLEAKNEY, DAVID A., Clinical Faculty, Respiratory Therapy Program  
B.S., RDMS (Florida Technological University)

BLITCHINGTON, W. PETER, Clinical Faculty, Public Health  
Ph.D. (George State University)

BOARDMAN, WILLARD H., Clinical Faculty, Respiratory Therapy Program,  
M.D. (University of Buffalo, School of Medicine)

BONDER, CHERIE B., Clinical Faculty, Radiologic Sciences  
R.T., (R), (ARRT) (Florida Hospital)
HEINLEIN, CLARENCE, Clinical Faculty, Radiologic Sciences
R.T., (R), (ARRT) (Florida Hospital)

HESS, JOHN C., RRT, Clinical Faculty, Respiratory Therapy
B.S. (University of Central Florida)

HINKLE, LEWIS O., Clinical Faculty, Radiologic Sciences
RT, (ARRT), B.S. (Alderson Broaddus College)

HOLCOMB, RODNEY F., Clinical Faculty, Medical Technology
M.D. (Tulane University)

HOLIMON, JAMES L., Clinical Faculty, Medical Technology
M.D. (Medical College of Virginia)

JACKSON, BARBARA, Clinical Faculty, Medical Record Administration
RRA, B.S. (Florida Technological University)

JOHNSTON, LARRY, Clinical Faculty, Radiologic Sciences
R.T., (R), (ARRT) (Kettering Memorial Hospital)

KALE, HERBERT W., II, Adjunct Assistant Professor of Biological Sciences
Ph.D. (University of Georgia)

KARUNARATNE, HARISCHANDRA B., Clinical Faculty, Respiratory Therapy Program
M.D. (University of Ceylon)

KARSON, PATRICK J., Clinical Faculty, Respiratory Therapy Program
D.O. (College of Osteopathic Medicine and Surgery)

KERMAN, HERBERT D., Clinical Faculty, Radiologic Sciences
M.D. (Duke University)

KLOTZ, SOL D., Adjunct Professor of Biological Sciences and
Clinical Faculty, Respiratory Therapy
B.S., M.S., M.D. (New York Medical College)

KRONMAN, BARRY S., Clinical Faculty, Communicative Disorders
A.B., M.D. (New York University)

LIPMAN, BRIAN, Clinical Faculty, Respiratory Therapy
F.C.P. (College of Medicine of South Africa)

LOBER, CLIFFORD W., Clinical Faculty, Respiratory Therapy
M.D. (Duke University)

MANOUCHERI, MANOUCHER, Clinical Faculty, Public Health
M.D. (Loma Linda University)

MATTI, E. L., Jr., Clinical Faculty, Public Health
B.S., M.D., M.P.H. (Jefferson Medical College)

MAURER, DAVID A., Clinical Faculty, Medical Technology
M.D. (Tulane University)

McANDREW, MIKE, CRRT, Clinical Faculty, Respiratory Therapy
A.A., A.S. (Daytona Beach Community College)

McDONALD, MALCOLM H., Clinical Faculty, Public Health
M.D. (Chicago College of Osteopathic Medicine)

McGALLIARD, RUTH, Clinical Faculty, Medical Record Administration
RRA, B.S. (Medical College of Georgia)

McGARRY, JOHN F., Clinical Faculty, Public Health
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McGEE, CARLA F., Clinical Faculty, Medical Technology Program
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RRA

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R.T., (R), (ARRT)

MILLER, RUSSELL A., Clinical Faculty, Public Health
M.A. (East Tennessee State University)

MOORES, LINDA, Clinical Faculty, Medical Record Administration
ART

MORGAN, DEBORAH, Clinical Faculty, Medical Record Administration
RRA, B.S. (Florida Technological University)

MOSELEY, PATTERSON W., Clinical Faculty, Respiratory Therapy
M.D. (Louisiana State University)
NOCERO, MICHAEL A., JR., *Clinical Faculty, Respiratory Therapy Program*
M.D. (New York University College of Medicine)

NORMAN, BARBARA K., *Clinical Faculty, Medical Technology*
B.S. (North Georgia College)

OHMAN, JOHN A., *Clinical Faculty, Public Health*
Pharm.D. (Mercer University)

PENTELLA, MICHAEL A., *Clinical Faculty, Medical Technology Program*
B.S., M.S. (Thomas Jefferson University)

PHILLIPS, HANCE C., *Clinical Faculty, Communicative Disorder*
B.A., M.D. (Northwestern University)

PRITCHARD, PETER C. H., *Adjunct Assistant Professor of Biological Sciences*
B.A., M.A., Ph.D. (University of Florida)

PYLES, VALORIE K., *Clinical Faculty, Medical Technology Program*
A.A., B.S MT(ASCP) (University of South Florida)

ROBERTS, W.J., JR., *Clinical Faculty, Medical Technology Program*
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ROGERS, PATRICIA W., *Clinical Faculty, Medical Technology*
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ROGERS, ROBERT L., JR., RRT, *Clinical Faculty, Respiratory Therapy*
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ROLLIE, ORRIS O., *Clinical Faculty, Public Health*
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ROSENBERG, STEVEN, *Clinical Faculty, Respiratory Therapy Program*
M.D. (Downstate Medical School)

ROTH, DAVID, *Clinical Faculty, Respiratory Therapy*
B.S. (State University of New York of Stony Brook)

SAGERT, REBA, *Clinical Faculty, Medical Record Administration*
RRA

SCHMIDT, DONALD H., *Clinical Faculty, Respiratory Therapy Program*
M.D. (University of Wisconsin)

SCHWARTZ, ARTHUR, *Clinical Faculty, Radiologic Sciences*
M.D. (University of State of New York)

SCHWARTZ, KERRY M., *Clinical Faculty, Respiratory Therapy Program*
M.D. (Emory University)

SCOTT, MEREDITH LEE, *Clinical Faculty, Respiratory Therapy Program*
M.D. (University of Florida Medical School)

SECO, JOSE E., *Clinical Faculty, Respiratory Therapy*
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SIDIQUI, SABIHA SALAHUDDIN, *Clinical Faculty, Public Health*
M.D. (Osmania University, Hyderabad, India)

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