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

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Volume 20, Number 1

May 1987

Cover photo: Richard Spencer
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Director, Evening/Weekend and
Area Campus Student Services .................................................................................... Jimmy Watson
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Director, International Student Services ...................................................................... N. D. Hoan
Director, Recreational Services ................................................................................... Loren Knutson
Director, Student Center/Student Organizations ........................................................... Jimmie Ferrell
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Assistant Dean ................................................................................................. Lee A. Armstrong
Assistant Dean ................................................................................................. Kathryn L. Seidel
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Chair, Biological Sciences ........................................................................... Franklin Snelson
Chair, Chemistry ............................................................................................ Guy C. Mattson
Chair, Communication .................................................................................. James W. Welke
Chair, Computer Science ............................................................................. Amar Mukherjee
Chair, English .................................................................................................. Stuart Omans
Chair, Foreign Languages ............................................................................. Armando Payas
Chair, History .................................................................................................. Jerrell H. Shofner
Chair, Humanities, Philosophy, and Religion .............................................. Paul E. Riley
Chair, Mathematics ........................................................................................ Lokenath Debnath
Chair, Music .................................................................................................... Bruce A. Whisler
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Chair, Political Science .................................................................................. Joyce R. Lille
Chair, Psychology ........................................................................................... Richard D. Tucker
Chair, Public Service Administration ............................................................ Raymond A. Shapek
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Chair, Social Work ........................................................................................ K.J. Kazmerski
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Chair, Theatre ................................................................................................. Harry W. Smith, Jr.

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Associate Dean .............................................................................................. Wallace W. Reiff
Assistant Dean ............................................................................................... Wade R. Kilbridge
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Chair, Economics ........................................................................................... Brian Rungeling
Chair, Finance ................................................................................................ David R. Klock
Chair, Hospitality Management .................................................................... Abraham Pizam
Chair, Management ......................................................................................... Halsey R. Pizam
Chair, Marketing ............................................................................................. Alvin C. Burns
College of Education

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Chair, Educational Services ..................... John W. Powell
Chair, Educational Foundations ............. William K. Esler

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Chair, Electrical Engineering & Communication Sciences ........... Nicolaos S. Tzannes
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Chair, Engineering Technology ............... Richard G. Denning

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Director, Medical Record Administration ......... Lynda Kuyper
Director, Medical Laboratory Sciences .......... Marilyn Kangelos
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Director, Radiologic Sciences ..................... Thomas Edwards III
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**Greek Housing**

**Admissions**

**Faculty**

**Prof. Staff**

**Staff**

**Student**

**Handicapped**

**Dormitories**

**Room 23**

**Vailltor**

**Partdng**

**MAP NO. BUILDING NAME**

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**PARKING LOT CODES**

- A: Administration
- B: Faculty & Prof. Staff
- C: Staff
- D: Student
- H: Handicapped
- R: Dorm Residents
- 23: Visitor Parking

**PARKING RESTRICTIONS**

- Apply from 8 am to 8 pm in most lots; check posted times for later deadline

**MAP NO. BUILDING NAME**

- 38, 39: Athletics
- 20: Biological Sciences (BL)
- 17: Campus Police
- 22: Central Receiving/Print Shop
- 6: Chemistry (CH)
- 33: Commons
- 13: Computer Center I (CCII)
- 29: Computer Center II (CCII)
- 24: Creative School for Children
- Dormitories
- 30: Brevard Hall
- 9: Lake Hall

**Campus Map**
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<td>Last day for receipt of readmission applications.</td>
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</tr>
<tr>
<td>August 17-20</td>
<td>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.</td>
</tr>
<tr>
<td>August 24</td>
<td>Academic year and classes begin.</td>
</tr>
<tr>
<td>August 26</td>
<td>Last day to adjust class schedule (end of Add/Drop)</td>
</tr>
<tr>
<td>August 26</td>
<td>Last day to submit Grade Forgiveness Request</td>
</tr>
<tr>
<td>August 26</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>August 28</td>
<td>Last day for refund</td>
</tr>
<tr>
<td>August 28</td>
<td>Registration deadline for CLAST to be given September 26, at designated locations.</td>
</tr>
<tr>
<td>August 28</td>
<td>Last day to apply for graduation for those completing requirements end of Fall Semester.</td>
</tr>
<tr>
<td>August 31</td>
<td>Only day to submit audit request</td>
</tr>
<tr>
<td>September 7</td>
<td>Labor Day Holiday (University-wide)</td>
</tr>
<tr>
<td>September 25</td>
<td>Last day for removing temporary student status</td>
</tr>
<tr>
<td>September 26</td>
<td>CLAST given at designated locations.</td>
</tr>
<tr>
<td>October 10</td>
<td>Graduate Record Exam (at designated examination centers). Registration for examination must be made four weeks prior to this date.</td>
</tr>
<tr>
<td>October 16</td>
<td>Deadline for withdrawal. Last day to withdraw from a course or the University.</td>
</tr>
<tr>
<td>October 23</td>
<td>Homecoming Celebration. No classes scheduled from Noon to 3:00 p.m.</td>
</tr>
</tbody>
</table>
October 23-25  Homecoming Weekend
November 11  Veterans' Day Holiday (University-wide)
November 20  Last day to remove an "I" earned last semester
November 26-27 Thanksgiving Holidays (University-wide)
December 4  Classes end for Fall Semester
December 5-12 (Noon)  Final Examination period
December 11  Commencement
December 11 (3:00 pm)  Residence Halls close (Residents must vacate residence halls. Returning residents may leave possessions in Spring Semester room assignment)
December 12  Graduate Record Exam (at designated examination centers). Registration for examination must be made four weeks prior to this date.
December 14  Christmas Holidays begin (students)
December 15 (Noon)  Grades due in Registrar's Office

*The registration appointment time on appointment time card is valid for area campus registration, also. Registration hours at area campuses may differ from the Orlando Campus registration hours. Schedules printed and distributed by each area campus (Brevard, Daytona Beach, and South Orlando) provide, additional registration information related to courses offered at those sites.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2, 1987</td>
<td>Last day for receipt of applications and required supporting documents from students.</td>
</tr>
<tr>
<td>December 4, 1987</td>
<td>Last day for receipt of regular undergraduate and graduate applications and required supporting materials.</td>
</tr>
<tr>
<td>December 18</td>
<td>Last day for receipt of readmission applications.</td>
</tr>
<tr>
<td>January 3 (Noon)</td>
<td>Residence Halls open for Spring Semester</td>
</tr>
<tr>
<td>January 5</td>
<td>Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised.</td>
</tr>
<tr>
<td>January 5-6</td>
<td>*Registration by appointment for new and readmitted graduates, post-baccalaureate, and undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.</td>
</tr>
<tr>
<td>January 7</td>
<td>Classes begin for Spring Semester</td>
</tr>
<tr>
<td>January 11</td>
<td>Last day to adjust class schedule (end of Add/Drop)</td>
</tr>
<tr>
<td>January 11</td>
<td>Last day to submit Grade Forgiveness Request</td>
</tr>
<tr>
<td>January 11</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>January 13</td>
<td>Last day for refund</td>
</tr>
<tr>
<td>January 13</td>
<td>Only day to submit audit request</td>
</tr>
<tr>
<td>January 18</td>
<td>Martin Luther King Day. University Holiday.</td>
</tr>
<tr>
<td>January 15</td>
<td>Last day to apply for graduation for those completing requirements end of Spring Semester</td>
</tr>
<tr>
<td>February 1</td>
<td>Last day for removing temporary student status.</td>
</tr>
<tr>
<td>February 6</td>
<td>Graduate Record Exam (at designated examination centers). Registration for examination must be made four weeks prior to this date.</td>
</tr>
<tr>
<td>February 12</td>
<td>Registration deadline for CLAST to be given March 12 at designated locations</td>
</tr>
<tr>
<td>February 26</td>
<td>Deadline for withdrawal. Last day to withdraw from a course or the University.</td>
</tr>
<tr>
<td>March 12</td>
<td>CLAST given at designated locations</td>
</tr>
<tr>
<td>March 28-April 1</td>
<td>Spring Holidays</td>
</tr>
<tr>
<td>April 4</td>
<td>Last day to remove an &quot;I&quot; earned last semester</td>
</tr>
<tr>
<td>April 9</td>
<td>Graduate Record Exam (at designated examination centers). Registration for examination must be made four weeks prior to this date.</td>
</tr>
<tr>
<td>April 29</td>
<td>Classes end for Spring Semester</td>
</tr>
<tr>
<td>April 23-30</td>
<td>Final Examination period</td>
</tr>
<tr>
<td>April 29</td>
<td>Commencement</td>
</tr>
<tr>
<td>April 29 (3:00 pm)</td>
<td>Residence Halls close for Spring Semester (Summer residents move to Summer room assignment)</td>
</tr>
<tr>
<td>April 30</td>
<td>Academic year ends</td>
</tr>
</tbody>
</table>

*SPRING SEMESTER 1988*
Grades due in Registrar's Office

*The registration appointment time on appointment time card is valid for area campus registration, also. Registration hours at area campuses may differ from the Orlando Campus registration hours. Schedules printed and distributed by each area campus (Brevard, Daytona Beach, and South Orlando) provide additional registration information related to courses offered at those sites.
SUMMER SEMESTER 1988

January 29  Last day for receipt of applications and required supporting documents from International Students
March 25  Last day for receipt of regular undergraduate and graduate applications and required supporting materials
April 21  Last day for receipt of readmission applications.
May 5  Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised.

May 4 (9:00 am)  Residence Halls open for Summer Semester
May 5  Advisement for current and former students not pre-advised
May 5  *Registration by appointment for new and readmitted baccalaureate, and undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.

May 6  Registration deadline for CLAST to be given June 4, 1988 at designated locations
May 9  Classes begin for Summer Semester
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 13  Last day to apply for graduation for those completing requirements end of Summer Semester

May 30  Memorial Day Holiday (University-wide)
June 3  Last day for removing temporary student status
June 4  CLAST given at designated locations
June 4  Graduate Record Exam-General Only at designated examination centers. Registration for examination must be made four weeks prior to this date.

June 17  Last day to withdraw from a "C" Term course or the University.
June 17 (3:00 pm)  Residence Halls close for Summer "A" residents
June 21 (9:00 am)  Residence Halls open for Summer "B" residents
July 4  Independence Day Holiday (University-wide)
July 13  Last day to remove an "I" earned last semester
July 29  Classes end for Summer "C" Semester. Final exam given at discretion of instructor.
July 29 (3:00 pm)  Residence Halls close for Summer "C" residents
Commencement
Grades due in Registrar's Office

*The registration appointment time on appointment time card is valid for area campus registration, also. Registration hours at area campuses may differ from the Orlando Campus registration hours. Schedules printed and distributed by each area campus (Brevard, Daytona Beach, and South Orlando) provide additional registration information related to courses offered at those sites.
### SUMMER "A" TERM 1988

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 29</td>
<td>Last day for receipt of applications and required supporting documents from International Students</td>
</tr>
<tr>
<td>March 25</td>
<td>Last day for receipt of regular undergraduate and graduate applications and required supporting materials</td>
</tr>
<tr>
<td>April 21</td>
<td>Last day for receipt of readmission applications.</td>
</tr>
<tr>
<td>May 4 (9:00 am)</td>
<td>Residence Halls open for Summer &quot;A&quot; term</td>
</tr>
<tr>
<td>May 5</td>
<td>Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised.</td>
</tr>
<tr>
<td>May 5</td>
<td>Advisement for current and former students not pre-advised.</td>
</tr>
<tr>
<td>May 5</td>
<td>*Registration by appointment for new and readmitted graduate, post-baccalaureate, and undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.</td>
</tr>
<tr>
<td>May 6</td>
<td>Registration deadline for CLAST to be given June 4, 1988 at designated locations</td>
</tr>
<tr>
<td>May 9</td>
<td>Classes begin for Summer &quot;A&quot; Term</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 13</td>
<td>Last day to apply for graduation for those completing requirements and of Summer Semester</td>
</tr>
<tr>
<td>May 27</td>
<td>Deadline for withdrawal. Last day to withdraw from a course or the University</td>
</tr>
<tr>
<td>May 30</td>
<td>Memorial Day Holiday (University-wide)</td>
</tr>
<tr>
<td>June 3</td>
<td>Last day for removing temporary student status</td>
</tr>
<tr>
<td>June 4</td>
<td>CLAST given at designated locations</td>
</tr>
<tr>
<td>June 17</td>
<td>End of Summer &quot;A&quot; Term, classes, and exams</td>
</tr>
<tr>
<td>June 17 (3:00 pm)</td>
<td>Residence Halls close for Summer &quot;A&quot; residents</td>
</tr>
<tr>
<td>June 20 (Noon)</td>
<td>Grades due in Registrar's Office</td>
</tr>
</tbody>
</table>

*The registration appointment time on appointment time card is valid for area campus registration, also. Registration hours at area campuses may differ from the Orlando Campus registration hours. Schedules printed and distributed by each area campus (Brevard, Daytona Beach, and South Orlando) provide additional registration information related to courses offered at those sites.*
### SUMMER "B" TERM 1988

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 29</td>
<td>Last day for receipt of applications and required supporting documents from International Students</td>
</tr>
<tr>
<td>May 13</td>
<td>Last day for receipt of regular undergraduate and graduate applications and required supporting materials</td>
</tr>
<tr>
<td>June 10</td>
<td>Last day for receipt of readmission applications.</td>
</tr>
<tr>
<td>June 21 (9:00 am)</td>
<td>Residence Halls open for Summer &quot;B&quot; residents</td>
</tr>
<tr>
<td>June 23</td>
<td>Advisement for current and former students not pre-advised.</td>
</tr>
<tr>
<td>June 24</td>
<td>Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised.</td>
</tr>
<tr>
<td>June 24</td>
<td>*Registration by appointment for new and readmitted graduate, post-baccalaureate, and undergraduate students. Student registration will close following the last appointment.</td>
</tr>
<tr>
<td>June 27</td>
<td>Classes begin for Summer &quot;B&quot; Term</td>
</tr>
<tr>
<td>June 28</td>
<td>Last day to adjust class schedule (end of Add/Drop)</td>
</tr>
<tr>
<td>June 28</td>
<td>Last day to submit Grade Forgiveness Request</td>
</tr>
<tr>
<td>June 28</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>June 28</td>
<td>Last day for refund</td>
</tr>
<tr>
<td>June 28</td>
<td>Only day to submit audit request</td>
</tr>
<tr>
<td>June 29</td>
<td>Last day to apply for graduation for those completing requirements end of Summer &quot;B&quot; Term.</td>
</tr>
<tr>
<td>July 1</td>
<td>Independence Day Holiday (University-wide)</td>
</tr>
<tr>
<td>July 13</td>
<td>Last day to remove an &quot;I&quot; earned last semester</td>
</tr>
<tr>
<td>July 15</td>
<td>Deadline for withdrawal for Summer &quot;B&quot; Term students only.</td>
</tr>
<tr>
<td>July 25</td>
<td>Last day to withdraw from a course or the University.</td>
</tr>
<tr>
<td>August 5</td>
<td>Commencement</td>
</tr>
<tr>
<td>August 5 (3:00 pm)</td>
<td>Residence Halls close</td>
</tr>
<tr>
<td>August 6</td>
<td>End of Summer &quot;B&quot; Term, classes, and exams</td>
</tr>
<tr>
<td>August 6 (3:00 pm)</td>
<td>Residence Halls close</td>
</tr>
<tr>
<td>August 8 (Noon)</td>
<td>Grades due in Registrar's Office</td>
</tr>
</tbody>
</table>

*The registration appointment time on appointment time card is valid for area campus registration, also. Registration hours at area campuses may differ from the Orlando Campus registration hours. Schedules printed and distributed by each area campus (Brevard, Daytona Beach, and South Orlando) provide additional registration information related to courses offered at those sites.*
CAMPUS DIRECTORY

A.A. DEGREE APPLICATION
ACADEMIC CLASSIFICATION
ACADEMIC MATTERS/COUNSELING
ACADEMIC RESOURCE CENTER
ACADEMIC STATUS

ADD/DROP

ADDRESS CHANGE
ADMISSIONS/STANDARDS COMMITTEE
AUDIT A CLASS

BOARD ROOM (President's)
BOOKS, SUPPLIES, & SUNDARY ITEMS
CAMPUS TOURS (By Appointment)

CATALOGS
CERTIFICATION OF ENROLLMENT:
INTERNATIONAL STUDENTS
GOOD STUDENT DISCOUNT
FINANCIAL AID & LOANS

CHANGE OF MAJOR
CHECK CASHING
CHECKING ACCOUNT
CLAST
COLLEGE LEVEL EXAMINATION PROGRAM

COOPERATIVE EDUCATION & PLACEMENT
COUNSELING:
ADMISSIONS
CAREER

PERSONAL

RELIGIOUS
CREDIT BY EXAMINATION
DECALS (PARKING)
DISCOUNT TICKETS

EMERGENCIES:

AUTOMOBILE
MEDICAL
STUDENT LOANS
EXTENDED STUDIES
FINANCIAL AID
FLORIDA RESIDENT AFFIDAVIT
FRATERNITIES
GORDON RULE
GRADE FORGIVENESS
GRADUATE ADMISSIONS-LIAISONS
GRADUATION
HANDICAPPED STUDENTS

HEALTH INSURANCE
HELP WITH READING, SPEECH, OR HEARING
“HOLD” CLEARANCES
HOUSING APPLICATION/PROBLEM
“ID. CARD INFORMATION”
INTENT TO GRADUATE FORMS

Registrar/Records AD 1st Floor x2531
Registrar AD 1st Floor x2531
Academic Advisor (Degree Program Advisor) PC 102 x5122
Registrar AD 1st Floor (or Academic Advisor in College)
Registrar/Records (Class Schedule lists dates for current term)
Registrar/Records AD 1st Floor x2531
Registrar/Records AD 1st Floor x2511
Registrar/Records AD 1st Floor x2531
Details in UCF Catalog & Class Schedule) AD 3rd Floor
Bookstore, Student Services x2355
Student Center 198 x5105
Bookstore, Student Services x2355
Registrar/Records AD 1st Floor x2531
Registrar/Records AD 1st Floor x2531
Registrar/Records AD 1st Floor x2531
Present Department
Bookstore, Student Services x2355
Credit Union, Student Services x2855
Undergraduate Studies AD 210 x2691
Counseling & Testing Center RS 203

AD 124 x2361

Admissions AD 1st Floor x2511
Counseling & Testing Center RS 203 x2811
Placement Office AD 145 x2811
Counseling & Testing Center RS 203 x2811
Campus Ministry SC 208 x2468
Dept. Chair within appropriate College
Police Department x2422
Student Government KIOSK x2060
Police Department x2421
Police Department x2421
Financial Aid AD 120 x2060
AD 145 x2123
AD 120 x2827
Admissions AD 1st Floor x2511
Student Affairs AD 282 x2177
Undergraduate Studies AD 210 x2691
Registrar/Records AD 1st Floor x2531
AD 146 x2765
Dept. Chair/Advisor/Registrar/Records x2811
Handicapped Student Coordinator
AD 282 x2371
Student Health Center x2701

Instructional Resources LIB 107 x5489
Registrar/Records AD 1st Floor x2531
Housing Office SC 137 x2171
Business Services AD 362 x2624
Registrar/Records AD 1st Floor x2842
INTERNATIONAL STUDENTS

International Student Services
AD 225 x2337
Recreational Services RS 101 x2408
Student Center x2117
AD 384 x2351
Student Center 198 x2117
Undergraduate Studies AD 210 x2691
AD 225 x2716
Registrar/Records AD 1st Floor x2531
Student Center x2117
Chair of Department offering course and
College-designated representative

PARKING DECALS
PAY UNIVERSITY BILL
PROBLEMS REGARDING PAYMENT
READMISSION APPLICATION
SCHOLARSHIPS

SENIOR CITIZEN FEE WAIVER
SORORITIES
STUDENT CENTER ROOM
RESERVATIONS
STUDENT EMPLOYMENT

SUMMER CREDIT WAIVER
TESTING: SAT, ACT, MCAT, GRE, GMAT
TICKETS: ATHLETIC
THEATRE (Discount tickets)
TIME-SHORTENED DEGREE
OPPORTUNITIES

TRAFFIC VIOLATIONS
TRANSSCRIPTS:
ACADEMIC (official & unofficial)
FINANCIAL AID
TRANSFER HOURS SENT TO UCF
REQUESTS SENT FROM UCF

TRANSIENT STUDENT FORMS/APPLICATIONS:
OUTGOING
INCOMING

VETERANS' BENEFITS
WITHDRAWAL FROM COURSES OR UNIVERSITY

CAN'T FIND AN ANSWER?
UNIVERSITY OF CENTRAL FLORIDA

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

STATEMENT OF PURPOSE

The University of Central Florida is a general-purpose state university which combines a contemporary and local role with one which is both traditional and universal. As part of the State University System of Florida, UCF seeks to serve the needs of the immediate community and the larger region in which it is located. As a university in the traditional sense, UCF seeks to serve its national and international constituents through its quest for new knowledge, the enrichment of the imagination, and the preservation of the knowledge and learning gleaned from previous generations and civilizations.

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

In common with other universities, the University of Central Florida addresses its broader purpose through a general education program designed to produce well-rounded men and women with a balance of communicative and mathematical skills; historical, social, and scientific knowledge; and ethical, aesthetic, and artistic sensitivity.

In brief, the University's purpose in both its undergraduate and graduate programs is to provide its students with a significantly enhanced opportunity to lead lives which are both productive and meaningful.

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. International students 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 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 1.7 million. The area is well endowed with a rich heritage of cultural, educational, industrial, and recreational activities. Cultural opportunities 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, quality public school systems, public community colleges, and several privately supported colleges and schools serve the educational needs of the area. Recreational opportunities abound in the Orlando area.

THE ORLANDO CAMPUS

The campus of UCF, located 13 miles east of downtown Orlando, consists of 1,227 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 86 million dollars
have been invested in facilities and equipment including the library, classroom buildings, laboratories, residence halls, and student facilities. The Creative School for Children 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 16,000 students.

Residence halls can accommodate up to 900 students on campus. Single, double, and triple room arrangements are available, but most rooms are designed for double occupancy. 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 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. Laundry facilities, vending machines, and common social/study lounges are provided for resident students. About half of the resident facilities are reserved for women and half for men. More detailed information may be obtained from: 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.

UCF Brevard Campus
Director: Robert W. Westrick
BCC/UCF Lifelong Learning Center
1519 Clearlake Road
Cocoa, FL 32922
(305) 632-4127

The University of Central Florida in Brevard is housed in a 5.8 million-dollar facility located on the Cocoa campus of Brevard Community College. At this site, the University offers junior, senior, and graduate-level courses and programs. Freshman and sophomore-level courses are provided by Brevard Community College. Students who have completed the Associate of Arts Degree are able to select from 20 baccalaureate programs offered by the University in Brevard. Newly admitted or currently enrolled UCF students may also register in selected upper division elective courses presented at UCF-Brevard. In addition, six graduate programs are offered in Education, Business, Public Administration, and Engineering.
The coordination between the University of Central Florida and Brevard Community College for the 2+2 baccalaureate degree has been considered by many to be a model for other institutions of higher education in the State of Florida.

UCF-Brevard is a senior institution offering junior, senior, and graduate-level degree programs in the following academic disciplines:

**College of Business**

**College of Arts & Science**
- Master's of Business Administration (MBA)
- Allied Legal Studies
- Accounting
- Computer Science
- General Business Administration
- Criminal Justice
- Liberal Studies
- Masters in Public Administration (MPA)
- Public Administration

**College of Engineering**

**College of Education**
- Computer Technology
- Elementary Education
- Design Technology
- Exceptional Education
- Electronics Technology
- Continuing Certification
- Information Systems Technology
- Coursework
- Operations Technology
- Master of Education in Elementary Education

**Master's in Engineering Administration**
- Master of Education in Administration

**FEEDS/ITV Graduate Engineering & Supervision**
- (Courses on videotape)

**Secondary Education**
- Math
- Science

**College of Health**
- Nursing
- Radiologic Science

Information concerning the campus may be obtained by contacting the Admissions Office at the University of Central Florida-Brevard.

**UCF Daytona Beach Campus**

Director: Sarah H. Pappas
UCF/DBCC Higher Education Center
1200 Volusia Avenue
P. O. Box 1111
Daytona Beach, Florida 32015
(904) 255-7423/7424
The Daytona Beach Campus of the University of Central Florida 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 and Engineering.

The UCF Campus at Daytona Beach is located in a new 3.8 million-dollar Higher Education Center that it shares with Daytona Beach Community College. The faculty and staff at the new UCF facility have a strong commitment to serve the residents of Volusia and Flagler counties. Plans include expansion of present 2+2 baccalaureate degree programs between the University and Daytona Beach Community College with freshman and sophomore-level courses provided by the community college. Additional graduate programs and courses will also be added as a need is identified.

At present, baccalaureate degree programs are available in Criminal Justice, Business Administration, Elementary Education, Vocational/Technical Education, Nursing, and Liberal Studies, in addition to graduate programs in Education, Engineering, and Public Administration. Also, newly admitted or currently enrolled UCF students may register in selected upper-division courses.

Additional information may be obtained from the UCF Daytona Beach Admissions Office.

**UCF South Orlando Campus**

Director: TBA
7300 Lake Ellenor Drive
Orlando, Florida 32809
(305) 855-0881

At the University of Central Florida-South Orlando (SOC) students may choose upper or lower division required courses, as well as selected electives, in all programs of study. Courses in Vocational Education and Graduate Engineering are also available. SOC is conveniently located and easily accessible; therefore, for some students SOC may be closer than the Orlando campus. Schedules are arranged to provide opportunity for full-time enrollment and are published in the student newspaper. 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, a number of scientific, professional, and academic bodies confer 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 accreditation is conferred in Chemistry by the American Chemical Society, in Music by the National Association of Schools of Music (NASM), and in Social Work by the Council of Social Work Education. The College of Business Administration is accredited at the graduate and undergraduate levels by the American Assembly of Collegiate Schools of Business (AACSB). In the College of Engineering the Civil, Computer, Environmental, Electrical, Industrial, and Mechanical Engineering options are accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

Within the College of Health accreditation has been approved by the agency indicated: 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 lists the acceptability of transfer credits based upon the reporting institutions in the states, commonwealths, 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 ten 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 the sixty-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 gifts to UCF are processed through the Foundation.

UNIVERSITY LIBRARIES

Director: Anne Marie Allison, LR 512, Phone 275-2564
Associate Director: Orlyn B. LaBrake, LR 512, Phone 275-2564

The University Library is housed in a new facility of 200,200 square feet. A collection of over 500,000 volumes with approximately 4,500 subscriptions (journals, newspapers, and other serials) is available on open shelves for students and faculty. Catalog and circulation records for these materials are available in an on-line computer system, so that library users can determine whether the UCF Library owns a particular item, and the location and availability of the item. Copies of the library catalog are also available on microfiche.

During school terms the University Library is open approximately 87 hours each week, including evenings and weekends. 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. Arrangements may also be made for class or small group instruction. Interlibrary loan service is available for faculty, staff, and students to obtain materials not available in the library's collections.
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 or computer terminal with a modem, handicapped students can determine the books they need, and telephone the Library to ask that books be brought 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.

The University’s campuses in Daytona Beach and South Orlando contain small collections. Subjects covered in these collections vary depending on the courses offered at each center. Students at the Brevard Campus receive a full range of library services from the Brevard Community College library. Access to the main library collection is available from all branch campus locations through dial-up terminals and microfiche copies of the library catalog. These catalogs and a courier service give students and faculty access to the full collections of the main library.

INSTRUCTIONAL RESOURCES:
Director: Robert L. Arnold, LR 107, Phone 275-2571
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 audiovisual and classroom support services; and a wide range of instructional development assistance and consultation. Instructional Resources also administers the Center for Faculty Support, the University Learning Center, the Listening Lab, Cable TV-Channel 35, Brevard Educational Cable Network, and WUCF-FM.

UNIVERSITY OF CENTRAL FLORIDA PRESS

The UCF Press is a member of UNIVERSITY PRESSES OF FLORIDA. The UCF Press actively solicits clearly-written scholarly manuscripts and original unpublished manuscripts of poetry for its Contemporary Poetry Series. Current submission guidelines may be obtained from: Director, UCF Press, English Department, 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 BOOKSTORE

The University Bookstore, located in the Student Services Building, is a convenient facility for students to buy textbooks, supplemental books, supplies, gifts, and other items of interest to UCF students.

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 I. 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.

UCF’s current varsity sports include baseball, basketball, cross country, golf, football, rifle, soccer, and tennis for men. The women’s sports include basketball, cross country, golf, rifle, soccer, tennis, and volleyball. Crew and waterskiing are intercollegiate club sports for both men and women.
STUDENT AFFAIRS

INTRODUCTION

The term "student affairs" is used collectively to refer to the Student Affairs Division and its many functional departments responsible for the administration and management of programs, services, facilities, and activities designed to support the educational mission of the University. The Division of Student Affairs exists primarily to enhance the teaching and learning process through its 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, veterans' affairs, and other special activities. Students are invited to consult the staff of Student Affairs concerning any aspect of campus life.

Personal development may be enhanced through informed, experienced, and dedicated participation in University and community activities. Frequently, activities are referred to as "extracurricular," but at the University of Central Florida student activities are regarded as a part of the total educational program—a supplement to the individual student's academic program. The University, through student cooperation and with the assistance of student organizations, sponsors a variety of cultural and entertainment programs which 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.

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 Office of the Dean of Students is 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 Deans plan and assist in the development of University programs which provide for the personal, social, and academic adjustment of students. They counsel students confronted by personal, academic, financial, and social problems, and refer students to specialized professional services as necessary. In addition, the Deans supervise the student disciplinary process. The Deans are the primary source for students seeking information or assistance in non-academic areas of University operations.

The Division of Student Affairs annually publishes a student handbook called The Golden Rule. Information concerning more detailed aspects of student life is included in this handbook. Copies may be obtained from the Student Center or from the Office of the Dean of Students.

STUDENT PRIVILEGES

Confidentiality of Student Records

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

Student Government

The purpose of the Student Government is to represent student opinion, advance the cause of students both socially and academically, promote communication, cooperation, and understanding among students, and administer Activity and Service fees. Student Government represents students' needs and concerns at the state and federal level.
Student Government provides many services to students, including discount movie and dinner theatre tickets, tutor referral, consumer affairs education, carpool coordination, and legal aid.

Every student enrolled at the University of Central Florida is a member of Student Government. The interests of students are represented through three branches of government: the executive branch, headed by an elected student body president and vice president, the student senate (legislative branch) composed of representatives of every college, and the Judicial Council (judicial branch). In addition to these offices, there are many openings for appointed offices and on Student Government and University committees. By actively participating in Student Government, or by voicing opinions and ideas through representative legislators, a student may gain valuable experience in the freedoms and responsibilities of the democratic process. Students interested in working with Student Government may obtain information from the Student Government offices located in the Student Center.

STUDENT RESPONSIBILITIES

Classroom Responsibility

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

Student Conduct

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

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

SERVICES

Orientation

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 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 sessions. The Mathematics Placement Tests are given at Orientation for those new students who are required to take them.

Academic Peer Advisement

The Academic Peer Advisement Team consists of 50 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, Recreational Services Building, Room 203, 275-2811.

University Counseling and Testing Center

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

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

The Center presents special programs throughout the year, including encounter groups, training in relaxation and coping skills, marital enrichment programs, self-hypnosis training, consciousness growth groups, race relations groups, stress reduction training, and assertiveness training workshops. All Center services are free to UCF students.
Career Resource Center - Career Planning and Placement

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. CHOICES is a valuable tool to assist in making career decisions.

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.

The Cooperative Education 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 throughout Florida and nationwide.

Further information may be obtained from: Career Resource Center, University of Central Florida, Suite 124, Administration Building, Orlando, Florida 32816. Telephone (305) 275-2361 or (305) 275-2314.

Housing

1. Regularly enrolled single students paying registration fees for a minimum of nine semester hours may apply for assignment to University residential units. Because of the limited amount of space in University housing facilities (442 spaces for females and 425 spaces for males), the University of Central Florida does not require any student to live on campus.

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

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

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

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

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

Student Health Services

In recognition of the increasing importance of lifestyle in the prevention of disease, the Student Health Service is extending its commitment to caring for the students of the University of Central Florida. Quality care for illness and accidents is teamed with an aggressive health education and lifestyle enhancement program.

The Student Health Center (SHC) is staffed by medical doctors, a certified nurse practitioner, physician's assistant, nurses, pharmacist, technicians, and a complete support system. Specialized medical services, such as orthopedics through the Jewett Orthopedic Clinic, are available from many of Central Florida's leading practitioners. In addition, there is a Student Wellness Advocate Team to enhance the health promotion efforts of the SHC. When the SHC is not open, students can use the "Hot Line" phones at the front and back doors of the building to obtain help for urgent needs.

By Board of Regents regulation, each student must have a health history form on file with the University in order to complete registration. This information is used for background
purposes in providing medical care services. Medical records are held in the strictest confidence.

Each health fee-paying student is entitled to the benefits outlined in the SHC brochure; faculty and staff can only be seen on an emergency basis, and then for a fee (except Worker Compensation cases). Optional health and accident insurance may also be purchased. Further information about options may be obtained from the SHC at 275-2701. Blood drives are held several times annually.

**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, Veterans' Affairs, Campus Ministries, Interfraternity Council, and Panhellenic Council.

Other facilities include four food service operations, auditorium, conference and meeting rooms, game room, the Activities Center, information desk, and lounges.

**Recreational Services**

The Office of Recreational Services offers a wide variety of sports and recreational opportunities to the students, faculty, and staff of UCF and their immediate families, as well as a limited number of opportunities to UCF alumni and the surrounding community.

The services provided include intramural sports leagues and tournaments, summer co-recreational leagues, organized recreation and fitness programs, unstructured open recreation, and sports-related special events. Equipment may be checked out for use on and off campus, and a silkscreen printing service is provided for campus groups and individuals.

Recreational Services exists to serve the UCF community and welcomes the opportunity to serve each individual. A friendly staff is ready and willing to assist with complete information on its programs. The Office of Recreational Services is located next to the pool. The phone number is 275-2408.
Office of Area Campus and Evening Student Services

Evening/Weekend and Area Campus Student Services is responsible for the administrative supervision of student affairs functions for all University students taking evening and weekend classes. The office coordinates the evening schedule for services provided by other units within the University and disseminates information on various University services to evening and weekend students. Counseling and referrals are available to evening/weekend students. The office also coordinates the Area Campus programs to ensure that student services are provided and communication between the campuses is maintained. The Evening/Weekend and Area Campus office hours are:

- 8:00 am to 9:00 pm Monday through Thursday
- 8:00 am to 5:00 pm Friday
- 10:00 am to 2:00 pm Saturday at SG Kiosk 275-2060
- 2:00 pm to 5:00 pm Sunday at SG Kiosk 275-2060

International Student Services

The International Student Office provides services for all international students and resident aliens. Its central role is to assist students and scholars attending UCF under F-1 or J-1 visas in their adjustment to the changing lifestyle in order to achieve their educational goals and gain a meaningful living experience in the United States. A wide range of special services is provided to the UCF international community, such as issuance of immigration forms I-20 A/B and IAP-66, assistance in locating off-campus apartments, counseling on personal, financial, academic, and cross-cultural communication matters, advisement in immigration and tax matters, promotion of social activities, and home visits in Central Florida. Further information may be obtained from the International Office, Administration Building Suite 225. Telephone: (305) 275-2337.

Handicapped Student Services

The Office of Handicapped Student Services provides information and orientation to campus facilities and services, assistance with handicapped parking permits, assistance with classroom accommodations, 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), epilepsy, diabetes, or mental or psychological disorder.

Students who have a disability or handicap which may require special assistance are requested to voluntarily contact the Office of Handicapped Student Services. All information is confidential and will be used only to assist the student. 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.

Individuals with access to a Telecommunications Device for the Deaf can secure information from Handicapped Student Services by phoning (305) 275-2116 (TDD calls only).

Creative School for Children

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

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

Office of Veterans' Affairs

The Office of Veterans' Affairs (SC 132) is a center for students who are using VA educational benefits 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 enrollment 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 consult 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 12 semester hours for full-time VA benefits, 9 semester hours for three-fourths time benefits, and 6 semester hours for half-time benefits. Five semester hours or less will be reimbursed at cost of tuition and fees only. Those students with a baccalaureate degree who are classified by the University as post baccalaureate must meet the same eligibility criteria as undergraduates. Veterans and eligible dependents who are fully accepted in a graduate degree-seeking program are required to carry 6 semester hours in courses numbered 5000 and above for full-time benefits, 4 to 5 semester hours in courses numbered 5000 and above for three-fourths time benefits, and 3 semester hours in courses numbered 5000 and above for half-time benefits.

Veterans and eligible dependents intending to enroll simultaneously at UCF and another institution have the option to receive VA benefits, but must first consult 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.

In order to receive education benefits, veterans and eligible dependents must maintain satisfactory academic progress. Accordingly, benefits will be terminated for individuals who are disqualified or excluded from the University. Individuals placed on academic probation will continue to receive benefits as long as a 2.0 or higher GPA is earned each semester. However, benefits will be terminated once the veteran or eligible dependent has earned the required semester hours of coursework for the program of study regardless of GPA or eligibility for graduation.

Veterans and eligible dependents may draw VA benefits during the periods of eligibility while on cooperative education assignments. The recipient may choose to receive assistance at the "Co-op rate" which is approximately 80 percent of the entitled monthly VA benefit. Payment is received during both on-campus enrollment semesters and off-campus work terms. In this program, students must enroll in at least 12 credit hours during on-campus semesters. Benefit eligibility time is not extended through this option.

Eligible recipients may choose not to receive benefits during cooperative education assignments. In this case, full benefits are received during on-campus enrollment semesters. Benefits cease during off-campus work terms unless the student is currently enrolled for 12 credit hours.
ADMISSION

APPLICATION FOR ADMISSION

HOW TO APPLY: Applicants should complete the State University System application for admission, and include a 15-dollar non-refundable application fee. Applicants should also request official transcript(s) from each educational institution attended to be forwarded directly to the Admissions Office. Students are encouraged to apply several months in advance. Applications will be accepted up to one year prior to the start of the term desired, and the application deadline for each term is approximately eight weeks prior to the start of the term. The exact date appears in the college calendar. Applications should be mailed to the Admissions Office, University of Central Florida, Orlando, FL 32816.

The University encourages applications from qualified persons of both sexes from all cultural, racial, religious, and ethnic groups. The University does not discriminate on the basis of handicap in admission or access to its programs and activities. Additionally, both the Educational Testing Service (SAT) and the American College Testing program (ACT) have information describing special testing arrangements for handicapped applicants who are unable to take the required tests.

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

1. A satisfactory academic record. Each applicant must furnish a complete chronological record of educational institutions previously attended. Official transcripts must be submitted in accordance with instructions on the application form.

2. Satisfactory scores on the Scholastic Aptitude Test (SAT) or the American College Test (ACT). Students whose native language is not English must also submit a Test of English as a Foreign Language (TOEFL) score. The required minimum TOEFL score is 550.

3. A satisfactory conduct record.

NOTE: Florida Board of Regents regulations provide that furnishing false or fraudulent statements or information in connection with an application for admission or residence affidavit may result in disciplinary action, denial of admission, and invalidation of credits or degrees earned.

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

ADMISSIONS AND STANDARDS COMMITTEE

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

REACTIVATION

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

READMISSION

Students not in attendance 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.
The student is also encouraged to 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 may be referred to the Admissions and Standards Committee. Students may make a personal appearance before the Admissions and Standards Committee if they desire.

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

**LIMITED ACCESS PROGRAMS**

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

**RECORDS**

**Validity of Documents**

All supporting admissions documents must be received directly from the issuing institution or testing agency, 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.

**Medical History Report**

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

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

The Medical History Report form will be mailed to the applicant with receipt for the Application for Admission. Applicants should return the Medical History report to the Admissions Office.

**Deadline**

All supporting admissions documents, such as transcripts and test scores not recorded on official transcripts, should be received by the Admissions Office no later than 20 days preceding the first day of classes. In some cases applicants may be allowed to register on a temporary basis without all records if eligibility for admission can be determined from available records or consultation with the student.
FRESHMAN APPLICANTS

The University reserves the right to limit freshman enrollment by selecting those students who are judged to have the greatest chance of academic success. Students who meet the following requirements will be given priority in the admissions process and a decision about their admission will be rendered as soon as all necessary documents are received.

High School Diploma

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

Entrance Examination Scores

Students applying for admission to UCF must also submit test scores from the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board or from the American College Testing (ACT) program.

High School Academic Units

All applicants must have earned a minimum number of high school academic units (year-long courses which are not remedial in nature) as shown in the table below to be considered for admission.

The high school academic unit requirements are as follows:

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<thead>
<tr>
<th>ACADEMIC SUBJECT</th>
<th>UNITS REQUIRED</th>
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<tr>
<td>English</td>
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<td>Natural Science</td>
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<tr>
<td>Social Science</td>
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<td>Foreign Language</td>
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</table>

Additional academic electives from
the above five subject areas and courses recommended by the Florida Association of School Administrators, or other groups, and recommended by the Articulation Committee, and approved by the Department of Education.

TOTAL 19

1. Three of which must have included substantial writing.
2. At or above the Algebra 1 level.
3. Two of which must have included substantial laboratory requirements.
5. Effective August 1, 1987. Both credits must be in the same language.

Eligible Applicants

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

The University reaffirms its Equal Educational Opportunity (EEO) commitments and will seek ways to increase the enrollment of minority students. Students may be considered eligible for admission to the University in each of the following three alternative ways:

(a) A student applying for admission who has a satisfactory high school record, including at least a “B” average (3.0 on a 4.0 scale) in the required high school academic units normally offered in grades 9 through 12, and who submits other appropriate evidence that he can be expected to carry out successful academic progress in the University is academically eligible for admission. In computing the high school grade point average for purposes of admission to the University, the Admissions Office will raise the grade in Honors and/or Advanced Placement courses one letter.

(b) A student applying for admission who has less than a “B” average in the required academic units described in (a) above must present a combination of high school GPA and
entry-level test scores equivalent to a 2.5 (on a 4.0 scale) in the required academic units, and a score of 900 on the combined verbal and quantitative parts of the Scholastic Aptitude Test of the College Entrance Examination Board, or a composite score of 19 on the American College Testing Program. Academic eligibility for admission will be determined according to the following Admissions Scale:

<table>
<thead>
<tr>
<th>If the High School GPA in the required academic courses equals any entry in this column,</th>
<th>the SAT/ACT score must equal or exceed the corresponding entry in this column</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>1050/24</td>
</tr>
<tr>
<td>2.1</td>
<td>1020/23</td>
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<tr>
<td>2.2</td>
<td>990/23</td>
</tr>
<tr>
<td>2.3</td>
<td>960/21</td>
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<tr>
<td>2.4</td>
<td>930/20</td>
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<tr>
<td>2.5</td>
<td>900/19</td>
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<td>2.6</td>
<td>890/19</td>
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<tr>
<td>2.7</td>
<td>880/18</td>
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<tr>
<td>2.8</td>
<td>870/18</td>
</tr>
<tr>
<td>2.9</td>
<td>860/18</td>
</tr>
</tbody>
</table>

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

**TRANSFER APPLICANTS**

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

**Applicants with Fewer Than 60 Credit Hours**

In addition to meeting the requirements which apply to all transfer applicants, an undergraduate student transferring from a regionally accredited college or university who has earned fewer than 60 semester hours or 90 quarter hours must meet the same requirements as an entering freshman (requirements such as high school credits, test scores, and high school GPA).

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

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

1. At least 60 semester hours of academic work exclusive of occupational courses and basic required physical education courses.
2. An approved general education program of at least 36 semester hours.
3. A grade point average of at least 2.0 on a 4.0 system on all college-level academic courses attempted, provided that only the final grade received in courses repeated by the student shall be used in computing the average.
4. One year of college instruction in a single foreign language. (This requirement applies to those students without the required two units of foreign language in high school.) Students who receive an Associate of Arts degree from a Florida public community college or university but have not met the foreign language requirement and do not qualify in one of the exempt groups defined below may only be admitted to the lower division of the University. Admission to the upper division will be granted when the foreign language requirement is satisfied.
Two groups of students are exempt from the foreign language portion of the admission requirement. These groups are:
A. Students who receive an Associate of Arts degree prior to September 1, 1987.
B. Students who enroll prior to August, 1989 in an Associate of Arts program at a Florida public community college and maintain continuous full-time enrollment through the completion of the A.A. degree and their transfer to UCF. Continuous full-time enrollment shall be defined as enrollment for a minimum of 24 credit hours during any 2 semesters and a related summer term.

Applicants with an A.A. Degree from a Private or Out-of-State College
Applicants with an Associate of Arts degree from a regionally accredited private or out-of-state institution must meet freshman admission requirements.
Any student who receives an Associate of Arts degree prior to September 1, 1987 is exempt from the foreign language portion of the admission requirements.

Applicants with an A.S. Degree
Only in one case does the A.S. degree assure admission to UCF: applicants who have received an Associate of Science degree in Engineering Technology from a Florida public college or university will be admitted only to the Bachelor of Engineering Technology program. All other A.S. degree applicants must meet the appropriate admission requirements defined in this section.
The A.S. degree does not certify the student as having completed General Education requirements.

Applicants—More Than 60 Hours, Have Not Received an A.A. Degree
In addition to meeting the requirements which apply to all transfer applicants, undergraduate transfer students who wish to be admitted to UCF as upper division students must have met all of the following requirements:
1. A minimum of 60 semester hours of academic coursework.
2. The English and mathematics requirements of the Gordon Rule.
3. Passing scores on three of the four parts of the College Level Academic Skills Test.
4. One year of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)
Applicants who have not met the above requirements may only seek admission into the lower division, and consequently must meet freshman application requirements (defined in “Freshman Applicants” paragraph of this section), which include high school units, entrance examination scores, and high school GPA, in addition to meeting requirements which apply to all transfer applicants.

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

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

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

Military Service School Courses

Completed military service school courses may be evaluated on the basis of the recommendations of the American Council of Education (A.C.E.) when official credentials have been properly presented. Credit may be granted when courses are equivalent to those offered by the University. However, recommendations by the A.C.E. are not binding upon the University, and application for service school course transfer should be made at the time of admission.

General Education Credits Transfer

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

Grade Forgiveness Transfer

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

Credits from Private and Out-of-State Institutions

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

Credits from a Previous Baccalaureate Degree

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

ACCREDITED INSTITUTIONS

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

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

Foreign institutions are evaluated through World Education Services, Inc.
COLLEGE PREPARATORY INSTRUCTION

State statutes require that new students be evaluated in terms of their potential to successfully complete required coursework at the University. Those students who are identified as likely to have difficulty in the areas of mathematics, writing, or reading may be required to take college preparatory courses prior to enrollment in college-level courses in those areas. State law provides that students must begin any required preparatory instruction during their first 12 semester hours and finish all such coursework within 3 semesters. New students will be notified of the need to take placement examinations during orientation, or of coursework that will be required.

INTERNATIONAL STUDENTS

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

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 who have completed their general education requirements (as defined in the Articulation Agreement), 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 course-by-course evaluation from World Education Services, Inc. (Evaluation applications may be obtained from the Admissions Office or by writing WES, P.O. Box 745, Old Chelsea Station, New York, NY 10011.)
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, nor completed their general education requirements (as defined in the Articulation Agreement) 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.
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 4 weeks (first 20 class days) to furnish all required records. Incomplete records or records indicating ineligibility may result in cancellation of the student's registration.

TRANSIENT STUDENTS
Students in good standing with a 2.0 overall academic average in any accredited college or university who wish to enroll for one term at UCF may be considered for admission as transient students. Such enrollment terminates at the end of one term and does not presuppose regular acceptance by any college or department of the University. A transient 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 and an official transcript are required to support the application for admission.

AUDIT STUDENTS
To audit a class, a student must file a regular application and be accepted as a degree-seeking or non degree-seeking student, obtain an audit application at the records counter, and take it to the instructor for his/her signature of approval. Requests to audit a class will be processed the first working day following the add/drop period and will be approved on a space-available basis. Finance and Accounting will bill students for audit classes separately from credit classes. Students registering for credit during regular or late registration, or during add/drop may not change to audit status, but must remain in the course or withdraw through normal withdrawal procedures.

NON DEGREE-SEEKING STUDENTS
This classification allows qualified students to enroll in selected courses at the University without satisfying requirements for admission to degree-seeking status. Successful completion of courses while in this classification does not necessarily provide a basis for regular admission at a later date.

Although the regular admissions procedure is not required for a non degree-seeking student, a simplified form called “Application for Registration” must be completed. This application is available from the Admissions Office. The following regulations will apply to non degree-seeking students:
1. Students are required to provide evidence of their educational qualifications for attending classes in order to meet the intent of this enrollment classification.
2. Non degree-seeking students may register for ONE semester only. They are required to complete the Application for Registration before each term in which they plan to enroll. Non degree-seeking students are subject to the same rules and regulations as degree-seeking students.
3. Registration is permitted on a space-available basis. Students should consult the registration calendar in the Schedule of Classes or contact the Admissions Office for the appropriate registration time.
4. A maximum of 15 undergraduate baccalaureate semester hours earned as a non degree-seeking student may be applied toward a degree if a non degree-seeking student is later accepted as a baccalaureate student.
5. An applicant who has been denied admission or who has been disqualified or excluded may not register as a non degree-seeking student.
6. International students may not register as non degree-seeking since immigration regulations prevent foreign nationals from enrolling without admission to a degree or certificate program.

SENIOR CITIZENS
Senior citizens who are Florida residents and who are 60 years old or over may enroll as audit students by completing a specially-marked non degree-seeking student form at the Admissions Office. A Florida Residency Affidavit will be required in order to establish Florida residency.
FINANCIAL INFORMATION

SCHEDULE OF FEES

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. Fees are affected by residency status. Information on residency is contained in the “Admission” section of this catalog.

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

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

General Fees and Costs

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

B. Registration Fees per semester for campus, centers, and continuing education courses.

Minimum registration of one credit hour (at the level the student is classified) must be charged for students registering for zero hours (co-op student on work assignment, applicant for graduation during the semester that student is not registered).

<table>
<thead>
<tr>
<th>Fall, Spring and Summer Semesters 86-87 Rates</th>
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<tbody>
<tr>
<td>Florida Resident</td>
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<tr>
<td>Lower Division*</td>
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<tr>
<td>Upper Division*</td>
</tr>
<tr>
<td>Graduate*</td>
</tr>
<tr>
<td>Thesis*</td>
</tr>
</tbody>
</table>

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

C. Room and Board (Several optional Food Service Plans are available)-

- per semester ........................................... $1,149.00-$1,428.00
- Charge for late payment ................................ $25.00

D. Books and supplies (estimated) per semester ................................... $150.00

E. Late Registration Fee—not refundable (for students who register during late registration periods or who fail to pay full fees by the established deadline) ............... $25.00

F. Vehicle Registration (required of everyone operating a motor-powered vehicle on campus) per calendar year for full-time, part-time students, and courtesy students from other institutions. Student’s fee ........................................... $13.00

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 ........................................... $26.00

H. Intern Participation Holder ........................................... $3.76/hr.

I. I.D. Card replacement ........................................... $5.00

J. Athletic Fee—per semester (Fall & Spring semesters only) ............... $16.00

Assessed to all students except those enrolled exclusively for off-campus credit courses. These fees are waived for senior citizens, for employees under the fringe benefit plan, for intern participation holders, and for students on training session under the cooperative education program that are not taking coursework at UCF. Students enrolled at Brevard campus, Daytona campus, or South Orlando campus must also be assessed the athletic fee.

K. Scientific Laboratory fees—fee per student on specific course(s) ............... $2.00 - $15.00
INSTALLMENT FEE PAYMENT PLAN

The University has authority to accept a student's registration and tuition fees on an installment basis. The plan requires the student to pay 50 percent 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 $100.00, exclusive of any financial aid awards.

Forms to request payment of fees under the installment plan are available in the Office of Student Accounts, Room 112, Administration Building.

FLORIDA RESIDENCE

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

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

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

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

1. Documentation establishing legal residence in Florida (this document must be dated at least one year prior to the first day of classes of the term for which resident status is sought). The following documents will be considered in determining legal residence:
   A. Declaration of Domicile.
   B. Proof of purchase of a home in Florida which the student occupies as his residence.
   C. Proof that he has maintained residence in the state for the preceding year (e.g., rent receipts, employment records).
2. Documentation establishing bona fide domicile in Florida which is not temporary or merely incidental to enrollment in a Florida institution of higher education. The following documents will be considered evidence of domicile even though no one of these criteria, if taken alone, will be considered as conclusive evidence of domicile:

A. Declaration of Domicile.
B. Florida voter registration.
C. Florida vehicle registration.
D. Florida driver license.
E. Proof of real property ownership in Florida (e.g., deed, tax receipts).
F. Employment records or other employment-related documentation (e.g., W-2, paycheck receipts), other than for employment normally provided on a temporary basis to students, or other temporary employment.
G. Proof of membership in or affiliation with community or state organizations or significant connections to the State.
H. Proof of continuous presence in Florida during periods when not enrolled as a student.
I. Proof of former domicile in Florida and maintenance of significant connections while absent.
J. Proof of reliance upon Florida sources of support.
K. Proof of domicile in Florida of family.
L. Proof of admission to a licensed practicing profession in Florida.
M. Proof of acceptance of permanent employment in Florida.
N. Proof of graduation from high school located in Florida.
O. Any other factors peculiar to the individual which tend to establish the necessary intent to make Florida a permanent home and that the individual is a bona fide Florida resident, including the age and general circumstances of the individual.

3. No contrary evidence establishing residence elsewhere.
4. Documentation of dependent/independent status (copy of IRS tax return).

OR

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

OR

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

OR

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

OR

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

AND

Make a statement as to the length of residence in Florida and qualification under the above criteria.

FINANCIAL AID

University of Central Florida
FINANCIAL AID OFFICE
Administration Building, #120
Orlando, FL 32816-0113
(305) 275-2827

OFFICE HOURS
Daytime: Monday - Friday
8:00 a.m. to 3:30 p.m.
Evenings: Wednesday & Thursday
5:00 p.m. to 7:00 p.m.

Determining Eligibility for Financial Aid

The Financial Aid Office encourages all students to apply for financial aid and to begin the process early. There are many grant, loan, and employment programs available (these programs are discussed below). Almost all programs require the determination of financial need. Eligibility for most programs is calculated by a nationally standardized formula: the cost of education minus expected family contribution equals financial need.

Financial Aid Application Procedures

To apply for financial aid, a student must be a citizen or permanent resident of the United States, the Mariana Island, or the Pacific Trust Territories. A student can apply at any time
during the year. However, to be considered for all of UCF's financial aid programs for the academic year, the application procedure must be completed before March 15. Students should complete the following steps:

1) Complete a need analysis. UCF requests that students use the ACT Family Financial Statement* and makes this form available after January 1. Completing the need analysis involves several steps and can take four to six weeks, so it is important to file the need analysis well before the deadline date or the beginning of the term for which aid is wanted.
2) Fill out a UCF Financial Aid Application.
3) Request a Financial Aid Transcript from each post-secondary school previously attended whether or not financial aid was received.
4) Respond to all requests for additional information and documentation. Students may request assistance from the Financial Aid Office by letter, by phone, or in person.

*A CSS need analysis will also be accepted.

Financial Aid Programs

Grants

*Pell Grants: largest grant program available to needy undergraduates; minimum six credit hours enrollment required.

Supplemental Educational Opportunity Grants (SEOG): awards made to full-time students in UCF's highest-need category.

Florida Student Assistance Grants (FSAG): Two years Florida residency and minimum 12 credit hours enrollment required; grants determined by the State and based on high need and early application filing.

Loans

National Direct Student Loans (now called Perkins Loans): long-term loans at five percent interest to high-need students.

*Guaranteed Student Loans (GSL): long-term loans presently made at eight percent interest to students enrolled at least half-time at UCF.

Student Employment

College Work-Study: on-campus jobs authorized as part of students' financial aid packages according to their financial need; 12 hours minimum enrollment required.

Florida College Career Work Experience Program (FCCWEP): off-campus jobs related to educational pursuits can be arranged at the request of eligible students who can demonstrate need; two-year Florida residency and half-time enrollment required.

*After UCF's March 15 application deadline, there are only two programs with funds available for awards to eligible students: Pell Grants and Guaranteed Student Loans.

Financial Aid for Graduate Students

Graduate students are eligible to be considered for National Direct Student Loans, Guaranteed Student Loans, and the College Work-Study Program; the application procedures contained above are required. Each college offers various graduate student assistantships and out-of-state Tuition Waivers. In addition, selected scholarships are available to graduate students.

Award Notice and Disbursement Procedures

Eligible students will be mailed an Award Notice which details the types and amounts of aid they are being offered at UCF. Students are allowed 15 days from receipt of their notices to accept or reject any or all of their awards.

Actual disbursements are not made until at least two weeks after classes begin for the term(s) awarded. Once enrollment has been confirmed, UCF's computer system automatically makes full deferments for students whose eligible awards equal or exceed their fee assessments. A partial deferment is entered for students whose eligible awards total an
amount less than their assessments; such students are liable for payment of the difference by the fee payment deadline date.

A minimum of six hours enrollment at UCF is required for automatic deferment. Students who decide to withdraw or to drop classes must go through the add/drop process. Complete instructions are made available during registration.

Legal Requirements

To receive financial aid a student must have no outstanding defaults or refunds due on previous aid.

To remain eligible for financial aid a student must reapply yearly and meet the prevailing eligibility criteria. A student must pass the CLAST, the College Level Academic Skills Test required of sophomore and upper-level transfer students by the State of Florida. Students must meet the standards for Satisfactory Academic Progress established for financial aid recipients. These standards are based on GPA, the hours completed per semester, and a maximum time limit within which to obtain a degree. The standards for Satisfactory Academic Progress are available in detail from the Financial Aid Office.

Employment and Loan Programs Not Based on Financial Need

Loans

Parents Loan for Undergraduate Students (PLUS): parents and independent students may undertake bank loans at twelve percent interest.

UCF Short-Term Loans: available to any enrolled or admitted student for non-tuition purposes only.

Employment

Other Personnel Services (OPS): on-campus employment opportunities.

Cooperative Education Jobs: off-campus employment offered to full-time, degree-seeking students.
Scholarships
UCF offers many scholarships to students who have demonstrated outstanding academic achievement. Many other scholarships are offered through the University and private organizations to students meeting specific eligibility criteria; most are based upon the student’s ethnic background, county of residence, gender, or area of study. UCF has established a SCHOLARSHIP REFERENCE FILE housed at the Circulation Desk of the Orlando campus library that lists over 100 scholarship programs available to UCF students. (Other scholarship reference books are also available at the Circulation Desk.) Students may also refer to the Financial Aid and Scholarship Guide published by UCF’s Financial Aid Office.

TUITION FEE WAIVERS FOR STATE OF FLORIDA EMPLOYEES
State employees, faculty, and staff who utilize a tuition fee waiver for coursework 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. The employee is held responsible to register only on a space-available basis, and only during the prescribed times indicated by the Registrar. In addition, the tuition fee waiver can not be used for courses involving increased costs (such courses as Thesis, Dissertation, and Directed Individual Study).

TUITION FEE WAIVERS FOR SENIOR CITIZENS
Persons 60 years of age or older who meet Florida residency requirements may register for credit classes without payment of application fee, registration fee, and health fee. The senior citizen is held responsible, however, to register only on a space-available basis, and only during the last hour of the add/drop registration period prescribed by the Registrar. No academic credit shall be awarded for completed courses, and the waiver can not be used for courses which involve increased costs. These courses would include, but not be limited to Thesis, Dissertation, and Directed Individual Study.

APPEALS
Students who have been denied fee deferment, refund, or waiver 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 and Accounting. Students must then submit their petitions 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.

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.

1. A FULL REFUND will be made when:
   A. Withdrawal is made before the end of the add/drop period. Summer refunds will not be made until after Term B Registration and add/drop, except by written application to Student Accounts, Room 112 Administration Building.
   B. The course is cancelled by the University, or
   C. A student is denied admission to an offered course by the University for any reason.

2. A partial refund (25 percent of the total fees paid, less building and capital improvement fees) will be made when complete withdrawal from the University is made prior to the end of the fourth week of classes, during a 16 (or 17) week semester or at the end of the first quarter of classes during a mini-semester or summer semester (rounded to the end of the week in which the first quarter occurs).

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

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.

CHECKS

The University cashier will accept personal checks for accounts due to the University. Students are urged to make their own financial arrangements through their choice of commercial banks. For a nominal fee the University Bookstore will cash personal checks not exceeding $50.00. The University is required to collect a $10.00 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.
ACADEMIC POLICIES AND PROCEDURES

ACADEMIC ETHICS

Policy

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

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

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

Procedure

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

STUDENT CLASSIFICATIONS

Students will be classified by level, on the basis of semester hours satisfactorily earned:

FRESHMAN: Through 29 semester hours.

SOPHOMORE: 30-59 semester hours.

JUNIOR: 60-89 semester hours and have fulfilled CLAST and Gordon Rule requirements.

SENIOR: 90 or more semester hours, prior to completion of baccalaureate requirements.

POST BACCALAUREATE: Any student enrolled in courses, regardless of course level (except one working toward another baccalaureate degree), who has a baccalaureate degree but has not been admitted to a graduate program.

GRADUATE: Any student enrolled in graduate courses who has been admitted to a graduate program.

AUDITOR: A student registered for any credit course who is not seeking credit.

CO-OP STUDENT: A student enrolled in the Cooperative Education Program remains a registered student during all off-campus assignment semesters. Furthermore, there is no lapse in continuity in the co-op school calendar: a co-op student is either on assignment or attending class during each school semester. (See Veterans' Benefits for co-ops.)

SPECIAL STUDENT: A student of demonstrated academic ability who does not meet the regular requirements for admission (Early Admission, non-degree-seeking, transient, and auditor).

TEMPORARY: A student who applied before the deadline and is permitted to register and attend class pending completion of his admission 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. A UCF student may not be enrolled as
a transient student in another institution during the term in which
the baccalaureate degree or the Associate of Arts degree is to be
awarded.

NON DEGREE-SEEKING:
A student earning credit, but not working on a degree program.

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

SEMESTER HOURS EXPLAINED
The graduation credit value of each course of instruction is stated in terms of semester
hours. A semester hour of credit represents one class hour of work (or two or more
laboratory hours of work) per week for a semester.
Classes may be offered for a six-week period during the summer semester. 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.

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:

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

Other Actions
W—Withdrawn .......................................................... 0 grade point
WP—Withdrawn Passing ............................................. 0 grade point
WF—Withdrawn Failing ............................................. 0 grade point
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, WP, and I grades.
The grade point average for graduation requirement is 2.0 ("C") and will be computed on
both the student's total academic program and the UCF program.
A request for grade change will be considered only during the term immediately following
the one in which the grade was assigned, an exception being that grades assigned during
the spring semester may be changed during either the following summer or fall terms.
Academic Actions do not change when an incomplete grade is completed nor when a
course is repeated.

ACADEMIC STANDING
All Academic Actions are shown on grade reports and transcripts. The action is generated
due to course completion. Changing a course grade does not necessarily change academic
action. An exception can be made when an error is committed and is so stated on the
Change of Grade request form by the professor.
Semester Average  Grade Point Average on work attempted during any given semester.
UCF Average  Grade Point Average on all work attempted while in attendance at the University of Central Florida.
Overall Average  Grade Point Average on all work attempted since entering college, including work from all previously attended institutions.
Academic Warning  Some first-time-in-college applicants who do not meet University admission requirements may be admitted on Academic Warning. By obtaining a 2.0 GPA ("C" average) or better at the end of the first semester of attendance, Academic Warning will be removed. Earning less than a "C" average the first term will result in Academic Probation. A student may be on Academic Warning only once.
Academic Probation  Action taken when a Student's UCF cumulative or overall GPA drops below 2.0. A student may also be admitted on Academic Probation. Academic Probation will continue until the current term, UCF cumulative, and overall GPA reach 2.0 or better.
Disqualified (First Suspension)  A student on Academic Probation is disqualified upon failure to achieve a 2.0 GPA during the subsequent semester. A student who is disqualified may not enroll at the University for two semesters following disqualification. Readmission after two semesters is not automatic. A disqualified student must submit an application for readmission supported by a letter indicating the reasons for previous academic difficulties and plans for achieving a GPA of 2.0 or better. The total record will be reviewed and action on readmission will be taken by the Director of Admissions. When the Director of Admissions can not make a favorable decision, cases will be referred to the Admissions and Standards Committee.
Exclusion (Second Suspension)  A student readmitted following disqualification who fails to achieve a 2.0 GPA is excluded from the University. Exclusion is most serious and readmission will not be considered prior to a minimum suspension period of one year.
Readmission  If a student has dropped out of the University for any reason, he or she must reapply on the appropriate form (see calendar for deadline).

First-time-in-college students may be admitted on Academic Warning (see above) or Academic Probation at the discretion of the Admissions Office or the Admissions and Standards Committee. Transfer students may be admitted on Academic Probation at the discretion of the Admissions Office or the Admissions and Standards Committee. Academic Probation is intended to inform the student making unsatisfactory progress of his/her 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.

ADMISSION TO THE UPPER DIVISION
To be classified as an upper-division student at the University of Central Florida, a student must complete the following:
1. A minimum of 60 semester hours of academic work.
2. The English and mathematics requirements of the Gordon Rule.
3. Passing scores on three of the four parts of the College Level Academic Skills Test (CLAST).
4. One year of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)

EARNING CREDIT WHILE DISQUALIFIED OR EXCLUDED
A student disqualified or excluded while a Freshman or Sophomore who subsequently receives an A.A. degree with a "C" average (2.0 GPA) on all college work attempted from a Florida public community college may be readmitted to the University with credit earned in accordance with standard University policies.
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.
INCOMPLETE GRADE

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

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

SCHEDULE CHANGES--ADD/DROP POLICY

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

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

WITHDRAWAL POLICY

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

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

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

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

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

TRANSIENT ENROLLMENT AT OTHER INSTITUTIONS

A UCF degree-seeking student who wishes to earn credit at another college or university for transfer back into a degree program must obtain prior approval for specific courses from the Dean or Department Chair of his respective college. Approval of courses for the General Education Program should be obtained from the Office of Undergraduate Studies.

Credit earned without this transient approval may not be accepted. A student may not be enrolled as a transient student in another institution during the term in which the baccalaureate degree or the Associate of Arts degree is to be awarded. Transient forms are available in the Records Office. Transient credit can not be used to reduce the last 30 semester hour residency requirement.

GRADE FORGIVENESS

Policy

Limits: Grade forgiveness is limited to two courses.

Grade forgiveness can be used only for courses taken at UCF or transferred as part of an
Associate of Arts degree from a Florida public college. Grade forgiveness is not retroactive, and therefore may not be used for a course repeated before Fall 1981.

UCF does not honor grade forgiveness granted at other institutions unless it is part of an Associate of Arts degree transferred to UCF from a Florida public community college or university.

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

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

Because of the two-course limit, a student who has used grade forgiveness twice at another institution, and has included those courses in the transfer of an Associate of Arts degree may not use grade forgiveness again at UCF.

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

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

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

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

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

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

Procedure

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

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

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

ACADEMIC HONORS

1. President's Honor Roll Certificate

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

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

2. Dean's List

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

3. Baccalaureate Honors

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

A. Attain a UCF 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 overall grade point average
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 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.

HONORS PROGRAMS

The Honors Programs at UCF afford outstanding students the opportunity to participate in challenging instruction and study. Graduation with University Honors is available to those students who complete 24 hours of honors coursework in the General Education Program and fulfill requirements for honors in their major. Transfer and other students who have completed general education requirements may participate in Departmental Honors through the completion of departmental honors requirements, including an original research project. Students who successfully complete either University or departmental honors will have that fact stated on their transcripts. Information on admission to the honors programs and honors programs requirements may be obtained from Dr. Lawrence Tanzi, Honors Programs Director, Undergraduate Studies.

TIME-SHORTENED DEGREE OPPORTUNITIES

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

Early Admission Program

Students who have demonstrated exceptional academic ability may be permitted to enroll as students at the University of Central Florida any time after completion of their junior year in high school. To be considered for Fall Semester Early Admission, applicants must have:
   1. Superior test scores (SAT 1100 or above, ACT 27 or above).
   2. 'A'-"B" grades in high school.
   3. A recommendation from the student's high school counselor.
   4. A letter of permission from parents or guardian.
   5. A campus interview to ascertain the student's maturity and ability to adjust to collegiate responsibilities.

Qualified students may enroll dually on a part-time basis, taking one or two courses while completing their high school programs. An interview and letters of recommendation from parents and principal are required in addition to a superior record. Students desiring admission prior to high school graduation should contact the Admissions Office for an appointment.

College Level Examination Program (CLEP)

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

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

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

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

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

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

**CLEP GENERAL EXAMINATIONS**

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

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

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

**CLEP SUBJECT EXAMINATIONS**

<table>
<thead>
<tr>
<th>CLEP Subject Exam</th>
<th>Semester Hours</th>
<th>Qualifying Score</th>
<th>UCF Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government</td>
<td>3</td>
<td>50</td>
<td>POS 2041</td>
</tr>
<tr>
<td>American History I***</td>
<td>3</td>
<td>49</td>
<td>AMH 2010</td>
</tr>
<tr>
<td>American History II***</td>
<td>3</td>
<td>49</td>
<td>AMH 2020</td>
</tr>
<tr>
<td>American Literature***</td>
<td>6</td>
<td>50</td>
<td>AML 2011 and AML 3020</td>
</tr>
<tr>
<td>Analysis and Interp. Lit.***</td>
<td>6</td>
<td>51</td>
<td>ENC 1101 and LIT 3000</td>
</tr>
<tr>
<td>Calculus w/Elem. Functions</td>
<td>6</td>
<td>49</td>
<td>MAC 3311 and 3312 or MAC 3253 and 3254</td>
</tr>
<tr>
<td>Clinical Chemistry**</td>
<td>6.7</td>
<td>50</td>
<td>MLS 4630</td>
</tr>
<tr>
<td>College Algebra</td>
<td>3</td>
<td>48</td>
<td>MAC 1104</td>
</tr>
<tr>
<td>College Algebra &amp; Trig</td>
<td>3</td>
<td>50</td>
<td>MAC 1104 or MAC 1114</td>
</tr>
<tr>
<td>College Comp. w/Essay (Duplicate CLEP Exam - Subj: Trig)</td>
<td>6</td>
<td>50</td>
<td>ENC 1101 and ENC 1102</td>
</tr>
<tr>
<td>Computer &amp; Data Proc.</td>
<td>3</td>
<td>49</td>
<td>COC 1100</td>
</tr>
<tr>
<td>Educ. Psychology</td>
<td>3</td>
<td>49</td>
<td>None</td>
</tr>
</tbody>
</table>
Eng. Literature*** 6 49 ENL 2010 or
Freshman Eng. w/Essay*** 6 51 ENC 1101 and
General Biology 6 49 BSC 1020
General Chemistry 6 50 CHM 1020 and 1032
or CHS 1440
General Psychology 3 50 PSY 2013
Hematology** 6.7 51 MLS 3305
Human Growth and Devel. 3 None
Immunohematology** 6.7 50 MLS 4550
Intro. Accounting 6 50 ACG 2001 and 2011
or ACG 3023
Intro. Business Law 6 51 BUL 3111
Intro. Management 3 49 None
Intro. Microeconomics 3 50 ECO 2013
Intro. Marketing 3 50 ECO 2023
Intro. Sociology 6 50 SYG 2000
Languages: French 6/9/12 44/49/56 Corresponding
German 6/9/12 43/52/55 1120 and 1121,
Spanish 6/9/12 45/48/55 2200* and 2230
* Those students receiving six or nine hours are allowed to complete these courses.
** Each student must also satisfactorily complete a lab and an essay exam. Both exams
will be given by the College of Health.
***Satisfactory completion of these exams does not reduce the 24,000 word requirement of
the Gordon Rule.

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

ADDITIONAL PLACEMENT EXAMINATIONS

<table>
<thead>
<tr>
<th>Examination</th>
<th>Passing Scores</th>
<th>Semester Hours Awarded</th>
<th>UCF Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology*</td>
<td>3-4</td>
<td>3</td>
<td>BSC 1020</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
<td>BSC 1020 + 3 hours general elective</td>
</tr>
<tr>
<td>Chemistry*</td>
<td>3-4</td>
<td>3</td>
<td>CHM 1032</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
<td>CHM 1032 + 3 hours general elective</td>
</tr>
<tr>
<td>Computer Sci</td>
<td>3-4</td>
<td>3</td>
<td>COP 1110</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
<td>COP 1110 + 3 hours general elective</td>
</tr>
<tr>
<td>English**</td>
<td>3-4</td>
<td>3</td>
<td>ENC 1101</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
<td>ENC 1101 + 3 hours general elective</td>
</tr>
<tr>
<td>Course</td>
<td>Credits</td>
<td>Units</td>
<td>Code</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>English Lit***</td>
<td>3-4</td>
<td>3</td>
<td>ENL</td>
</tr>
<tr>
<td>French</td>
<td>3-4</td>
<td>3</td>
<td>FRE</td>
</tr>
<tr>
<td>German</td>
<td>3-4</td>
<td>3</td>
<td>GER</td>
</tr>
<tr>
<td>History (AM)***</td>
<td>3-4</td>
<td>3</td>
<td>AMH</td>
</tr>
<tr>
<td>History (EUR)***</td>
<td>3-4</td>
<td>3</td>
<td>EUH</td>
</tr>
<tr>
<td>Latin</td>
<td>3-4</td>
<td>3</td>
<td>LAT</td>
</tr>
<tr>
<td>Math—Cal AB</td>
<td>3-5</td>
<td>4</td>
<td>MAC</td>
</tr>
<tr>
<td>Math—Cal BC</td>
<td>3-5</td>
<td>4</td>
<td>MAC</td>
</tr>
<tr>
<td>Music—List &amp; Lit</td>
<td>3-4</td>
<td>3</td>
<td>MUL</td>
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<tr>
<td>Music Theory</td>
<td>3-4</td>
<td>2</td>
<td>MUT</td>
</tr>
<tr>
<td>Physics B*</td>
<td>3-4</td>
<td>3</td>
<td>PHY</td>
</tr>
<tr>
<td>Physics C</td>
<td>3-4</td>
<td>3</td>
<td>PHY</td>
</tr>
<tr>
<td>Spanish</td>
<td>3-4</td>
<td>3</td>
<td>SPN</td>
</tr>
<tr>
<td>Classics</td>
<td>3-4</td>
<td>3</td>
<td>HUM</td>
</tr>
<tr>
<td>History of Art</td>
<td>3-4</td>
<td>3</td>
<td>ARH</td>
</tr>
<tr>
<td>Studio Art</td>
<td>3-5</td>
<td>3-6</td>
<td></td>
</tr>
</tbody>
</table>

* DOES NOT SATISFY GENERAL EDUCATION PROGRAM SCIENCE LABORATORY REQUIREMENT

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

*** DOES NOT SATISFY GORDON RULE COMPOSITION REQUIREMENT

**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 consult their advisor and the chair of the department in which the course is offered to arrange for an examination. Degree credit will be awarded for those courses successfully completed by departmental examination. Credit by examination may not be attempted in a course in which the student has previously enrolled and may not be used to reduce the last 30 semester hours residency requirement. Credit by examination will not be given for any course lower in content than courses in the same discipline (i.e., with the same rubric) in which a student is currently enrolled or which he/she has already completed. Permission to take an examination is approved by the chair of the department and the Dean of the college in which the course is offered. 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-seeking students.
UNDERGRADUATE DEGREE REQUIREMENTS

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

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

CHOICE OF CATALOG
Student’s Options
Students have the option of fulfilling requirements for graduation under any single UCF catalog in force during their most recent period of continuous enrollment. Students may not use a combination of catalogs to fulfill degree requirements.

A.A. Transfer Student’s Options
A.A. transfer students from Florida public community colleges or universities may use the UCF catalog in effect at the time they began their enrollment at the public institution, provided they maintain continuous enrollment, (as defined below) (1) during enrollment at the public college while earning the A.A. degree, and (2) during the time period between the awarding of the A.A. degree and enrollment at UCF.

Enrollment at a public college after receiving an A.A. degree does not count toward continuous enrollment.

The above rights also apply to A.S. transfer students from Florida public colleges and universities who have been admitted to the Engineering Technology or Nursing programs.

Definition of Continuous Enrollment:
Continuous enrollment is interrupted by non-attendance for either:
• consecutive fall and spring semesters
• consecutive spring, summer, and fall semesters

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

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

**GENERAL EDUCATION PROGRAM COURSES**

(40 semester hours required)

<table>
<thead>
<tr>
<th>A. Communication Foundations</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. *ENC 1101 English Composition I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>2. *ENC 1102 English Composition II PR: ENC 1101</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>3. SPC 1014 Fundamentals of Oral Communication</td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Cultural and Historical Foundations</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. *EUH 2000 Western Civilization I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*EUH 2001 Western Civilization II</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>or *HUM 2211 Western Humanities I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*HUM 2230 Western Humanities II</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>or *AMH 2010 U.S. History: 1492-1877</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*AMH 2020 U.S. History: 1877-present</td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Take one course from the following:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARH 2050 The History of Art I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>ARH 2051 The History of Art II</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>MUL 2011 Enjoyment of Music</td>
<td>3(2,1)</td>
</tr>
<tr>
<td>THE 1020 Theatre Survey</td>
<td>3(2,1)</td>
</tr>
<tr>
<td>THE 2071 Cinema Survey</td>
<td>3(2,2)</td>
</tr>
<tr>
<td>REL 2302 World Religion</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>PHI 2010 Introduction to Philosophy</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*LIT 2110 World Literature I PR: ENC 1102</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*AML 2011 American Literature I PR: ENC 1102</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*ENL 2010 English Literature I PR: ENC 1102</td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Mathematical Foundations</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take one course from each group. Some majors require a specific course or a higher level course in this area. Consult your advisor.</td>
<td></td>
</tr>
<tr>
<td>1. **MAC 1104 College Algebra</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>**MGF 1203 Finite Mathematics</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>2. **CGS 1060 Introduction to Computer Science</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>**STA 2014 Principles of Statistics</td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Social Foundations</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ECO 2013 Principles of Economics I</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>2. POS 2041 American National Government</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>3. Choose one:</td>
<td></td>
</tr>
<tr>
<td>PSY 2013 General Psychology</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>SYG 2000 General Sociology</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>ANT 2003 General Anthropology</td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Science Foundations</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>1. PSC 1512 Physical Science PR: MAC 1104 or MGF 1203</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>PHY 2053C College Physics PR: MAC 1104 or MGF 1203</td>
<td>4(3,3)</td>
</tr>
<tr>
<td>CHM 1020 Concepts in Chemistry PR: MAC 1104 or MGF 1203</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>2. BSC 1020C Biological Principles</td>
<td>4(3,2)</td>
</tr>
<tr>
<td>BSC 1030C Biology and Environment</td>
<td>4(3,2)</td>
</tr>
<tr>
<td>GLY 1000 Geology &amp; Its Applications</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>GEO 1200 Physical Geography</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>*A grade of &quot;C&quot; or better in this course satisfies three hours of the Gordon Rule requirement in English composition. In addition, any upper-division course in compo-</td>
<td></td>
</tr>
</tbody>
</table>
osition or literature taught by the UCF English Department and selected upper-division courses taught by the UCF History Department also satisfy three hours of the English composition requirement, if the course is completed with a grade of "C" or better. A list appears in "The Golden Rule" this section.

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

Substitution of Courses - General Education Program

Students who wish 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." This form may be obtained in college and departmental offices, or from the Office 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 petition is used for all courses not taken at UCF and for any UCF courses being requested to substitute for stated GEP requirements and which are not on the list of approved substitutions.
2. UCF transcripts or 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 Florida public community college or university.
4. All petitions for substitution of GEP courses should be sent to Dr. David Dees, Assistant Dean, Undergraduate Studies.
5. Students transferring between UCF colleges are not required to re-petition for GEP requirements.
6. Appeals of decisions regarding substitution of courses for the GEP should be directed to Dr. Charles N. Micarelli, Dean of Undergraduate Studies.

Substitution requests for requirements in a major or minor should be made to the department offering the program of study.

Alternative Courses - General Education Program

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

<table>
<thead>
<tr>
<th>GEP REQUIREMENTS</th>
<th>ACCEPTABLE SUBSTITUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 1104 (College Algebra)</td>
<td>MAC 1114, MAC 3233, MAC 3253, MAC 3254, MAC 3311, MAC 3312, MAC 3313</td>
</tr>
<tr>
<td>ECO 2013 (Macro Economics)</td>
<td>Any higher level ECO course which has ECO 2013 as a prerequisite.</td>
</tr>
<tr>
<td>PHY 2053C (Physics)</td>
<td>PHY 3048, PHY 3049, PHY 2054C, PHY 3014, PHY 3015, PHY 3421, CHM 2045, CHM 1032, CHM 1440</td>
</tr>
<tr>
<td>CHM 1020 (Chemistry)</td>
<td>BSC 2010</td>
</tr>
<tr>
<td>BSC 1020 or BSC 1030 (Biology)</td>
<td>GEO 3370</td>
</tr>
<tr>
<td>GEO 1200 (Geography)</td>
<td>CGS 3000, CGS 3422, COP 1200, COT 3100</td>
</tr>
<tr>
<td>CGS 1060 (Intro to Computer)</td>
<td>STA 3023</td>
</tr>
<tr>
<td>STA 2014 (Statistics)</td>
<td></td>
</tr>
</tbody>
</table>

FOREIGN LANGUAGE PROFICIENCY REQUIREMENT

The Foreign Language Proficiency requirement applies to all students seeking their first baccalaureate degree under the 1987-1988 catalog. Students graduating with a Bachelor of Science degree must demonstrate proficiency in a foreign language equivalent to one year of college instruction. Students graduating with a Bachelor of Arts degree must demonstrate proficiency equivalent to two years of college instruction in a single language. This requirement may be met either by successful completion of the appropriate college-level course or by examination. Languages which may be used include those taught at UCF and any others for which the University can obtain standardized proficiency tests.

Important aspects of the requirement are:

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

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

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

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

THE GORDON RULE

The Gordon Rule (State Rule 6A-10.30) applies to students who first enroll in any college or university after October 1982. The rule requires students to complete 24,000 words of composition in 4 courses (12 semester hours) and to complete 2 courses (6 semester hours) of mathematics at the level of college algebra or higher. Each course must be completed with a grade of “C” or better.

Students who wish to use transfer credit to satisfy the Gordon Rule must petition the Office of Undergraduate Studies for approval, using the General Education Program petition form. CLEP and other forms of credit by examination may not be used to satisfy the composition portion of the Gordon Rule Requirement.

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

<table>
<thead>
<tr>
<th>Gordon Rule Requirement:</th>
<th>GEP Courses Which Satisfy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 6 hours of math at the level of college algebra or higher</td>
<td>(1) college algebra or finite math</td>
</tr>
<tr>
<td>Any higher level (3000-level or above) course in math, statistics, or computer science may also be used toward fulfillment of the math portion of the Gordon Rule Requirement.</td>
<td>(2) statistics or computer science</td>
</tr>
<tr>
<td>2. 12 hours of coursework in which the student must complete 24,000 words of composition</td>
<td>(1) 6 hours of English Composition</td>
</tr>
<tr>
<td></td>
<td>(2) 6-hour sequence of Western Humanities, U.S. History, or Western Civilization</td>
</tr>
</tbody>
</table>

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

| ADV 4101 Adv Copy & Campaigns | JOU 306 Critical Writing |
| JOU 3100 News Reporting | PUR 4800 Public Relations Campaigns |
| JOU 4302 Editorial/Column Writing | RTV 3501 Broadcast Copywriting |
| JOU 4310 Freelance Writing | RTV 3300 Broadcast Newswriting |
| JOU 4300 Feature Writing | RTV 4402 Broadcast Criticism |
| JOU 4104 Public Affairs Reporting | THE 4072 Principles of Motion Picture Art |

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

| AMH 3402 History of the South to 1865 | AMH 4130 The Age of the American Revolution 1763-1789 |
| AMH 3403 History of the South Since 1865 | AMH 4140 Jeffersonian America |
| AMH 3441 History of the Frontier: Eastern America | AMH 4160 Jacksonian America |
| AMH 3442 History of the Frontier: Western America | AMH 4170 Civil War and Reconstruction |
| AMH 3445 Spanish Borderlands | AMH 4201 Robber Baron Era |
| AMH 3460 History of Urban America | AMH 4231 United States History: 1914-1945 |
| AMH 3540 Military History | AMH 4270 United States History: 1945-Present |
| AMH 3560 Women in American History | AMH 4311 American Culture I |
| AMH 3570 Black American History | AMH 4313 American Culture II |
| AMH 3800 Canadian History | AMH 4110 Colonial America, 1607-1763 |
AMH 4510 Rise of the US to World Power, 1776-1914
AMH 4511 US as a Great Power: 1914-Present
ANT 3145 Archae of Complex Soc
ANT 3162 Archae of Mid & S. Am
ANT 3163 Mesoam Arch
ANT 3328 Maya Arch
ANT 3930 Seminar in Arch Meth
ARH 4350 Baroque Art
ARH 4430 19th Century Art
ARH 3456 Art After 1945
ARH 3530 Asian Art
ARH 4450 20th Century Art
ARH 4655 Meso American Art
ARH 4311 Early Italian Renaissance Art
ARH 4312 Late Italian Renaissance Art
ASH 3300 Survey of East Asia
ASH 4404 China in 19th and 20th Centuries
ASH 4442 Modern Japan, 19th & 20th Centuries
EUH 2095 Introduction to Anglo-American Law
EUH 3121 Age of Transition
EUH 3122 Medieval Society & Civilization
EUH 3142 Renaissance and Reformation
EUH 3202 Enlightenment and Religious Revival
EUH 3235 Romanticism and Realism
EUH 3242 The Emergence of Modern Soc. 1870-1930
EUH 3281 Second World War & Rebirth of Europe
EUH 3401 Ancient Greece
EUH 3411 Ancient Rome
EUH 3453 Age of Revolution and Napoleon
EUH 3651 War and Society
EUH 4284 Fascism & the Totalitarian Dictatorships
EUH 4456 France, 1914-Present
EUH 4461 Rise of Modern Germany
EUH 4465 Hitler's Third Reich
EUH 4500 English History to 1485
EUH 4501 English History to 1485-1815
EUH 4502 British History: 1815-Present
EUH 4530 British Empire & Commonwealth
EUH 4571 History of Russia to 1801
EUH 4574 History of Russia 1801-1917
EUH 4576 History of the Soviet Union: 1917-Present
EUH 4620 European Great Powers: 1815-1914
EUH 4621 War & International Politics in Europe 1914 to present
FIL 4201 Film Production II
HIS 4150 History and Historians
HUM 3431 Classical World: Greece
HUM 3432 Classical World: Rome
JOU 4300 Feature Writing
JOU 4104 Public Affairs Reporting
JOU 4306 Critical Writing
LAH 3130 Latin American History I
LAH 3200 Latin American History II
LAH 3400 History of Mexico & Central America
LAH 3470 History of the Caribbean
LEA 3012 Legal Writing
PHH 3100 Ancient Philosophy
PHH 3400 Modern Philosophy
PHI 1100 Critical Thinking
PHI 3600 Ethics
PHI 3800 Aesthetics
PHI 3803 Philosophy & Creativity
REL 3203 Hebrew & Christian Heritage
RTV 4403 Radio TV & Society
SOW 3104 Assessing Human Development
SYP 3400 Social Change
THE 3112 Theatre History I
THE 3113 Theatre History II

COLLEGE LEVEL ACADEMIC SKILLS TEST

The College-Level Academic Skills Test (CLAST) is designed to ensure that students have achieved communication and computation skills commensurate with successful completion of the Lower Division. All students seeking an Associate of Arts or Baccalaureate degree from UCF are required to pass CLAST. CLAST must be taken no later than the term in which a student enrolls for the 55th credit hour. Transfer students with more than 55 credit hours who have not had the opportunity to take CLAST may be admitted, but must take CLAST during their first term at UCF. Students passing 3 of the 4 CLAST subsections will be permitted to enroll for a maximum of 36 additional upper division hours.

CLAST is offered only once per term. Students must register in advance at the Office of Undergraduate Studies (AD 210) or the Counseling and Testing Center (RS 203). Further information regarding CLAST may be obtained from the Office of Undergraduate Studies.

SUMMER ATTENDANCE REQUIREMENT

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

To be classified as an upper-division student at the University of Central Florida, a student must complete the following:
1. A minimum of 60 semester hours of academic work.
2. The English and mathematics requirements of the Gordon Rule.
3. Passing scores on three of the four parts of the College Level Academic Skills Test (CLAST).
4. One year of college instruction in a single foreign language. (This requirement applies to those students admitted to the University without the required two units of foreign language in high school.)

STEPS IN THE GRADUATION PROCESS

A student should apply to the Registrar for graduation before registering for his final semester of attendance and not later than the end of the second week of the term of graduation.
Upon completion of 100 undergraduate semester hours of coursework, the student is notified to report to his Academic Advisor.

The following steps are required of 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 catalog under which the student has indicated he wishes to graduate shall constitute a recommendation of the respective college faculty that the degree be awarded, assuming the student is in good standing in the University.

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

TEACHER CERTIFICATION REQUIREMENTS

Since July 1, 1980, initial certification requirements (Temporary Certificate) in Florida have included three basic components with a fourth now added as prerequisite to (Regular Certificate) full certification. The components are:
1. General Preparation
   Courses included in this category are normally classified as general education (i.e., General Education Program). A graduate with a Bachelor's degree from an accredited institution shall be considered to have met the General Preparation requirements.
2. Teaching Specialization
   Courses included in this category are normally classified as the major area in a student's college program. Other subjects can be shown if the specific requirements in 6A-4.07 through 6A-4.35 Florida Requirements for Teacher Certification have been met.
3. Professional Preparation
   Students can complete a program of Professional Preparation by one of two means at UCF. These means are:
   A. The State-Approved Program of Teacher Education (i.e., a major in the College of Education) and satisfaction of state requirements for SAT or ACT scores.
   B. The Basic Certification Program (i.e., a major in some other college) and admissibility to the professional phase of the program.
4. Comprehensive Examination
   Competency must be demonstrated on a written examination in the areas of Mathematics, Reading, Writing, and Professional Skills. Examinations will be administered at least three times per year throughout the State of Florida.
   Beginning July 1, 1981, a Regular Florida Teacher's Certificate may be issued to persons meeting all requirements for the Temporary Certificate and satisfactorily completing a year-long beginning teacher program approved by the State Board of Education.
ACADEMIC PROGRAMS

UNDERGRADUATE DEGREES

Associate of Arts Degree

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

The Associate of Arts degree is awarded only upon application. The application form may be obtained in the 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. A student may not be enrolled as a transient student in another institution during the term in which the Associate of Arts degree is to be awarded. An Associate of Arts degree will not be awarded in the same term that the baccalaureate degree is to be awarded or in any term following the completion of the baccalaureate degree.

Baccalaureate Degrees

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

College of Arts and Sciences

Bachelor of Arts (B.A.)

Majors: Anthropology, Art, Communication, Criminal Justice, Economics, English, Film (RTV), Foreign Languages (General), French, History, Humanities, Humanities and Fine Arts (Intr.), Journalism, Music, Legal Studies, 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.)

Majors: 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.)

Majors: Accountancy, Economics, Finance, General Business Administration, Hospitality Management, Management, Marketing

College of Education

Bachelor of Science (B.S.)

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.)

Majors: Aerospace Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Environmental Engineering, Industrial Engineering, Mechanical Engineering

Bachelor of Engineering Technology (B.E.T.)


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College of Health
Bachelor of Arts (B.A.)
    Major: Communicative Disorders
Bachelor of Science (B.S.)
    Major: Medical Record Administration, Medical Laboratory Sciences, Radiologic Sciences, Cardiopulmonary Sciences
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

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

Second Baccalaureate Degree
Any UCF student desiring to obtain two baccalaureate degrees must meet the requirements for both degrees and earn a minimum of 150 hours. A separate diploma will be awarded for each degree.
Transfer graduates from accredited four-year U.S. institutions who apply for admission to work toward a second baccalaureate degree at the University of Central Florida must meet the regular graduation requirements of the major department, and the 30 semester-hour residency requirement. Students holding the baccalaureate degree from accredited U.S. institutions are considered to have completed all General Education Program Requirements. Students who hold degrees from foreign institutions may be required by the Dean of Undergraduate Studies to fulfill all or part of the UCF General Education Program requirements.

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

GRADUATE DEGREES
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

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Clinical Psychology
Computer Science
Industrial Chemistry
Industrial Psychology
Mathematical Science
Microbiology
Physics
Statistical Computing

**College of Business Administration**

Doctor of Philosophy in Business Administration (Ph.D.)
Master of Arts (M.A.)
Applied Economics
Master of Business Administration (M.B.A.)
Master of Science (M.S.)
Accounting
Taxation

**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
Counselor Education
School Psychology (M.S.)
K-12--Education Media Specialist, Music Education, Physical Education, Reading Specialist, Art Education
Secondary Education--Business Education (Comprehensive), 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 Civil Engineering (M.C.E.)
Master of Science (M.S.)
Engineering
Master of Science in Engineering (M.S.E.)
Civil Engineering
Computer Engineering
Electrical Engineering
Environmental Engineering
Industrial Engineering
Industrial Engineering/Manufacturing 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.)
Civil Engineering
Computer Engineering
Electrical Engineering
Environmental Engineering
Industrial Engineering
Mechanical Engineering

**College of Health**

Master of Arts (M.A.)
Communicative Disorders
Master of Science (M.S.)
Health Sciences
UNDERGRADUATE PROGRAMS

Anthropology (BA)  History (BA)
Art (BA)            Humanities (BA)
Art (BFA)          Journalism (BA)
Biological Science (BS)  Legal Studies (BA)
Biology (BS)        Mathematics (BS)
Botany (BS)         Music (BA)
Limnology (BS)      Music Education (BA)
Microbiology (BS)   Philosophy (BA)
Zoology (BS)        Physics (BS)
Chemistry (BS)      Political Science (BA)
Communication (BA)  Psychology (BA)
Computer Science (BS)  Public Administration (BA)
Criminal Justice (BA)  Radio-Television (BA)
Economics (BA)     Social Sciences (Int.)(BS)
English (BA)    Social Work (BSW)
Film (BA)          Sociology (BA)
Foreign Language Combination (BA)  Spanish (BA)
Forensic Science (BS)  Speech (BA)
French (BA)        Statistics (BS)

GRADUATE PROGRAMS*

Computer Science (Ph.D.)  Microbiology (MS)
Biological Science (MS)    Physics (MS)
Chemistry, Industrial (MS)  Political Science (MA)
Communication (MA)          Psychology, Clinical (MS)
Computer Science (MS)       Psychology, Industrial (MS)
English (MA)                Public Administration (MPA)
History (MA)               Sociology, Applied (MA)
Mathematical Science (MS)  Statistical Computing (MS)

OTHER PROGRAMS

Predental  Prepharmacy
Premedical  Prepodiatry
Preoptometry  Preveterinary
Prelaw

*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

Pre-Health Coordinator: Dr. O.M. Berringer, BL 103, Phone 275-2968

The College of Arts and Sciences offers preprofessional programs in the health disciplines leading to further study in schools of dentistry, medicine, osteopathic medicine, optometry, pharmacy, podiatry, and veterinary medicine. They are administered through the Pre-Health Professions Advisement Office, located in the Biological Sciences Building, Room 103. Other programs associated with the health-related professions (i.e., the allied health sciences) are administered through the College of Health.

Prelaw Program

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

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.

Office of Academic Support and Information Services

Director: Ms. Judith Boyle, FA 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 FA 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, or by calling 275-2212.

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/her 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/her program in consultation with a faculty advisor appointed by the chair of the major department or by the Dean of the College of Arts and Sciences.

INTERDISCIPLINARY MINOR PROGRAMS

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 4512, LIT 4354, SYD 3720. The student should be advised by the program advisor prior to registration.

American Studies
The minor in American Studies requires at least 21 hours of approved upper-division courses. The courses include at least three hours of restricted electives from each of three fields: literature and humanities, social sciences, and history. Other courses may be chosen from the list of approved courses available from the American Studies advisor. For further information, call Dr. K. Seidel, 275-2251.

INTERNATIONAL STUDIES MINOR PROGRAMS

Canadian Studies
Canadian Studies offers both a certificate and a minor. These programs are interdisciplinary and include courses from the departments of English, History, Political Science, Public
Service Administration, Foreign Languages, Anthropology, and the College of Engineering.
For information consult Dr. Henry Kennedy, at the Canadian Studies Center, FA 404, Tel. 275-2079.

Judaic Studies
An interdisciplinary minor in Judaic Studies is offered through the Department of Foreign Languages, with the cooperation of the departments of Humanities, Philosophy and Religion, English, History, Political Science, and Sociology/Anthropology. Included in the 26-28 required hours are Jewish History, at least one year of Hebrew, and 2-4 upper level courses such as JST 3613 Modern Hebrew Culture, REL 3203 The Hebrew and Christian Heritage, LIT 4373 Literature of the Bible, and JST 3905.1 Survey of Jewish Literature. See courses listed under prefix ASH, HBR, JST, REL, and WOH. For details contact Dr. Moshe Pelli, Director of Judaic Studies, FA 438 or 443, 281-4039 or 275-2466.
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.

Soviet Area Studies
Five UCF departments, Foreign Languages, History, Political Sciences, Sociology, and Humanities, Philosophy and Religion, have pooled their resources to offer a minor to students interested in Soviet Area Studies a basic and well-rounded background in the field. The philosophy of the program is to offer students a multidisciplinary approach to the subject, so as to allow them to grasp the subject in its complexity and to understand linguistic, cultural, historical, political, and socio-economic interrelationships.

Interested students should register for the minor with Dr. Karl-Heinrich Barsch, Department of Foreign Languages, FA 443, ext. 2466. For further information consult any of the above mentioned departments.

FOREIGN STUDY CENTERs—Undergraduate Interinstitutional Transient Program
The State University System operates study centers in London, England and Florence, Italy during the fall and spring semesters. Students with 27 or more semester hours of credit and GPA’s 2.5 or above in all State Universities are eligible to apply for one or both semesters as interinstitutional transient students (see page 47). Faculty at the centers are drawn from the nine State Universities. While credits are earned through Florida State University, which administers the program on behalf of the State University System, credits are fully transferable within the System. Students at the Centers are considered to be resident in their home institutions for attendance and degree purposes.

Classes at the Florence Center emphasize art history, Italian, social sciences, and the humanities; at the London Center, theatre, business, English, history and the social sciences. Field trips and museum visits are common to both. For further information consult Dr. Thomas Greenhaw in the Department of History (London Program) phone 275-2224 or Dr. Robert Flick in the Department of Humanities, Philosophy and Religion (Florence Program), phone 275-2273.

DEPARTMENT OF ART
Chair: M. Wahlman, FA 523, Phone 275-2676
Faculty: Chavda, Eyfells, Gaudnek, Lotz, Rivers, Skoglund, String, Wellman

The curriculum in Art provides professional preparation in art history and in the studio areas of ceramics, drawing, graphic design, painting, photography, printmaking, and sculpture, as well as combination specializations. Both the Bachelor of Arts and the Bachelor of Fine Arts degrees are offered.

Visual Arts Forum Requirement: All majors are required to attend a minimum of 75% of the Visual Arts Forum events.

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

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, and twelve semester hours of Art Specialization at the 3000-4000 level.

BACHELOR OF ARTS: ART
Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   A student must achieve at least a "C" grade point average (2.0) in the courses of his or her major.
   (See page 68)
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, Design Fundamentals I, II
      ART 2201C, 2202C, History of Art I, II
      Visual Arts Forum
      ARH 4906 Senior Research
   B. Restricted Electives
      1. Any one:
         ARH 4800 Theory and Criticism (3)
         ARH 3820 Arts Administration (3)
         PHI 3800 Aesthetics (3)
   C. Specialization
      3000 and 4000 level Art History courses
   D. Foreign Language
      2 years of college level courses.
   E. Comprehensive Art History Examination

II. Art (Studio)
   A. Required Courses
      ART 2201C, 2202C Design Fundamentals I, II
      ART 2300C, 2301C Drawing Fundamentals I, II
      ARH 2050, 2051 History of Art I, II
      ARH 3000-4000 Art History Courses
      Including PGY 3001
   B. Area Specialization
      3000-4000 level courses from:
      Ceramics, Drawing, Graphic Design, Painting, Printmaking, Photography, and Sculpture.
   C. Restricted Electives
      9 hours
      3000-4000 level courses from at least 3 areas outside the area of specialization: Art History, Ceramics, Drawing, Fibre and Fabrics, Film, Graphic Design, Painting, Printmaking, Photography, Sculpture and Special Topics.
   D. Portfolio Requirement
      Seniors are required to submit a portfolio of representative work in the student’s area of specialization, for review by faculty.

   Total Semester Hours in Art and other courses 45-48
   Total Semester Hours Required 120

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

1. University graduation requirements.
   A student must achieve at least a “B” grade point average (3.0) in the courses of her or his major.
   (See pages 52-59)

2. Special college and/or department requirements
   (See page 70)

3. Required Courses
   ART 2201C, 2202C  Design Fundamentals I, II  6 hours
   ART 2300C, 2301C  Drawing Fundamentals I, II  6 hours
   ARH 2050, 2051  History of Art I, II  6 hours
   ARH 3000-4000  3 Art History Courses  9 hours
   or PGY 3001

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

4. Restricted Electives
   15-21 hours
   3000-4000 level courses from at least 3 areas outside the student's specialization: Art History, Ceramics, Drawing, Fibre and Fabrics, Film, Graphic Design, Painting, Printmaking, Photography, Sculpture, and Special Topics.

5. Electives
   12 hours
   Total Semester Hours in Art Courses  54-60
   Total Semester Hours Required  120
The Department of Biological Sciences offers Bachelor of Science degree programs in biology, botany, limnology, microbiology, and zoology; a minor in biology; and the Master of Science in Biological Science and in Microbiology. The Core Curriculum required of all undergraduate degree programs provides a background in the chemical, mathematical, and physical sciences as well as broad preparation in the biological sciences. This diverse background opens career opportunities for graduates in areas outside of their particular degree program. In addition, our graduates are well prepared to further their education in professional or graduate schools. Selection of electives, in consultation with a faculty advisor, permits emphasis on a specific subdiscipline within a degree program. Research experience and exposure to specialized topics not taught through formal courses may be gained through independent study contracts.

MINOR IN BIOLOGY

The Department of Biological Sciences offers a minor in Biology, consisting of a minimum of 30 hours.

Required courses (20 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 biology course(s) accepted for degree programs 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.
C. To receive credit for a biological science course, students must pass both the lecture and laboratory components.

BACHELOR OF SCIENCE: ALL MAJORS

Degree Requirements

1. To be eligible for a major in any of the biological science degree programs, 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. 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. To receive credit for a biological sciences course, students must pass both the lecture and laboratory components. Students seeking a double major within the Department of Biological Sciences must satisfy the requirements of both majors and must take no fewer than 40 semester hours of coursework appropriate to the combined areas of specialization of the two majors.

2. The Core Curriculum is required of all undergraduate degree programs in the Department of Biological Sciences.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOT 2010C</td>
<td>General Botany</td>
<td>3</td>
</tr>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
<td>4</td>
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<tr>
<td>CHM 2045, 2046, 2046L</td>
<td>Chemistry Fundamentals I, II, lab</td>
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<tr>
<td>CHM 3210, 3211, 3210L</td>
<td>Organic Chemistry I, II, lab</td>
<td>8</td>
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<tr>
<td>MCB 3013C</td>
<td>General Microbiology</td>
<td>5</td>
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<tr>
<td>MCB 4404C</td>
<td>Microbial Metabolism</td>
<td>4</td>
</tr>
<tr>
<td>PCB 3023</td>
<td>Cell Physiology</td>
<td>3</td>
</tr>
<tr>
<td>PCB 3043, 3043L</td>
<td>Principles of Ecology with lab</td>
<td>4</td>
</tr>
<tr>
<td>PCB 3063, 3063L</td>
<td>Genetics with lab</td>
<td>4</td>
</tr>
<tr>
<td>PHY 2053C, 2054C</td>
<td>College Physics I and II</td>
<td>8</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
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</table>
BACHELOR OF SCIENCE: BIOLOGY
Degree Requirements:
1. University graduation requirements
   (See pages 57-59)
2. Special college or departmental requirements
   (See pages 68 and 73)
3. Required courses
   Core Curriculum (See page 73) 59-60 hours
   4. Restricted Electives
      Biology, Botany, Microbiology, or Zoology to be selected in consultation with advisor from courses numbered 3000 or above. Up to 6 hours of formal course work in Chemistry, 3000-level or above, may also be applied.
5. Electives (Varies with degree program; student should consult advisor).
   Total Semester Hours Required 128

BACHELOR OF SCIENCE: BOTANY
Degree Requirements:
1. University graduation requirements
   (See pages 48-51)
2. Special college or departmental requirements
   (See pages 68 and 73)
3. Required Courses
   Core Curriculum (See page 73) 59-60 hours
   BOT 4223C Plant Anatomy 4 hours
   BOT 4303C Plant Kingdom 5 hours
   BOT 4503C Plant Physiology 4 hours
   BOT 4713C Plant Taxonomy 5 hours
4. Restricted Electives
   Biology, Botany, Chemistry, Microbiology, or Zoology. To be selected in consultation with advisor from courses numbered 3000 or above. Must include at least 4 hours of Botany.
5. Electives
   (Varies with degree program; student should consult advisor).
   Total Semester Hours Required 128

BACHELOR OF SCIENCE: LIMNOLOGY
Degree Requirements:
1. University graduation requirements
   (See pages 48-51)
2. Special college or departmental requirements
   (See pages 68 and 73)
3. Required Course
   Core Curriculum (See page 73) 59-60 hours
   COP 1200 Computer Programming 3 hours
   PCB 4302C Limnology I 4 hours
   PCB 4303C Limnology II 4 hours
   ZOO 4880C Fisheries Management 4 hours
4. Restricted Electives
   Biology, Botany, Chemistry, Computer Science, Microbiology, Physics, Statistics, or Zoology courses numbered 3000 or above. To be selected in consultation with advisor.
5. Electives
   (Varies with degree program; student should consult advisor)
   Total Semester Hours Required 128
BACHELOR OF SCIENCE: MICROBIOLOGY

Degree requirements:
1. University graduation requirements
   (See pages 57-59)
2. Special college or departmental requirements
   (See pages 68 and 73)
3. Required courses
   Core Curriculum (See page 73)
   BCH 4053, 4054 Biochemistry I, II
   CHM 3120C Analytical Chemistry
   MCB 3023, 3023L Pathogenic Microbiology with lab
   MCB 4114C Microbial Systematics & Diagnosis
   MCB 4404C Microbial Metabolism
   MCB 4603C Environmental Microbiology
   PCB 3233, 3233L Immunology with lab
   Restricted Electives
   None
4. Electives
   (Varies with degree program; students should consult advisor)

Total Semester Hours Required

BACHELOR OF SCIENCE: ZOOLOGY

Degree Requirements:
1. University graduation requirements
   (See pages 57-59)
2. Special college or departmental requirements
   (See pages 68 and 73)
3. Required Courses
   Core Curriculum (See page 73)
   PCB 4723 Animal Physiology
   ZOO 3303C Vertebrate Zoology
   ZOO 3713C Comparative Vertebrate Zoology
   ZOO 4203C Invertibrate Zoology
   Restricted Electives
   ZOO courses numbered 3000-level or above. To be selected in consultation with advisor.
4. Electives
   (Varies with degree program; student should consult advisor)

Total Semester Hours Required

DEPARTMENT OF CHEMISTRY

Chair: G. Mattson, CH 117, Phone 275-2246
Faculty: Baker, Clausen, Cunningham, Elsheimer, Gupton, Hampton, Hertel, Juge, Kujawa
(Geology), Madsen, McGee (Forensic Science), Trefonas

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

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

MINOR

The Department of Chemistry offers a minor consisting of a minimum of 28 semester hours. Required courses (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 57-59)

2. Special college and/or department requirements
   (See page 68)

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 3210L, 3212L: Organic Laboratory Techniques I, II 4 hours
   - CHM 3120C: Analytical Chemistry 5 hours
   - CHM 3410, 3411: Physical Chemistry I, II 3 hours
   - CHM 3411L: Physical Chemistry Laboratory 1 hour
   - 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: Technical Report Writing 3 hours
   - MAC 3311, 3312, 3313: Calculus with Analytic Geometry I, II, III 12 hours
   - PHY 3048, 3048L, 3049, 3049L: Physics for Engineers & Scientists 8 hours
   - STA 3023: Statistical Methods I 3 hours

4. Restricted Electives

   a. Biological Sciences (minimum of 7 hours)
      - BSC 2010C: General Biology 4 hours
      - Approved electives restricted to those biological science courses not listed as designed for non-majors.

   b. Minimum of 3 hours
      - COP 1200: Computer Programming 3 hours
      - COP 2000: Programming I 3 hours
      - COP 2001: 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
      - CET 3123C: Microprocessor Electronics 3 hours
      - EEL 3341C: Introduction to Digital Circuits 3 hours
      - EEL 3342C: Intro to Digital Circuits and Systems 4 hours

   d. Minimum of 6 hours
      - BCH 4053: Biochemistry I 3 hours
      - BCH 4054: Biochemistry II 3 hours
      - CHM 4220: Advanced Organic Chemistry I 3 hours
      - CHM 4235: Applied Molecular Spectroscopy 3 hours
      - CHM 4221: Advanced Organic Chemistry II 3 hours
      - CHM 4580: Advanced Physical Chemistry 3 hours
      - CHM 5710: Chemical Structure I 2 hours
      - CHS 3531: Forensic Analysis 3 hours
      - CHS 4110C: Nuclear and Radio Chemistry 3 hours
      - CHS 4200: Concepts in Industrial Chemistry 3 hours
      - CHS 5250: Chemical Synthesis I 2 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: WW. 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 57-59)
2. Special college and/or department requirements
   (See page 68)
3. Required Courses
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>CHM 2045, 2046</td>
<td>Chemistry Fundamentals I, II</td>
<td>7</td>
</tr>
<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHM 3210, 3211</td>
<td>Organic Chemistry I, II</td>
<td>6</td>
</tr>
<tr>
<td>CHM 3210L</td>
<td>Organic Laboratory Techniques I</td>
<td>3</td>
</tr>
<tr>
<td>CHM 3120C</td>
<td>Analytical Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>CHS 3501</td>
<td>Introduction to Forensic Science</td>
<td>3</td>
</tr>
<tr>
<td>CHS 3505</td>
<td>Forensic Microscopy</td>
<td>3</td>
</tr>
<tr>
<td>CHS 3531</td>
<td>Forensic Analysis of Controlled Substances</td>
<td>3</td>
</tr>
<tr>
<td>CHS 4591</td>
<td>Forensic Science Internship</td>
<td>6</td>
</tr>
<tr>
<td>COP 1200</td>
<td>Computer Programming</td>
<td>3</td>
</tr>
<tr>
<td>ENC 3241</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>CHM 3410</td>
<td>Physical Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHM 4130C</td>
<td>Advanced Analytical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>MAC 3253, 3254</td>
<td>Applied Calculus I, II</td>
<td>6</td>
</tr>
<tr>
<td>PHY 2053C, 2054C</td>
<td>College Physics I, II</td>
<td>8</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
</tbody>
</table>

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 2010C, General Botany or MCB 3013C, General Microbiology, with the remainder normally selected from upper division courses of science or forensic science. Exceptions to these stipulations must be approved by the student's advisor.

5. Electives
   Total Semester Hours Required 5 hours

120
DEPARTMENT OF COMMUNICATION

Chair: J. Welke, FA 534, Phone 275-2681

Faculty: Arnold, Bledsoe, J. Butler, Davis, Fedler, Grasty, Hall, Hoglin, Johnson, McCann, Meeske, Morgan, O'Keefe, Pryor, R. Smith, Sullivan, Tanzi, 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 are required to demonstrate written proficiency in grammar, punctuation, and word usage. This is a prerequisite for most of the department writing courses and a requirement for graduation. Testing is conducted prior to the start of each semester and remedial options are provided. See your academic advisor or contact the department office for more information.

Transfer Limitation: Generally, students may not substitute lower division courses taken at community colleges for upper division courses in the communication major.

Typing Proficiency: Certain writing courses have a 20 word-per-minute typing ability prerequisite. All Journalism majors (News/Editorial and Advertising/Public Relations) and all Radio-Television majors must satisfy this proficiency requirement as well as all others planning to enroll in these courses. A required brief typing test will be given by the department prior to the start of each semester. See your academic advisor or contact the department office for further information.

MINOR

The Department of Communication offers the following minors consisting of a minimum of 15-16 semester hours in each minor.

1. Film
   Required Courses: FIL 3200 (4), FIL 4201 (4), FIL 3300 (4), Either RTV 3000 (3) or PGY 3610 (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 4330 (3), SPC 4325 (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 (3) or JOU 3003 (3), plus JOU elective (writing course) (3 hrs.).

6. Radio-TV
   RTV 3000 (3), RTV 4700 (3); RTV 3200 (4); Choose one - RTV 3300 (4), RTV 3501 (4).
7. Speech Communication
COM 3311\(^1\) (3) and 15 semester hours from the remaining 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 Grammar proficiency test required.

BACHELOR OF ARTS: COMMUNICATION

Degree Requirements
1. University graduation requirements
(See pages 57-59)
2. Special college and/or department requirements
(See pages 78)
3. Required Courses
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 3311</td>
<td>Communication as a Behavioral Science</td>
<td>3</td>
</tr>
<tr>
<td>SPC 4330</td>
<td>Nonverbal Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPC 4540</td>
<td>Attitudes and Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPC 3425</td>
<td>Group Interaction</td>
<td>3</td>
</tr>
</tbody>
</table>
4. Restricted Electives
5. Electives
(See Area of Specialization)
AREAS OF SPECIALIZATION

1. General Communication Track Requirements
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPC 3301</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPC 3542</td>
<td>Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>MMC 4200</td>
<td>Communication Law</td>
<td>3</td>
</tr>
</tbody>
</table>

   Select one course from history:
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTV 3000</td>
<td>Foundations of Broadcasting</td>
<td>3</td>
</tr>
<tr>
<td>JOU 3003</td>
<td>History of American Journalism</td>
<td>3</td>
</tr>
<tr>
<td>SPC 4633</td>
<td>Rhetoric of Social and Political Action</td>
<td>3</td>
</tr>
<tr>
<td>SPC 5200</td>
<td>Evolution of Communication Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

   Select 2 courses from motivation:
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUR 4000</td>
<td>Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>ADV 4000</td>
<td>Principles of Advertising</td>
<td>3</td>
</tr>
<tr>
<td>RTV 4402</td>
<td>Broadcast Criticism</td>
<td>3</td>
</tr>
<tr>
<td>SPC 3250</td>
<td>Speech and Human Relations</td>
<td>3</td>
</tr>
</tbody>
</table>

   Select 2 courses from research:
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMC 4609</td>
<td>Opinion and the Mass Media</td>
<td>4</td>
</tr>
<tr>
<td>SPC 4440</td>
<td>Group Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>SPC 4350</td>
<td>Studies in Listening</td>
<td>3</td>
</tr>
<tr>
<td>COM 4912</td>
<td>Studies in Human Communication Research</td>
<td>3</td>
</tr>
<tr>
<td>COM 4463</td>
<td>Communication and Courtroom Advocacy</td>
<td>3</td>
</tr>
</tbody>
</table>

   Students must select 9 hours of electives from Department of Communication.

2. Organizational Communication Track Requirements
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 3110</td>
<td>Business and Professional Communication</td>
<td>3</td>
</tr>
<tr>
<td>SPC 3445</td>
<td>Leadership</td>
<td>3</td>
</tr>
<tr>
<td>SPC 4440</td>
<td>Group Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>SPC 4350</td>
<td>Studies in Listening</td>
<td>3</td>
</tr>
<tr>
<td>SPC 3301</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 3120</td>
<td>Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>PUR 4000</td>
<td>Public Relations</td>
<td>3</td>
</tr>
</tbody>
</table>

   Students must select 12 hours of electives from Department of Communication.

1Prerequisite of Departmental Grammar proficiency test required.

BACHELOR OF ARTS: FILM

Degree Requirements

1. University graduation requirements
   
   (See pages 57-59)

2. Special college and/or department requirements

3. Required Courses
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 3311</td>
<td>Communication as a Behavioral Science</td>
<td>3</td>
</tr>
<tr>
<td>RTV 3000</td>
<td>Foundations of Broadcasting</td>
<td>3</td>
</tr>
<tr>
<td>RTV 3200</td>
<td>Broadcast Techniques</td>
<td>4</td>
</tr>
<tr>
<td>THE 3251</td>
<td>History of Motion Picture</td>
<td>3</td>
</tr>
<tr>
<td>PGY 3610</td>
<td>Photojournalism I</td>
<td>4</td>
</tr>
<tr>
<td>FIL 3200</td>
<td>Film Production</td>
<td>4</td>
</tr>
<tr>
<td>FIL 4201</td>
<td>Film Production II</td>
<td>4</td>
</tr>
<tr>
<td>FIL 3300</td>
<td>Film Documentary</td>
<td>4</td>
</tr>
<tr>
<td>MMC 4200</td>
<td>Communication Law</td>
<td>3</td>
</tr>
</tbody>
</table>

   *PR: FIL 3200

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

1Prerequisite of Departmental Grammar proficiency test required.
BACHELOR OF ARTS: JOURNALISM

Degree Requirements
1. University graduation requirements
(See pages 57-59)
2. Special college and/or department requirements
3. Required Courses
   COM 33111 Communication as a Behavioral Science 3 hours
   JOU 31001 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

1Prerequisite of Departmental Grammar proficiency test required.

AREAS OF SPECIALIZATION
1. Required Courses: News-Editorial Track
   JOU 32001 News Editing 4 hours
   JOU 3200L News Editing Lab 0 hours
   JOU 41041 Public Affairs Reporting 4 hours
   MMC 4602 Contemporary Media Issues 3 hours
   JOU 3003 History of American Journalism 3 hours
   JOU 43001 Feature Writing 4 hours
   PGY 3610 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, daily newspaper, or with a magazine. Because they will need the skills taught in those classes during any internship, students should 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. 3 hours
   ADV 4101 Ad Copy and Campaigns 3 hours
   ADV 4103 Radio-TV Advertising 3 hours
   COM 3110 Business & Prof. Communication 3 hours
   PGY 3610 Photojournalism I 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 complete a second different internship for an additional 3 elective hours. Check with your advisor before registering for an internship.

1Prerequisite of Departmental Grammar proficiency test required.
BA\textsc{C}HELOR OF \textsc{ARTS}: \textsc{RADIO-TELEVISION}

\textbf{Degree Requirements}

1. University graduation requirements
   (See pages 57-59)

2. Special college and/or department requirements

3. Required Courses
   \begin{itemize}
   \item COM 3311 \textsuperscript{1}
   \item RTV 3200
   \item RTV 3000
   \item RTV 4403
   \item RTV 4700
   \item RTV 4800
   \item RTV 3300 \textsuperscript{1}
   \item RTV 3501 \textsuperscript{1}
   \end{itemize}

4. Restricted Electives:
   Production—Choose one course
   \begin{itemize}
   \item RTV 3210 Radio Production
   \item RTV 3220 Television Production
   \item FIL 3200 Film Production
   \end{itemize}

5. Electives
   Student must select nine (9) additional hours from Communication Department offerings.

\textbf{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.

\textsuperscript{1}Prerequisite of Departmental Grammar proficiency test required.

BA\textsc{C}HELOR OF \textsc{ARTS}: \textsc{SPEECH}

\textbf{Degree Requirements}

1. University graduation requirements
   (See pages 57-59)

2. Special college and/or department requirements

3. Required Courses
   \begin{itemize}
   \item COM 3311 \textsuperscript{1}
   \item SPC 3301
   \item SPC 3542
   \item SPC 3425
   \item SPC 3250
   \item SPC 3601
   \item SPC 4330
   \end{itemize}

4. Restricted Electives:
   Select 6 hours from research area:
   \begin{itemize}
   \item SPC 3445
   \item SPC 4440
   \item SPC 4540
   \item SPC 4350
   \item COM 4918
   \item COM 4463
   \end{itemize}

   Select 5-6 hours from Rhetoric:
   \begin{itemize}
   \item SPC 4633
   \item ORI 3001
   \item SPC 3410
   \item LIN 3200
   \item SPC 5200
   \end{itemize}

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

\textbf{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.

\textsuperscript{1}Prerequisite of Departmental Grammar Proficiency Test required.
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 concentration in selected areas. In addition, the department conducts research in programming systems/languages, information systems, computer architecture, computational methods, and other areas.

The department’s minicomputer laboratory includes: a DEC VAX 11/780 with 4MB memory, 48 ports, Autodial interface to Arpanet and the Computer Science Network; DEC VAX 11/730; Harris H1000; 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 UNIX, 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, IBM 4341, HARRIS 800, and IBM 4381 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.
4. Departmental Residency Requirement - At least 18 semester hours of regularly scheduled 4000-5000 level courses must be taken from the UCF Department of Computer Science.

MINORS

The Department of Computer Science offers the following minors consisting of a minimum of 18 semester hours in each minor. A minimum GPA of 2.00 is required in all courses used to satisfy the requirements for the minor in computer science.

1. Computer Science Minor for Business Majors
   Required courses (15 hours): CAP 3001, 3002, 3006, 3007, COP 3120.
   Restricted electives (3 hours minimum): ACG 3701, ACG 5346, CIS 4112, 4323, COP 1110, 2510, 2511, 3402C, ECO 4412, FIN 3453, MAC 3233, 3311, 3312, 3313, MAN 4722, 4724, MAR 3613, MAS 3113, STA 4102, 4163.

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

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See page 68)
   Laboratory Course in Biological Sciences
3. Required courses:
   I. COMPUTER SCIENCE CORE:
      Computer Science Courses
      COP 2000 Programming I
      COP 2001 Programming II
      COP 3400 Assembly Language
      COP 3402 Computer Systems Concepts/Programming
      COT 3100 Introduction to Discrete Structures
      COP 3530 Data Structures
      Support Courses
      MAC 3311 Calculus with Analytic Geometry I
      MAC 3312 Calculus with Analytic Geometry II
      STA 3023 Statistical Methods I
      PHY 3048 Physics for Engineers & Scientists I
      PHY 3049 Physics for Engineers & Scientists II
      PHY 3049L Physics for Engineers & Scientists Lab. II
      EEL 3341C Introduction to Digital Circuits
      Special Department Requirement
      ENC 3241 Technical Report Writing
   II. UPPER DIVISION REQUIRED COURSES:
      *CDA 4105 Introduction to Computer Architecture
      *COT 4001 Discrete Computational Structures
      *COP 4020 Programming Languages I
      *COP 4600 Programming Systems

*Required for admittance into the Computer Science Graduate Program.
III. RESTRICTED ELECTIVES

16 hours
At least two 4000-5000 level regularly scheduled Computer Science courses for majors. Not more than 4 hours of Computer Science Independent Study may be used.
Any 4000-5000 level regularly scheduled course—
10 hours
Computer Science, Mathematics and/or Statistics—for majors of the respective departments or any course specified below in the “concentration” areas.

4. Electives

Total Semester Hours Required 120

AREAS OF CONCENTRATION

A student may, but need not, receive a Concentration in Architecture, Data Base, Programming and Systems, and/or Scientific by taking those courses listed below which are respectively designated by (A), (D), (P) and/or (S).

CDA 4300 (A, P) *CNM 4110 (S) 
CDA 4312 (A) STA 4163 (P) 
CDA 4311 (A) MAC 3313 (S) 
*CIS 4112 (D, P) MAP 3302 (S) 
CIS 4323 (D) MAS 3113 or 3103 
CIS 4324 (D) MHF 3104 

*Required for admittance into the Computer Science Graduate Program.

BACHELOR OF ARTS: ECONOMICS

Contact Person: J. Boyte, FA 208, Phone 275-2492

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

Degree Requirements

1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
3. Required courses

   ECO 2013 Principles of Economics I 3 hours
   ECO 2023 Principles of Economics II 3 hours
   ECO 3101 Intermediate Price Theory 3 hours
   ECO 3203 Aggregate Economic Conditions Analysis 3 hours
   ECO 3411 Quantitative Methods and Business Decision Analysis 3 hours

4. Restricted Electives

   a. Select Six Courses:

      ECO 3703 International Economics 3 hours
      ECO 4224 Money: Issues and Analysis 3 hours
      ECO 4303 History of Economic Thought 3 hours
      ECO 4412 Economic Statistics and Econometrics 3 hours
      ECO 4504 Economics of the Public Sector 3 hours
      ECP 3203 Contemporary Labor Economics 3 hours
      ECP 3424 The Economics of Regulated Industries 3 hours
      ECP 3433 Transportation Economics 3 hours
      ECP 4403 Business, Government & Industrial Organization 3 hours
      ECP 4603 Urban and Regional Economic Problems 3 hours
      ECP 4703 Managerial Economics 3 hours
      ECS 4003 Comparative Economic Systems 3 hours
      ECS 4013 Economic Development 3 hours

   b. Twenty-seven hours of additional courses, including the completion of a minor from one of the following areas: Computer Science, Mathematics, Statistics, or the Social and Behavioral Sciences.

5. Electives

   Total Semester Hours Required 120
DEPARTMENT OF ENGLISH

Chair: S. Omans, FA 432, Phone 275-2212
Faculty: Adicks, Astro, Barnes-Crocitto, Becker, Brain, Deane, Donnelly, George, Grove, Halle, Hemschemeyer, Higgins-Young, Jaffe, Jones, Keller, Marmaduke, McCown, Price, Rushin, Schiffhorst, Seidel, Sommer, Stap, Umphrey, Wood, Wyatt

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

MINOR

The Department of English offers the following minors:

Creative Writing Minor: Twenty-one semester hours. Required courses: CRW 2000, CRW 2100 or CRW 2300, CRW 3001, CRW 3002. Nine remaining hours to be chosen from CRW 3410, CRW 4940, CRW 4041, CRW 3310, CRW 3930.

Literature Minor: Twenty-one semester hours with no fewer than twelve completed at UCF. Requirements: Twelve semester hours selected from ENL 2010, 3021, AML 2011, 3020, ENL 3273, LIT 2110, 3120. Nine additional semester hours of English courses chosen by the student and advisor.

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

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

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special College and/or department requirements
   (See pages 68 and 86)
   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).
3. Required courses
   Foundation (for all concentrations)
   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
4. Restricted Electives
   (See Literature, Creative Writing, Technical Writing, and Linguistic concentrations below.)
5. Electives
   To be selected primarily from upper level courses with advisor's approval.
   Total Semester Hours Required 120

CONCENTRATIONS
1. Literature
   Required:
   CRW 2000 Principles of Creative Writing 3 hours
   ENL 4330 Shakespeare 3 hours
   ENL 4311 Chaucer 3 hours
   or
   ENL 4341 Milton 3 hours
   LIN 4100 History of English Language 3 hours
   or
   LIN 4341 Modern English Grammar 3 hours
   Choose Four of:
   ENL 4353 Eighteenth Century Studies 3 hours
   ENL 5226 English Renaissance Poetry & Prose 3 hours
   ENL 5236 Age of Dryden & Pope 3 hours
   ENL 5347 Age of Milton 3 hours
   LIT 5366 Romantic Revolt 3 hours
   LIT 5367 The Victorian Age 3 hours
   AML 4101 American Novel 3 hours
   ENL 4101 English Novel 3 hours
   AML 4321 Modern American Literature 3 hours
   ENL 4373 Modern British Literature 3 hours
   AML 4261 Literature of the South 3 hours
2. Creative Writing
   Required:
   CRW 2000 Principles of Creative Writing 3 hours
   ENL 4330 Shakespeare 3 hours
   ENL 4311 Chaucer 3 hours
   or
   ENL 4341 Milton 3 hours
   CRW 2100 Introduction to Fiction Writing 3 hours
   or
   CRW 2300 Introduction to Verse Writing 3 hours
   or
   LIN 4100 History of English Language 3 hours
   or
   LIN 4341 Modern English Grammar 3 hours
   CRW 3001 Creative Writing Workshop I 3 hours
CRW 3002
Choose One of:
CRW 3410
ENC 3310
ENC 3311
ENC 3341
ENC 3210
ENC 3241
Choose Two of:
CRW 4940
CRW 4941
CRW 5932

3. Technical Writing
Required:
ENC 2290
ENC 3210
or
ENC 3241
ENC 3310
ENC 3311
or
ENC 3341
LIN 4100
or
LIN 4341
Required (Advanced):
ENC 4293
ENC 4294
ENC 4295
ENC 4215
LIT 4433
ENC 4218
ENC 4280
Choose One of:
ENC 3330
ENC 3283
ENC 4254
Optional:
ENC 4941

4. Linguistics:
Required:
LIN 3010
LIN 4100
LIN 4341
CRW 2000
Choose Five of:
LIN 5137
LIN 3710
LIN 4801
PHI 4220
LIN 4202
LIN 5705
SPC 4330
LIN 4612
LIN 4020
Creative Writing Workshop II
Writing Scripts
Magazine Writing I
Advanced Expository Writing
Magazine Writing II
Business Report Writing
Technical Report Writing
Advanced Writer Workshop I
Advanced Writer Workshop II
Teaching Creative Writing
Careers in Writing
Business Report Writing
Technical Report Writing
Magazine Writing I
Advanced Expository Writing
Magazine Writing II
History of English Language
Modern English Grammar
Technical Documentation I
Technical Documentation II
Technical Documentation III
Techniques of Technical Publication
Surv. Technical and Scientific Literature
Graphics Capabilities
Technical Vocabulary
Rhetoric and Organization
Science and Lay Reader
Technical Writing & Imagination
Technical Writing & Editing Internship
(by Instructors' recommendation)
Principles of Linguistics
History of English Language
Modern English Grammar
Principles of Creative Writing
Linguistics
Foundations of Language
Language and Meaning
Philosophy of Language
Phonetics
Psycholinguistics
Non Verbal Communication
Black English
Anthro Linguistics

3 hours
3 hours
6 hours
1 hour
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
3 hours
15 hours
DEPARTMENT OF FOREIGN LANGUAGES
Chair: A. Payas, FA 443, Phone 275-2466
Faculty: Barsch, Cervone, DiPierro, Fernandez, Micarelli, Pelli, Taylor

Language studies in the College of Arts and Sciences provide instruction in Chinese, French, German, Hebrew, 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. They must complete 30 semester hours in the chosen language at the 3000 level or above. Among these 30 semester hours they must take courses numbered 3241 (SPN), 3244 (FRE), 3420, 3100, and 3101. Non-native French majors must also take FRE 4780 (French Phonetics and Diction) or the overseas summer course FRE 3955 (Corrective Phonetics and Vocabulary Building). Students interested in a combined major must take courses numbered 3241 (SPN), 3244 (FRE), 3420, 3100, and 3101 in both languages, plus an additional 15 hours in the primary language and an additional 8 hours in the secondary language for a total of 45 semester hours. This total must include FRE 4780 (French Phonetics and Diction) or FRE 3955 (Corrective Phonetics and Vocabulary Building).

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

A native or near-native speaker must substitute an alternate upper-division Spanish and French course for the conversation course (3241 (SPN) - 3244 (FRE)). Also, a native or near-native French speaker must substitute an alternate upper-division French course for FRE 4780 (French Phonetics and Diction) or FRE 3955 (Corrective Phonetics & Vocabulary Building). In cases where native speakers have received advanced education abroad, they will not be permitted to take the composition course (3420) for the fulfillment of their major requirements but may substitute another literature course chosen in consultation with advisors in the department.

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

Foreign Language State Teacher Certification may be obtained through the Department of Foreign Languages. The Certificate qualifies students to teach foreign languages at the elementary or high school levels.

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

Required courses: 18 semester hours at the 3000 level or above in one language including the courses numbered 3241 (SPN), 3244 (FRE), 3240 (GER), and 3420.

BACHELOR OF ARTS: FRENCH OR SPANISH
Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See page 68)
3. Required courses for French or Spanish Major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>3244 (FRE)</td>
<td>Conversation</td>
<td>3</td>
</tr>
<tr>
<td>3241 (SPN)</td>
<td>Comprehension</td>
<td>3</td>
</tr>
<tr>
<td>3420</td>
<td>Survey of Literature I</td>
<td>3</td>
</tr>
<tr>
<td>3100</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
or
FRE 3955

4. Restricted Electives
Students are also required to choose two of the following:
- LIN 4100: History of the English Language
- LIN 4341: Modern English Grammar
- LIN 3010: Principles of Linguistics

5. Electives

BACHELOR OF ARTS: FOREIGN LANGUAGE COMBINATION

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See page 89)
3. Required Courses for Combined Major in Foreign Languages
   - 3244 (FRE), 3241 (SPN)
   - 3420, 3100, 3101
   - FRE 4780
   or
   - FRE 3955

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

5. Electives

Total Semester Hours Required

Summer Study Abroad
The Department of Foreign Languages has been offering a Summer Study program in Spain since 1972, in Italy since 1975, and one in France since 1981. These programs are approved by the Board of Regents and are expected to be offered in 1988. Credit bearing courses are available in these programs in language (all levels), art, and civilization of France, Italy, or Spain. These programs are open to all students of the State University System of Florida.

AREA OF SPECIALIZATION
1. Judaic Studies. An interdisciplinary minor in Judaic Studies is offered through the Department of Foreign Languages, with the cooperation of the Departments of Humanities, Philosophy and Religion, English, History, Political Science and Sociology/Anthropology. 26-28 hours are required, including a general survey of Jewish history, at least one year of Hebrew, and 2-4 upper level courses, depending on whether an additional year of Hebrew is taken. See courses listed under prefix JST, HBR, REL, and WOH. For details consult Dr. Moshe Pelli, Director of Judaic Studies, FA 438 or 443, phone 281-5039 or 275-2466.

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

3. Soviet Area Studies. The College of Arts and Sciences offers an academic minor in Soviet Area Studies. Five UCF departments, Foreign Languages, History, Political
Science, Sociology, and Humanities, Philosophy and Religion, have pooled their resources in order to offer students interested in Soviet Area Studies a basic and well-rounded background in the field. The philosophy of the program is to offer students a multidisciplinary approach to the subject in its complexity and to understand the linguistic, cultural, historical, political, and socio-economic interrelationships. Interested students should register for the minor with Dr. Karl-Heinrich Barsch, Department of Foreign Languages.

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

Latin American Studies: The History Department participates in the Latin American Studies program. Consult Dr. Jose B. Fernandez for information.

MINOR
The Department of History offers a minor consisting of a minimum of 18 semester hours. Required courses: 18 semester hours of history, twelve of which must be at the 3000-4000 level. Specific courses must be selected in conference with a departmental advisor.

BACHELOR OF ARTS: HISTORY
Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
3. Required Courses
   None
4. Restricted Electives
   None
5. Electives
   To be selected with approval of the student's advisor

Total Semester Hours Required 120

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

DEPARTMENT OF HUMANITIES, PHILOSOPHY AND RELIGION
Chair: P. Riley, FA 483, 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 or she 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.

**MINORS**

The Department of Humanities, Philosophy and Religion offers minors consisting of 22-24 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 57-59)
2. Special college and/or department requirements
   (See page 68)
   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

**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 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 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 57-59)
2. Special college and/or department requirements
   (See page 68)
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
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

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI 1100</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>PHI 2010</td>
<td>Introduction to Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHH 3100</td>
<td>Ancient Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHI 3600</td>
<td>Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHI 3700</td>
<td>Philosophy of Religion</td>
<td>3</td>
</tr>
<tr>
<td>REL 3203</td>
<td>Hebrew and Christian Heritage</td>
<td>3</td>
</tr>
<tr>
<td>REL 3314</td>
<td>Religions of China &amp; Japan</td>
<td>3</td>
</tr>
<tr>
<td>REL 3342</td>
<td>Hinduism</td>
<td>3</td>
</tr>
<tr>
<td>REL 3353</td>
<td>Islam</td>
<td>3</td>
</tr>
</tbody>
</table>

b. Restricted electives

Four elective courses in religion or philosophy

12 hours

DEPARTMENT OF MATHEMATICS

Chair: L. Debnath, CC II 221, Phone 275-2585
Faculty: Andrews, Anthony, Armstrong, Barr, Brigham, Caron, Eves, Heinzer, Hurst, Jones, Malik, Mikusinski, Mohapatra, Norman, O’Hara, Pettofrezzo, Rautenstrauch, Richardson, Rodriguez, Salzmann, Sherwood, Shivamoggi, M. Taylor, Vajravelu

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 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 UCF.

BACHELOR OF SCIENCE: MATHEMATICS

Degree Requirements

1. University graduation requirements

(See pages 57-59)

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 UCF or must be approved by the Mathematics Department Standards Committee.

3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
<td>4</td>
</tr>
<tr>
<td>COP 2000</td>
<td>Programming I</td>
<td>3</td>
</tr>
<tr>
<td>COP 2001</td>
<td>Programming II</td>
<td>3</td>
</tr>
<tr>
<td>MAA 4226</td>
<td>Advanced Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MAC 3311</td>
<td>Calculus with Analytic Geometry</td>
<td>4</td>
</tr>
</tbody>
</table>
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
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  Technical Report Writing  3 hours
ENC 3310  Magazine Writing I  3 hours
ENC 3311  Advanced Expository Writing  3 hours

4. AREA OF SPECIALIZATION

a. Mathematics

MAA 4227  Advanced Calculus II  3 hours
MAS 4301  Algebraic Structures  3 hours
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 4500, 5510; COT 4210 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. This course must be approved by 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 4153  Vector and Tensor Analysis  3 hours

or

MAD 4203  Combinatorics and Graph Theory  4 hours
MAP 4364  Applied Boundary Value Problems II  3 hours
STA 4322  Statistical Theory II  3 hours

One course selected from upper division or graduate mathematics or statistics courses or from CNM 5510 or COT 4210. (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. A list of courses approved by the Mathematics Department Standards Committee is available in the Department Office.

5. Electives

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

Total Semester Hours Required 120

DEPARTMENT OF MUSIC

Chair: B. Whisler, FA 105A, Phone 275-2869

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.
SPECIAL MUSIC MAJOR ENTRANCE REQUIREMENTS
In order to be accepted as a music or music education major, the student must perform an audition. Each student must demonstrate an advanced level of proficiency by performing compositions representing a variety of musical periods. Memorization is required for pianists and vocalists. Accompanists will be furnished only upon request prior to the audition. Each candidate must bring music for the compositions he or she intends to perform. The College will provide large instruments such as the tuba, string bass, or tympani for these auditions. All smaller instruments must be brought to the University. The audition will serve as a placement examination for accepted candidates.

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

As a prerequisite to formal admission to the State Approved Program of Teacher Education students must: 1) score at or above the 40th percentile of all college bound persons tested on the American College Testing Program (ACT, score 17) or the Scholastic Aptitude Test (SAT, score 835) and have this score reported as part of their official academic record, 2) have an overall and UCF academic average (G.P.A.) of 2.0 of above, 3) have satisfactorily completed EDG 4321 (Teaching Strategies), 4) have passed the College Level Academic Skills Test (CLAST), and 5) submit a formal junior student teaching application to the College of Education Student Internships Office.

Since July 1, 1980, all applicants for a teaching certificate in Florida must pass a written competency examination administered by the Florida State Department of Education.

Since July 1, 1982, all applicants for their First Regular Florida Teaching Certificate must satisfy requirements of the Florida Beginning Teacher Program.

COMPREHENSIVE EXAMINATIONS
Comprehensive examinations in Music Theory and Music History should be taken by students during their junior year. Ear-training, sight-singing, part-writing, and visual analysis examinations will be offered during the fall semester; a music history examination will be offered during the spring.

POLICY REGARDING MAJOR ENSEMBLE PARTICIPATION
1. 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/she so desires. Major ensembles which fulfill this requirement are chorus, symphony orchestra, concert band, marching band and wind ensemble.
2. Music education majors in winds, 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.
3. Assignment to major ensembles will be made by the ensemble directors.
4. Any undergraduate student taking a course in Performance must take concurrently a major ensemble appropriate to his/her 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.

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

POLICY REGARDING RECITALS AND STUDENT TEACHING
Music and Music Education students must complete all but one of the following proficiency examinations before they will be permitted to audition for their senior recital and/or do their senior student teaching: music history, piano, sight-singing, ear training, and music theory. Music Education students may not give their required recital during the semester of their senior student teaching.

MINOR
The Department of Music offers a Minor in Music. The requirements are as follows:
1. A successful audition on the student's principal instrument or voice.
2. A minimum of 21 semester hours of credit to include the following or their equivalent:
   - Theory IA and IB (6 hours), MUL 2010 (3 hours), four consecutive semesters of a major performing organization (4 hours), two semesters of Performance Level I (4 hours) and two semesters of Performance Level II (4 hours) on the same instrument.
3. A minimum of 11 semester hours of these required courses, including two semesters of a major performing organization and two semesters of Performance Level II, must be completed at UCF.
4. Successful completion of 4 semesters.
5. A GPA of 2.0 is required for all music courses attempted, whether used to fulfill these requirements or not.

BACHELOR OF ARTS: MUSIC
Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 68 and 96)
3. Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 1010</td>
<td>Music Forum (8 semesters)</td>
<td></td>
</tr>
<tr>
<td>MUT 2111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3116</td>
<td></td>
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<td>3117</td>
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<td></td>
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<tr>
<td>4561</td>
<td></td>
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<tr>
<td>MUT 1241</td>
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</tr>
<tr>
<td>1242</td>
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<td>2246</td>
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<td>2247</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3248</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MVP/MVV</td>
<td>Performance (8 semesters)</td>
<td>16</td>
</tr>
<tr>
<td>MVP</td>
<td>(including 2 semesters of level IV)</td>
<td></td>
</tr>
<tr>
<td>MUN</td>
<td>Major Ensemble (8 semesters)</td>
<td>8</td>
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<tr>
<td>MUN</td>
<td>Minor Ensemble</td>
<td>8</td>
</tr>
<tr>
<td>MUH 4211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4212</td>
<td>*Music History</td>
<td>6</td>
</tr>
<tr>
<td>MUG 3101</td>
<td>Basic Conducting</td>
<td>2</td>
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<tr>
<td>PHS 3805</td>
<td>Physical Basis of Music</td>
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<tr>
<td>Music Electives</td>
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</tr>
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</table>

Any secondary performance course not in area of major instrument or any MUC, MUE, MUG, MUH, MUL, MUN, MUS, MUT courses numbered 3000 or higher except the following: MUH 4218, MUT 4031, 4249.

In partial fulfillment of their Electives requirements, Piano Majors take Piano Literature (MUL 3400, 3401) for 4 hours; Voice Majors take Foreign Diction (FRE 1005, GER 1005, ITA 1005 - 1 hour each) and Song Literature (MUL 3600, 3601 - 1 hour each) for a combined total of 5 hours; Piano Pedagogy Majors take Piano Literature (MUL 3400, 3401) 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
   None
5. Electives
   Total Semester Hours Required | 4 hours

*Three semester hours of coursework in the General Education program are satisfied by the Music History sequence.
Special Non-Course Requirements
1. Students are required to take piano until they meet the Piano Proficiency requirement.
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/her last two semesters of required performance and his senior recital while in attendance at UCF.
5. A GPA of 2.0 is required for all music courses attempted.

BACHELOR OF ARTS: MUSIC EDUCATION

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 66, 96, and 129)
3. Required Courses

<table>
<thead>
<tr>
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MUS 1010</td>
<td>Music Forum (6 semesters)</td>
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</tr>
<tr>
<td>MUT 2111, 2112, 3116, 3117, 4561</td>
<td>Music Theory</td>
<td>10</td>
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<tr>
<td>MUT 1241, 1242, 2246,2247,3248</td>
<td>Ear Training and Sight Singing</td>
<td>5</td>
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<tr>
<td>MVB/MVK/MVP</td>
<td>Performance (6 semesters including 2 semesters of level III)</td>
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<tr>
<td>MVS/MVV/MVW</td>
<td>Major Ensemble (7 semesters)</td>
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<tr>
<td>MUN</td>
<td>Minor Ensemble</td>
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<td>MUH 4211, 4212</td>
<td>*Music History</td>
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<td>MUG 3101</td>
<td>Basic Conducting</td>
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<tr>
<td>MUE 1460</td>
<td>Brass Techniques</td>
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<tr>
<td>MUE 1470</td>
<td>Percussion Techniques</td>
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<td>MUE 1440</td>
<td>String Techniques</td>
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<td>MUE 1450</td>
<td>Woodwind Techniques</td>
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<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
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<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>
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<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
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<tr>
<td>EDE 3943</td>
<td>Junior Year Student Teaching</td>
<td>6</td>
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<tr>
<td>EDE or ESE 4943</td>
<td>Senior Year Student Teaching</td>
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<tr>
<td>MUE 4311</td>
<td>Elementary School Music Instructional Analysis</td>
<td>2</td>
</tr>
<tr>
<td>MUE 4360</td>
<td>Secondary School Music Instructional Analysis</td>
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Program A - Instrumental Music Education Specialization
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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>MVV 1211</td>
<td>Class Voice</td>
<td>1</td>
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<tr>
<td>MKV</td>
<td>Class Piano I-IV</td>
<td>4</td>
</tr>
<tr>
<td>MVB/MVK/MVP/MVS/MVV/MVW</td>
<td>Performance IV</td>
<td>2</td>
</tr>
<tr>
<td>MUE 1460</td>
<td>Brass Techniques</td>
<td>1</td>
</tr>
<tr>
<td>MUE 1450</td>
<td>Woodwind Techniques</td>
<td>1</td>
</tr>
<tr>
<td>MUG 3302</td>
<td>Instrumental Conducting</td>
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</tr>
<tr>
<td>MUT 4344</td>
<td>Seminar in Music Arranging</td>
<td>1</td>
</tr>
<tr>
<td>MUE 4480</td>
<td>Marching Band Techniques</td>
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</table>

Program B - Choral Music Education Specialization
<table>
<thead>
<tr>
<th>Course</th>
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<th>Hours</th>
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<tr>
<td>MVK 1111-1141</td>
<td>Class Piano I-IV</td>
<td>4</td>
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<tr>
<td>(Not required of Piano Majors)</td>
<td>Class Voice</td>
<td>2</td>
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<tr>
<td>MVS 1216</td>
<td>Secondary Guitar</td>
<td>1</td>
</tr>
<tr>
<td>MUG 3202</td>
<td>Choral Conducting</td>
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</tbody>
</table>
Program C -Elementary School Music Education Specialization

MVK 1111-1141 Class Piano I-IV
(Not required of Piano Majors)

MVV 1211 Class Voice
(Not required of Voice Majors)

MVS 1316 Secondary Guitar

MVO 3124 Recorder II

Special Topics in Elementary School Music (2 semesters)

4. Restricted Electives
None.

5. Electives
None.

Minimum Total Semester Hours Required 134-139

Three semester hours of course work in the General Education Program are satisfied by the Music History sequence.

Special Non-course requirements
1. Students are required to take piano until they meet the Piano Proficiency requirement.
2. A faculty-approved public recital of 30 minutes length. (A recital is optional for the Elementary School Music Specialization).
4. Any student who graduates from UCF with a major in music education must complete his/her last two semesters of required performance; his/her recital, if required; and, his/her senior year student teaching while in attendance at UCF.
5. A GPA of 2.0 is required for all music courses attempted.

DEPARTMENT OF PHYSICS

Acting Chair: J. H. Noon, HPB 312, Phone 275-2325
Faculty: Bolemon, Botte, Brennan, Caldwell, Chow, Chowdhury, Littlewood, Llewellyn, Noon

The Department of Physics offers a Bachelor of Science degree in Physics and a minor in Physics, physics courses for graduate and undergraduate science education majors, and a Masters of Science in Physics. Students planning graduate study should consult faculty advisors about increased course content in physics (some electives are offered in alternate years) and mathematics such as applied boundary problems, vector and tensor analysis, matrices; double majors are encouraged where appropriate.

Physics is the basic science fundamental to many different fields of endeavor. Physics majors are therefore encouraged to prepare for interdisciplinary 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, environmental physics, instrumentation and measurement of fundamental constants, lasers, mathematical modeling, Mossbauer spectroscopy, molecular and atomic spectroscopy, nuclear physics, optics, and physics education.

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 57-59)
2. Special college and/or department requirements
   (See page 68)

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 Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 201OC</td>
<td>General Biology</td>
<td>4</td>
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<tr>
<td>CHM 2045, 2046, 2046L</td>
<td>Chemistry Fundamentals</td>
<td>8</td>
</tr>
<tr>
<td>MAC 3311, 3312, 3313</td>
<td>Calculus with Analytic Geometry</td>
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</tr>
<tr>
<td>PHY 3048, 3048L</td>
<td>Physics For Engineers &amp; Scientists I &amp; II</td>
<td>8</td>
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<tr>
<td>PHY 3049, 3049L</td>
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<td></td>
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<tr>
<td>PHY 3101</td>
<td>Modern Physics</td>
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<tr>
<td>PHY 3503</td>
<td>Thermodynamics</td>
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<tr>
<td>MAP 3302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3320</td>
<td>Electricity, Magnetism &amp; Electromagnetic Waves</td>
<td>3</td>
</tr>
<tr>
<td>CGS 3422</td>
<td>Programming and Numerical Methods</td>
<td>3</td>
</tr>
<tr>
<td>PHS 3151</td>
<td>Computer Methods in Physics</td>
<td>4</td>
</tr>
<tr>
<td>PHY 3752C</td>
<td>Physics of Scientific Instruments</td>
<td>4</td>
</tr>
<tr>
<td>PHY 4220</td>
<td>Mechanics</td>
<td>3</td>
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<tr>
<td>PHY 4604</td>
<td>Wave Mechanics</td>
<td>3</td>
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<tr>
<td>PHY 4424</td>
<td>Optics</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3722C</td>
<td>Physics Laboratory-Electronics</td>
<td>3</td>
</tr>
<tr>
<td>STA 3032</td>
<td>Probability and Statistics for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3802L</td>
<td>Intermediate Physics Laboratory</td>
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</tr>
<tr>
<td>PHY 4803L</td>
<td>Advanced Physics laboratory</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives
   Upper division PHS or PHY courses or those to be used in partial fulfillment of the requirements of a double major. Research credit may be used.
   6 hours

5. Electives for Career Enrichment
   A plan for use of electives must be approved no later than the junior year by a departmental committee.
   6 hours

6. Electives (approved by Department Curriculum Committee)
   6 hours

Total Semester Hours Required: 127

DEPARTMENT OF POLITICAL SCIENCE

Chair: J. Lilie, FA 426, Phone 275-2608
Faculty: Bledsoe, Davison, Handberg, Johnson-Freese, Kennedy, S. Lilie, Morales, Perry, Pollock, Stern, Vittes

The Department of Political Science seeks to (1) provide a broad background for careers in foreign and domestic public service and in the private sector where a knowledge of government and politics is necessary; (2) provide a broad background for and facilitate admission to law school through the prelaw emphasis; (3) prepare students for teaching, research and graduate study in Political Science; (4) provide a broad background for careers in politics; and (5) educate citizens and promote their active interest in public affairs. Students should plan their major or minor in consultation with their departmental 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 Politics; and Political Theory.

It is strongly recommended that majors planning to continue their education at the graduate level or to pursue a career in international fields acquire a working knowledge of a foreign language.
Canadian Studies: The Department of Political Science is the main contributor to the Canadian Studies Programme. Interested students should contact Dr. Henry Kennedy.

Latin American Studies: The Political Science Department participates in the Latin American Studies Program. Contact Dr. Waltraud Q. Morales.

Soviet Area Studies: The Political Science Department participates in the Soviet Area Studies program. Consult Dr. Henry Kennedy.

MINOR

The Department of Political Science offers minors consisting of a minimum of 18 semester hours in each minor.

1. Political Science

   Required courses: POS 2041 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
   (See pages 57-59)
   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 pages 68 and 101)
3. Required Courses
   POS 2041 American National Government 3 hours
   *POS 3703 Scope and Methods of Political Science 3 hours
   *This course should be completed by the second semester of the junior year.
4. Restricted Electives
   Majors must choose from one of the following emphases for a minimum of 30 additional hours.
   Emphasis 1: American Politics and Policy
   Five courses from area A 15 hours
   Two courses from area B 6 hours
   Two courses from area C 6 hours
   One additional course from any area 3 hours
   Emphasis 2: International Relations-Comparative Politics
   Five courses from area B 15 hours
   Two courses from area A 6 hours
   Two courses from area C 6 hours
   One additional course from any area 3 hours
   Emphasis 3: Prelaw
   POS 4284 Judicial Process and Politics 3 hours
   One of the following:
   *POS 4603 American Constitutional Law I
   POS 4604 American Constitutional Law II
   INR 4401 International Law I
   INR 4402 International Law II
   *POS 4603 should ordinarily be taken before POS 4604.
   Five courses from either area A or area B 15 hours
   Two courses from area A if area B is chosen above; or
   Two courses from area B if area A is chosen above 6 hours
   One course from area C 3 hours
   Total Hours in Major 36 hours
5. Electives
   Total Semester Hours Required 120

AREAS OF SPECIALIZATION
The Department courses are divided into three areas of specialization.
A. American Politics and Policy
   POS 3122 State Government
   POS 3443 Political Parties and Processes
   POS 3413 The American Presidency
   POS 3424 Congress and the Legislative Process
   PUP 3314 Minorities in American Politics
   POS 3235 Mass Media and Politics
   POS 3233 Public Opinion
   POS 3273 Voting and Elections
   POS 3173 Southern Politics
   POS 4246 Political Socialization
   POS 4603 American Constitutional Law I
   POS 4604 American Constitutional Law II
   POS 4284 Judicial Process & Politics
   POS 4412 Presidential Campaigning
   PUP 4323 Women and Politics
   POS 4142 Metropolitan Politics
   URP 4026 Community Planning
   PUP 3204 Environmental Politics

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PRELAW: POLITICAL SCIENCE

While no specific major is prescribed for admission to law school, many prelaw students elect to major in political science. These individuals usually choose the prelaw emphasis within the political science major.

Prelaw students are encouraged to work closely with 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, consult one of the Department's prelaw advisors.

1. Some suggested electives include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ACG 2001</td>
<td>Principles of Accounting I</td>
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<tr>
<td>ACG 2011</td>
<td>Principles of Accounting II</td>
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<tr>
<td>BUL 3111</td>
<td>Legal Environment of Business</td>
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<tr>
<td>ENC 3210</td>
<td>Business Report Writing</td>
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<td>EUH 2095</td>
<td>Introduction to Anglo-American Law</td>
</tr>
<tr>
<td>LEA 3011</td>
<td>Legal Research and Writing</td>
</tr>
<tr>
<td>PHI 2130</td>
<td>Formal Logic I</td>
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<tr>
<td>PHI 3131</td>
<td>Formal Logic II</td>
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<tr>
<td>MHF 2300</td>
<td>Logic and Proof in Mathematics</td>
</tr>
<tr>
<td>LIN 4341</td>
<td>Modern English Grammar</td>
</tr>
</tbody>
</table>

PRELAW: POLITICAL SCIENCE

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<td>LIN 4341</td>
<td>Modern English Grammar</td>
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</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 usually 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, consult one of the Department's prelaw advisors.

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<td>Logic and Proof in Mathematics</td>
</tr>
<tr>
<td>LIN 4341</td>
<td>Modern English Grammar</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 usually 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, consult one of the Department's prelaw advisors.

1. Some suggested electives include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 2001</td>
<td>Principles of Accounting I</td>
</tr>
<tr>
<td>ACG 2011</td>
<td>Principles of Accounting II</td>
</tr>
<tr>
<td>BUL 3111</td>
<td>Legal Environment of Business</td>
</tr>
<tr>
<td>ENC 3210</td>
<td>Business Report Writing</td>
</tr>
<tr>
<td>EUH 2095</td>
<td>Introduction to Anglo-American Law</td>
</tr>
<tr>
<td>LEA 3011</td>
<td>Legal Research and Writing</td>
</tr>
<tr>
<td>PHI 2130</td>
<td>Formal Logic I</td>
</tr>
<tr>
<td>PHI 3131</td>
<td>Formal Logic II</td>
</tr>
<tr>
<td>MHF 2300</td>
<td>Logic and Proof in Mathematics</td>
</tr>
<tr>
<td>LIN 4341</td>
<td>Modern English Grammar</td>
</tr>
</tbody>
</table>
INTERNSHIP PROGRAM: POLITICAL SCIENCE
For students who excel, a limited number of internships may be available each semester for 3 to 6 hours of credit. Under the Internship Director, the student is typically placed in an office of local, state, or national government, a law office, or campaign headquarters. For further information consult Dr. Donald Davison.

DEPARTMENT OF PSYCHOLOGY
Chair: R. Tucker, PH 317, Phone 275-2216
Faculty: Abbott, Blau, Brophy, Burr, Burroughs, Connally, Fisher, Gilson, Guest-Houston, Jensen, McGuire, Rinalducci, Rollins, Shirkey, Tell, Thomas, Turnage, Wooten

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 57-59)
2. Special college and/or department requirements
3. Required Courses
   PSY 2013 General Psychology 3 hours
   PSY 2023 Careers in Psychology 1 hour
   PSY 3214 Research Methods 4 hours
   PSY 3204 Statistical Methods in Psychology 4 hours
   EXP 3404 Basic Learning Processes 4 hours
   PSB 3002 Physiological Psychology 4 hours
4. Restricted Electives (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

DEPARTMENT OF PUBLIC SERVICE ADMINISTRATION
Chair: R. Shapek, PH 336, Phone 275-2603
Faculty: Becker, Brennan, Colby, Cook, Duffey, Holten, Kimmitt, Korstad, Lawther, Pyle, Slaughter

The Department of Public Service incorporates three related undergraduate degree programs: Legal Studies Program, Criminal Justice and Public Administration. It also offers the Master of Public Administration degree.

LEGAL STUDIES PROGRAM
The Legal Studies Program provides students with a broad understanding of basic principles of law and the role and function of the Legal System. It prepares students for professional positions in law offices, corporations, and public agencies and provides
educational experience beneficial to students planning to attend law school. Satisfactory completion of program requirements leads to the degree of Bachelor of Arts with a major in Legal Studies.

**BACHELOR OF ARTS: LEGAL STUDIES**

**Degree Requirements**
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
3. Required Courses (33 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEA 3001</td>
<td>Law and the Legal System</td>
<td>3</td>
</tr>
<tr>
<td>LEA 3011</td>
<td>Legal Research</td>
<td>3</td>
</tr>
<tr>
<td>LEA 3012</td>
<td>Legal Writing</td>
<td>3</td>
</tr>
<tr>
<td>LEA 3101</td>
<td>Civil Practice and Procedure</td>
<td>3</td>
</tr>
<tr>
<td>LEA 3151</td>
<td>The Law of Torts</td>
<td>3</td>
</tr>
<tr>
<td>LEA 3201</td>
<td>Property and Real Estate Law</td>
<td>3</td>
</tr>
<tr>
<td>LEA 3601</td>
<td>Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>LEA 4211</td>
<td>Estates and Trusts</td>
<td>3</td>
</tr>
<tr>
<td>LEA 4301</td>
<td>Contract Law</td>
<td>3</td>
</tr>
<tr>
<td>LEA 4312</td>
<td>Fla. Partnerships and Corporations</td>
<td>3</td>
</tr>
<tr>
<td>LEA 4501</td>
<td>Domestic Relations Law</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives
   a. Six (6) additional semester hours of Legal Studies coursework.
   b. Six (6) semester hours of supporting courses chosen with the approval of the student's advisor. These courses may be selected from any department or program (including Legal Studies) so long as they are related to the law.

5. Electives

**Total Semester Hours Required** 120

---

**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 57-59)
2. Special college and/or department requirements
3. Required Courses (12 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCJ 3020</td>
<td>Criminal Justice System</td>
<td>3</td>
</tr>
<tr>
<td>CCJ 3010</td>
<td>Crime in America</td>
<td>3</td>
</tr>
<tr>
<td>CCJ 3290</td>
<td>Prosecution and Adjudication</td>
<td>3</td>
</tr>
<tr>
<td>CCJ 3300</td>
<td>Corrections and Penology</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives
   a. 24 additional semester hours of CCJ coursework. Seniors can satisfy up to 9 hours of this requirement with internship and up to 6 hours with directed independent study; however, the combination of these non-class options shall not exceed 9 hours. Program standards must be met to be eligible for either internships or independent study credit.
   b. 15-16 additional semester hours of supporting courses to be selected with and approved by the student's advisor. These courses may vary from student to student depending upon individual needs or objectives, but include selected courses from public administration, legal studies, sociology, statistics, and psychology.

5. Electives

**Total Semester Hours Required** 120
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 57-59)
2. Special college and/or department requirements
3. Required Courses (27 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAD 3003</td>
<td>Introduction to Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4034</td>
<td>Administration of Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4104</td>
<td>Administrative Theory</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4204</td>
<td>Fiscal Management</td>
<td>3</td>
</tr>
<tr>
<td>PAD 4414</td>
<td>Public Personnel Administration</td>
<td>3</td>
</tr>
<tr>
<td>POS 2041</td>
<td>American National Government</td>
<td>3</td>
</tr>
<tr>
<td>ECO 2013</td>
<td>Principles of Economics I</td>
<td>3</td>
</tr>
<tr>
<td>COC 1100</td>
<td>Introduction to Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>CAP 3001</td>
<td>Computer Fundamentals for Business Application</td>
<td>3</td>
</tr>
<tr>
<td>STA 2014</td>
<td>Principles of Statistics</td>
<td>3</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives
   a. Eighteen (18) additional semester hours of Public Administration coursework (may include internship)
b. 12-15 semester hours in an allied public service field. This field and the corresponding courses are selected with and approved by the student's advisor. Among such supporting fields are accounting, legal studies, communication, computer science, criminal justice, economics, political science, social work, sociology, and statistics.

5. Electives

<table>
<thead>
<tr>
<th>Total Semester Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
</tr>
</tbody>
</table>

**BACHELOR OF SCIENCE: SOCIAL SCIENCES**

**Contact Person:** J. Boyte, FA 208, Phone 275-2492

This unique program offers students an opportunity to become acquainted with the various fields of the Social Sciences and to better understand the relationships between those fields. Satisfactory completion of the program leads to the degree Bachelor of Science with a major in Social Sciences.

**Degree Requirements**

1. University graduation requirements (See pages 57-59)
2. Special college and/or department requirements
3. Required Courses
   None
4. Restricted Electives
   a. Choose one
      - **POS 3703** Scope and Methods of Political Science 3 hours
      - **PSY 3214** Research Methods (Psychology) 3 hours
      - **SYA 3300** Research Methods (Sociology) 3 hours
   b. A minimum of 15 semester hours in each of four Social Science disciplines. The following are the required courses for each discipline selected.

   **Communication**
   - **COM 1000** Basic Communication 3 hours
   - **COM 3311** Communication as a Behavioral Science 3 hours

   **Economics**
   - **ECO 2013** Principles of Economics I 3 hours
   - **ECO 2023** Principles of Economics II 3 hours

   **Political Science**
   - **POS 2041** American National Government 3 hours

   **Psychology**
   - **PSY 2013** General Psychology 3 hours
   - **PPE 3003** Personality Theory 3 hours

   **Public Service Administration**
   - **PAD 3003** Introduction to Public Administration 4 hours
   - **CCJ 3020** Criminal Justice System 4 hours
   - **LEA 3001** Law and the Legal System 4 hours

   **Sociology**
   - **SYG 2000** General Sociology 3 hours
   - **ANT 2003** General Anthropology 3 hours

5. Electives

<table>
<thead>
<tr>
<th>Total Semester Hours Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
</tr>
</tbody>
</table>

**DEPARTMENT OF SOCIAL WORK**

**Chair:** K.J. Kazmerski, FA 404, Phone 275-2114

**Faculty:** Abel, Green, Suh, Tropf

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

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

## Degree Requirements

1. University graduation requirements  
   (See pages 57-59)

2. Special college and/or department requirements

3. Required Courses (45 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOW 3104</td>
<td>Assessing Human Development</td>
<td></td>
</tr>
<tr>
<td>SOW 3191</td>
<td>Assessing Human Systems</td>
<td></td>
</tr>
<tr>
<td>SOW 3203</td>
<td>Social Welfare and Community Resources</td>
<td></td>
</tr>
<tr>
<td>SOW 3232</td>
<td>Social Welfare Policies and Issues</td>
<td></td>
</tr>
<tr>
<td>SOW 3403</td>
<td>Social Work Research</td>
<td></td>
</tr>
<tr>
<td>SOW 4431</td>
<td>Evaluating Social Work Practice and Service Programs</td>
<td></td>
</tr>
<tr>
<td>SOW 3300</td>
<td>Generalist Practice in Social Work</td>
<td></td>
</tr>
<tr>
<td>SOW 3352</td>
<td>Interpersonal Skills in Social Work Practice</td>
<td></td>
</tr>
<tr>
<td>SOW 4341</td>
<td>Micro-level Roles and Interventions in Social Work</td>
<td></td>
</tr>
<tr>
<td>SOW 4343</td>
<td>Macro-level Roles and Interventions in Social Work</td>
<td></td>
</tr>
<tr>
<td>SOW 4620</td>
<td>Social Work with Minorities</td>
<td></td>
</tr>
<tr>
<td>SOW 4510</td>
<td>Field Education</td>
<td></td>
</tr>
<tr>
<td>SOW 4522</td>
<td>Field Education Seminar</td>
<td></td>
</tr>
</tbody>
</table>

4. Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Semester Hours Required</td>
<td>120</td>
</tr>
</tbody>
</table>

## Social Welfare Enhancement Options

Students desiring additional studies in a social welfare area must satisfy the requirements of the basic curriculum while concurrently completing a minimum of 21 hours in the optional area.

1. Child Welfare Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYO 4100</td>
<td>The Family</td>
<td></td>
</tr>
<tr>
<td>SOW 4654</td>
<td>Children's Services</td>
<td></td>
</tr>
<tr>
<td>EDF 3603</td>
<td>Analysis of Educational Foundations</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDF 4003</td>
<td>Overview of Education</td>
<td></td>
</tr>
</tbody>
</table>

   Elective from approved list -- see advisor

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

2. Gerontology Certificate Program

   See page 170, Office of Undergraduate Studies

3. Health Services Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYO 4400</td>
<td>Medical Sociology</td>
<td></td>
</tr>
<tr>
<td>HSA 4120</td>
<td>Community and Public Health Services</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSA 4121</td>
<td>History and Future of Health Care</td>
<td></td>
</tr>
<tr>
<td>SOW 4602</td>
<td>Social Work in Health Settings</td>
<td></td>
</tr>
</tbody>
</table>

   Elective in health studies

   In addition, SOW 4510 Field Education must be completed in a health setting.

## DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

Chair: D. Fabianic, FA 402, Phone 275-2227  
Faculty: Allen, Bridges, W. Brown, A. Chase, D. Chase, Cook, Dees, Hodgin, D. Jones, Miller, Stearman, Unkovic, Wallace

The Department of Sociology and Anthropology offers a Bachelor of Arts in Sociology and Anthropology. Students should consult with their advisor early in their academic careers to select an area of specialization within the Department or if they plan to pursue graduate work.
MINORS
The Department offers the following minors:

1. Anthropology
   Required Courses: ANT 3000, 3410, 3422, ANT 3511, twelve additional hours to be taken in consultation with the student's advisor. No more than two courses can be transferred from other Sociology/Anthropology Departments. The minimum number of semester hours required - 21.

2. Sociology
   Required Courses: SYG 2000, SYO 3000, and SYA 3110 or SYA 3120; and a minimum of 9 semester hours of Sociology courses. No more than 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. The minimum number of semester hours required - 18.

BACHELOR OF ARTS: SOCIOLOGY

Degree Requirements
The Sociology curriculum is designed to provide students a basic curriculum which emphasizes critical examination of various components of society. The purpose of the curriculum is to increase students' social awareness and ability to employ a sociological perspective to interpret social institutions and behavior. A minimum of 44 semester hours is required for a major. In addition, one course in statistics is also required.

1. University graduation requirements
2. Special college and/or department requirements
3. Required Courses (23 semester hours)
   SYG 2000 General Sociology 3 hours
   SYO 3000 Modern Sociology 3 hours
   SYA 3110 Development of Social Thought 3 hours
   or
   SYA 3120 Modern Sociological Thought 3 hours
   SYA 3300 Research Methods 4 hours
   SYO 3360 Social Organization & Human Relations 3 hours
   or
   SYP 4000 Sociological Social Psychology 3 hours
   SYA 4450 Data Analysis (PR: Course in Statistics) 4 hours
   SYA 4650 Applied Sociology 3 hours

One course in Statistics
(After the required courses are completed, remaining courses listed in the required course category may be taken and will be credited in the Social Processes and Institutions category.)

4. Restricted Electives
   Majors must choose from one of the following emphases for a minimum of 21 semester hours.
   A. General Sociology Emphasis. Students are required to take 6 semester hours from the Deviant Behavior and Social Problems category, and 15 semester hours from the Social Processes category; or, students may take 15 semester hours from the Social Processes and Institutions category, and a minimum of 6 semester hours of Sociology Internship.
   B. Deviant Behavior and Social Problems Emphasis. Students are required to take 15 semester hours from the Deviant Behavior and Social Problems category and 6 semester hours from the Social Processes and Institutions category; or, students may take 15 semester hours from the Deviant Behavior and Social Problems category and a minimum of 6 semester hours of Sociology Internship.

Areas of Emphasis
Social Processes and Institutions
   SYD 3410 Urban Sociology 3 hours
   SYD 3700 Race and Ethnic Minorities in the U.S. 3 hours
   SYD 3800 Sex Roles in Modern Society 3 hours
   SYD 4020 Population 3 hours
   SYD 4680 Soviet Sociology 3 hours
   SYO 3530 Social Stratification 3 hours
   SYO 4100 The Family 3 hours
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYO 4250</td>
<td>Sociology of Education</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4300</td>
<td>Political Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4370</td>
<td>Sociology of Occupations &amp; Professions</td>
<td>3</td>
</tr>
<tr>
<td>SYO 4400</td>
<td>Medical Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3300</td>
<td>Collective Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3400</td>
<td>Social Change</td>
<td>3</td>
</tr>
<tr>
<td>SYG 3010</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>SYO 3410</td>
<td>Sociology of Mental Illness</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3510</td>
<td>Sociology of Deviant Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3520</td>
<td>Criminology</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3530</td>
<td>Juvenile Delinquency</td>
<td>3</td>
</tr>
<tr>
<td>SYP 3551</td>
<td>Sociology of Alcoholism</td>
<td>3</td>
</tr>
<tr>
<td>SYP 4550</td>
<td>Sociology of Drug Abuse</td>
<td>3</td>
</tr>
<tr>
<td>SYP 4730</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
</tbody>
</table>

Eligible students may enroll for 3 to 15 semester hours of Internship. Arrangements for Internship are coordinated by the Department.

5. Electives

**Total Semester Hours Required** 120

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**BACHELOR OF ARTS: ANTHROPOLOGY**

**Degree Requirements**

Anthropology offers the Bachelor of Arts degree. In keeping with the holistic nature of the discipline, students are required to pursue a course of study which leads to a comprehension of all subfields of Anthropology. The four recognized subfields of Anthropology are: Cultural Anthropology, Archaeology, Physical Anthropology, and Linguistics. Area studies dealing with North American Indians, Mesoamerican Civilization, and Latin American Culture are available to the student. The Program also provides for interested majors or minors with the proper background course work to participate in ongoing archaeological excavations dealing with the Maya culture in the Central American country of Belize.

A minimum of 45 semester hours is required for a degree; all Anthropology courses are 3 semester hours with the exception of ANT 4124, which is 9 semester hours.

**Degree Requirements**

1. University graduation requirements
   (See pages 57-59)

2. Special college and/or department requirements

3. Required Courses (27 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 3000</td>
<td>Human Origins (Anthropology I)</td>
</tr>
<tr>
<td>ANT 3410</td>
<td>Cultural Anthropology (Anthropology II)</td>
</tr>
<tr>
<td>ANT 3511</td>
<td>The Human Species (Anthropology III)</td>
</tr>
<tr>
<td>ANT 3034</td>
<td>History of Anthropological Ideas</td>
</tr>
<tr>
<td>ANT 3145</td>
<td>Archaeology of Complex Societies</td>
</tr>
<tr>
<td>ANT 3422</td>
<td>Peoples of the World</td>
</tr>
<tr>
<td>ANT 3610</td>
<td>Language and Culture</td>
</tr>
<tr>
<td>ANT 3940</td>
<td>The Profession of Anthropology</td>
</tr>
<tr>
<td>ANT 4084</td>
<td>Anthropological Method and Theory</td>
</tr>
</tbody>
</table>

4. Restricted Electives (18 hours)

   **Area Studies (Select two)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 3153</td>
<td>Archaeology of North America</td>
</tr>
<tr>
<td>ANT 3162</td>
<td>Archaeology of Middle and South America</td>
</tr>
<tr>
<td>ANT 3163</td>
<td>Mesoamerican Archaeology</td>
</tr>
<tr>
<td>ANT 3311</td>
<td>Indians of the Southeastern United States</td>
</tr>
<tr>
<td>ANT 3312</td>
<td>Ethnology of North American Indians</td>
</tr>
<tr>
<td>ANT 3313</td>
<td>Indians of the North American High Plains</td>
</tr>
<tr>
<td>ANT 3328</td>
<td>Maya Archaeology</td>
</tr>
<tr>
<td>ANT 3332</td>
<td>Peoples and Cultures of Latin America</td>
</tr>
<tr>
<td>ANT 3360</td>
<td>Peoples of the Far East</td>
</tr>
</tbody>
</table>
Specialized Studies (Select four)

Cultural
- ANT 3302: Sex, Gender, and Culture
- ANT 3241: Magic, Ritual, and Belief
- ANT 3432: Culture and the Individual
- ANT 3418: Aging and Death
- ANT 3262: Rural Society
- ANT 3271: Law and Culture
- ANT 3705: Action Anthropology

Archaeology
- ANT 3122: Archaeological Method and Theory
- ANT 3141: The Emergence of Civilizations
- ANT 3142: Old World Prehistory
- ANT 3144: Prehistory of the American Indians
- ANT 4124: Advanced Archaeological Fieldwork
- ANT 4180: Seminar in Laboratory Analyses
- ANT 4930: Selected Topics in Archaeology

Physical
- ANT 3462: Medical Anthropology
- ANT 3464: Human Microevolution
- ANT 3512: Biobehavioral Anthropology
- ANT 3552: Primatology

5. Electives
- ANT 2003: General Anthropology (recommended for non-majors)
- ANT 5479: Comparative Cultural Analysis
- ANT 5937: Proseminar in Anthropology

Total Semester Hours Required 120
The Department of Statistics offers courses and programs which lead to a Bachelor of Science in Statistics, a minor in statistics, and a Master of Science in Statistical Computing. (See the Graduate Studies catalog for a description of the M.S. in Statistical Computing.)

The undergraduate programs in statistics are designed to serve (1) students who wish to pursue careers in statistics after having completed a baccalaureate degree; (2) students who wish to continue their education in graduate or professional schools; and (3) students who need to use statistics as tools in their specialty areas.

In order to serve such a wide variety of students, the courses and programs in the Department of Statistics have developed along several lines. There are the usual service courses in elementary statistics along with strong programs in the upper division in statistical methods, statistical theory, and statistical computing.

A limited number of assistantships are available for qualified graduate and undergraduate students.

MINOR

The Department of Statistics offers a minor (with a minimum of 18 hours). Required Courses: STA 3023 or STA 3032 or equivalent; STA 4163, STA 4164, and one of the following: STA 4222 or STA 4502. A grade of C or higher is required in each course counting toward a minor.

Restricted Electives: Six or more hours from STA courses numbered 3000 or higher. (Credit from STA 3023 or STA 3032 or the equivalent may not be used as a restricted elective.) All courses except STA 3023 or STA 3032 must be taken from the Department of Statistics at U.C.F. unless substitutes are approved by the Department Standards Committee.

BACHELOR OF SCIENCE: STATISTICS

Degree Requirements

1. University graduation requirements
   (See pages 57-59)

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 UCF unless substitutes are approved by the Department Standards Committee.

   (b) To meet the College of Arts and Sciences requirement for Natural Science majors, a Statistics major must take one course from one group (A or B) and two courses from the other group, with at least one laboratory in each group. Any additional science course in the College of Arts and Sciences of any level or any course in the College of Health numbered 3000 or higher will count as the fourth required course.

   Group A
   BOT 2010C
   BSC 2010C
   ZOO 2010C

   Group B
   CHM 2045
   CHM 2046 and CHM 2046L
   PHY 2053C
   PHY 2054C

   (NOTE: If both CHM 2046 and CHM 2046L are taken, they will only count as "one" course in satisfying the above requirement. CHM 2046L by itself will not count as a course.)

   (c) A grade of C or higher is required in all STA courses counting towards a statistics major.

   (d) A 2.0 average or higher is required in all computer science and mathematics courses that count toward a statistics major.

3. Required Courses

   STA 3023 Statistical Methods I 3 hours
   STA 4664 Statistical Quality Control 3 hours
   STA 4102 Computer Processing of Statistical Data 3 hours
   STA 4163 Statistical Methods II 3 hours
   STA 4164 Statistical Methods III 3 hours
   STA 4222 Sample Survey Methods 3 hours
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STA 4321</td>
<td>Statistical Theory I</td>
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<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 4500</td>
<td>Numerical Calculus</td>
<td>3</td>
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<tr>
<td>COP 2000</td>
<td>Programming I</td>
<td>3</td>
</tr>
<tr>
<td>COP 2001</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>or</td>
<td>MAS 3113</td>
<td>4</td>
</tr>
<tr>
<td>COT 3100</td>
<td>Introduction to Discrete Structure</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td>MHF 2300</td>
<td>3</td>
</tr>
<tr>
<td>ENC 3241</td>
<td>Technical 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.)
Selected courses in engineering may be used but must first be approved by the Statistics Department Standards Committee.

5. Electives
The number of hours depends on the courses chosen to satisfy university requirements.
Total Semester Hours Required: 120

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DEPARTMENT OF THEATRE

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

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. Successful completion of the theatre degree is contingent upon the student’s continuing participation in Department productions.

MINOR
The Department of Theatre offers a minor consisting of a minimum of 29 hours, as follows: THE 1020, THE 2071, THE 2925, THE 3370 or THE 3112 or THE 3113, TPA 2210, TPA 3060 or TPP 3310, TPP 2110, DAA 3200 and 6 hours of 3000/4000 level theatre electives.

BACHELOR OF ARTS: THEATRE

Degree Requirements
1. University graduation requirements
(see pages 57-59)
2. Special college and/or department requirements
(see page 68)
3. Required Courses (28 semester hours)

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Hours</th>
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<tr>
<td>DAA 3200</td>
<td>Dance I</td>
<td>3</td>
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<tr>
<td>THE 1020</td>
<td>Theatre Survey</td>
<td>3</td>
</tr>
<tr>
<td>THE 2071</td>
<td>Cinema Survey</td>
<td>3</td>
</tr>
<tr>
<td>THE 2925</td>
<td>Theatre Practicum I</td>
<td>2.2</td>
</tr>
<tr>
<td>THE 3112</td>
<td>Theatre History I</td>
<td>3</td>
</tr>
<tr>
<td>THE 3113</td>
<td>Theatre History II</td>
<td>3</td>
</tr>
<tr>
<td>TPA 2210</td>
<td>Technical Theatre Production I</td>
<td>3</td>
</tr>
<tr>
<td>TPA 2211</td>
<td>Technical Theatre Production II</td>
<td>3</td>
</tr>
<tr>
<td>TPP 2110</td>
<td>Acting I</td>
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</tr>
<tr>
<td>TPP 3310</td>
<td>Directing I</td>
<td>3</td>
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</tbody>
</table>
AREAS OF CONCENTRATION

Program "A" Performance
THE 3305 Drama Analysis  3 hours
THE 3925 Theatre Practicum II  2 hours
TPP 3111 Acting II  3 hours
TPP 4150 Scene Study and Character Dev.  3 hours
TPP 4260 Acting III  3 hours
TPP 4311 Directing II  3 hours

Suggested Electives: Theatre and Related Courses  12 hours

Program "B" Technical Theatre & Design
THE 3260 Theatrical Costume History and Design  3 hours
THE 3925 Theatre Practicum II  2 hours
TPA 3060 Scene Design I  3 hours
TPA 3081 Scene Painting  3 hours
TPA 3220 Stage Lighting  3 hours
TPA 3221 Lighting Design  3 hours

Suggested Electives: Theatre and Related Courses  12 hours

Program "C" Film
THE 3251 History of Motion Picture  3 hours
THE 4072 Principles of Motion Picture Art  3 hours
THE 4073 Film Production  3-6 hours
TPA 3060 Scene Design  3 hours
TPA 3220 Stage Lighting  3 hours

Special Topics and/or Independent Study in Film  3-6 hours

Suggested Electives
Approved ART, RTV, or THE courses  6 hours

4. Restricted Electives
5. Electives--see each program for suggested electives

Total Semester Hours Required  120

PRE-HEALTH PROFESSIONS PROGRAMS ADVISEMENT OFFICE
Preprofessional Coordinator: O.M. Berringer, BL 103, Phone 275-2968

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, usually between the junior and senior year. 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, approximately 91 percent of all pre dental and 95 percent of all premedical students accepted throughout the nation each year have completed four years of college. Consequently, since pathways such as "premed" do not 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 each term, with the exception of summer terms.

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 3023
- Comparative Anatomy, ZOO 3713C
- Embryology, ZOO 4603C
- Histology, ZOO 4753C
- Microbiology, MCB 3203C, and PCB 3233
- Analytical Chemistry, CHM 3121C plus either (or both) Biochemistry, BCH 4053, 4054, or Physical Chemistry, CHM 3410.
- 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 4753C; and Biochemistry, BCH 4053

Preveterinary students must take
- General Botany, BOT 2010C
- Analytical Chemistry, CHM 3121C
- Microbiology, MCB 3203C

*Animal Science, ASG 3003, and ASG 3402. *These courses to be taken as a transient student at the University of Florida, preferably during the summer following the sophomore year.
Additionally, the UCF courses Histology (ZOO 4753C), 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
Communication: SPC 3301 or 4330.
Health Sciences: APB 3600; HSC 3122; 3110; 4411; SPA 3001
Human Anatomy: ZOO 3733C
Literature: LIT 2110 and 3120.
Management: GEB 3004.
Philosophy: PHI 3600; 3630; 3930.
Political Science: PUP 4602.
Psychology: CLP 3143; DEP 3004; 3202; 3212; EAB 3704; DEP 3464; 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. Veterinary Medicine, A Career Of Choices: A Handbook for advisors, prepared by the Office of Student Affairs and Admissions, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853.

Each preprofessional student is encouraged to obtain a copy of the admissions 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, BL 103.

Other Health Professions
For Nursing and other Allied Health Sciences, see College of Health.
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, Ph.D.)
- Taxation (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 to become 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 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 grade of "C" or better must be achieved in each of the following courses: 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 placed in Business Administration pending category until they meet the requirements set forth above. Each student 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  
- Hospitality Management  
- 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.

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<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>
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</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
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<tr>
<td>ACG 3023</td>
<td>Principles of Accounting I &amp; II</td>
<td>6</td>
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<tr>
<td>ECO 2013</td>
<td>Principles of Economics I</td>
<td>3</td>
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<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>
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<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
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<td>ECO 3411</td>
<td>Quant. Methods &amp; Bus. Decisional Anal.</td>
<td>3</td>
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<td>CGS 3000</td>
<td>Comp. Fund. for Business App.</td>
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<tr>
<td>FIN 3403</td>
<td>Business Finance</td>
<td>3</td>
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<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>
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<tr>
<td>GEB 4351</td>
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<tr>
<td>MAN 4720</td>
<td>Business Policies</td>
<td>3</td>
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</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 chair 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. (Nine semester hours of upper division business courses must be completed at UCF.)

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. GEB 3004 and MAN 3705 may not be used as the business course elective. Nine (9) semester hours must be taken at UCF.

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 5265, ANT 3410, ECS 4003, ECS 4013, GEO 3470, INR
4035, INR 4401, INR 4224, INR 4243, INR 4274; Special Topics Seminars in Interna-
tional Business; 3000/4000 level foreign language course.

SCHOOL OF ACCOUNTING
Director: H. Anderson, PH 417, Phone 275-2463
Faculty: Alidina, Avery, Bandy, Campbell, Clark, Crowell, Danese, Grierson, Hunt, W. Johnson,
Kaminsky, Kelliher, Klintworth, Landry, Phillips, Robertson, J. Salter, M. Salter, Savage, Veit,
D. Welker, R. Welker

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 account­
ing 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 57-59)
2. Special college and/or department requirements
(See page 118)
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 4123 Financial Accounting III 3 hours
ACG 4203 Financial Accounting IV 3 hours
ACG 4651 Auditing 3 hours
BUL 3112 Business Law I 3 hours
BUL 3121 Business Law II** 3 hours
4. 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: As necessary to result in 126 total credit hours.
Total Semester Hours Required 126
*Except BUL 3111, Legal Environment of Business, which is satisfied by taking BUL
I & II.
**Transferable only from senior academic institutions.
CPA EXAMINATION REQUIREMENTS

Effective August 31, 1983, Florida Law states that to qualify to sit for the CPA exam, one must possess thirty (30) additional semester hours of credit beyond the requirements for the baccalaureate degree. In addition to this overall educational requirement, the following specific criteria also apply:

- 36 hours in accounting beyond elementary, including at least:
  - 12 hours in financial and cost accounting
  - 6 hours in auditing and internal auditing
  - 6 hours in tax

AND

- 39 hours in general business including at least six hours of business law. Because of these increased educational requirements, no experience or additional course work is needed for certification.

To satisfy the necessary coursework required by the law, the School of Accounting offers the MASTER OF SCIENCE IN ACCOUNTING (MSA) degree program. Please see the graduate catalog for program requirements.

DEPARTMENT OF ECONOMICS

Chair: B. Rungeling, PH 444, Phone 275-2465
Faculty: Braun, Day, Euzent, Fritz, Gupta, D. Hosni, Kilbride, Martin, McHone, 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 3703, 4224, 4303, 4412, 4504; ECP 3203, 3424, 3433, 4403, 4603, 4703; ECS 4003, 4013.
BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: ECONOMICS

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 118 and 121)
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 3703 International Economics 3 hours
   ECO 4224 Money: Issues and Analysis 3 hours
   ECO 4303 History of Economic Thought 3 hours
   ECO 4412 Economic Statistics and Econometrics 3 hours
   ECO 4504 Economics of the Public Sector 3 hours
   ECP 3203 Contemporary Labor Economics 3 hours
   ECP 3424 The Economics of Regulated Industries 3 hours
   ECP 3433 Transportation Economics 3 hours
   ECP 4403 Business, Government & Industrial Organization 3 hours
   ECP 4603 Urban and Regional Economic Problems 3 hours
   ECP 4703 Managerial Economics 3 hours
   ECS 4003 Comparative Economic Systems 3 hours
   ECS 4013 Economic Development 3 hours
5. Electives
   Total Semester Hours Required 120

DEPARTMENT OF FINANCE
Chair: D. Klock, PH 436, Phone 275-2525
Faculty: Atkinson, Cheney, DeVane, DeWitt, Graham, LeBlanc, Madura, Modani, Neustel, Reiff, Scott, Veit, Weaver

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 judgments in finance.

The study of finance prepares the student for careers in business financial management. 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.

The Department of Finance at the University of Central Florida offers "financial services" as an area of concentration within the finance major. This program has been initiated in response to the growing demand throughout the country for professionals who are knowledgeable in all areas of personal financial planning and management. These areas include investments, real estate, insurance, taxes, and estate planning.

BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: FINANCE

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See page 118)
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 4126       Seminar in Financial Services  3 hours
FIN 4127       Employee Benefits and Retirement Planning  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 Financial Management  3 hours
REE 3043       Fundamentals of Real Estate  3 hours
REE 4303       Real Estate Investment Analysis  3 hours
RMI 3015       Principles of Risk and Insurance  3 hours

5. Electives

Total Semester Hours Required  120

FINANCIAL SERVICES CONCENTRATION

Students graduating from UCF with a BSBA degree with a major in finance and a concentration in financial services will be awarded a certificate of program completion in addition to their diploma.

The following course requirements must be met by the student in addition to the General Education Program and Common Body of Knowledge:

Required Courses
FIN 3453       Financial Models  3 hours
FIN 3502       Investments  3 hours
FIN 3303       Financial Institutions  3 hours
REE 4303       Real Estate Investment Analysis  3 hours
RMI 3015       Principles of Risk and Insurance  3 hours
TAX 3000       Personal Income Tax  3 hours
FIN 4127       Employee Benefits, Retirement Planning  3 hours
FIN 4126       Seminar in Financial Services  3 hours

Restricted Electives (Select at least one course)
FIN 3233       Money and Banking  3 hours
FIN 3324       Comm Bank Administration  3 hours
FIN 4520       Sec. Analysis and Port. Management  3 hours

GENERAL BUSINESS ADMINISTRATION

This option allows students to develop a general program of study which will satisfy career objectives not provided for by the specialized areas of concentration. To pursue this option, students 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 57-59)
2. Special college and/or department requirements
   (See page 118)
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

<table>
<thead>
<tr>
<th>DEPARTMENT OF HOSPITALITY MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chair:</strong> A. Pizam, PH 102, Phone 275-2188</td>
</tr>
<tr>
<td><strong>Faculty:</strong> Ashley, Chandrasekar, Farsad, McCool, Milman</td>
</tr>
</tbody>
</table>

The hospitality industry is comprised of the many business organizations that provide
services to individuals away from home. The hospitality industry, the number one employer
in the United States, requires high technical and managerial competence for managing the
numerous services provided by the varied organizations in the field.

The study of hospitality management prepares students for a broad range of managerial
positions in hotels, motels, restaurants, catering services, resorts, country clubs, airlines,
travel agencies, state and local convention and visitors bureaus, hospital and college food
services, as well as supportive industries, such as consulting and research firms, public
accountants, computer firms, or sales and marketing organizations. The program provides
students opportunities to complete studies in all hospitality management areas as well as
for "hands-on" laboratory experience and for study in advanced specialized courses. In
addition, necessary "real world" experience is provided through a requirement of 800 hours
of paid employment in the hospitality field during each student's course of study.
BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION:
HOSPITALITY MANAGEMENT

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 118 and 124)
3. Required Courses
   a. Business College Common Body of Knowledge EXCEPT:
      BUL 3111  Legal Environment of Business
      ENC 3210  Business Report Writing
      CAP 3001  Computer Fundamentals for Business
      Applications
      (These requirements are met through the required
       Hospitality Management courses.)
   b. HFT 1000  Introduction to the Hospitality
      & Tourism Industry  3 hours
      HFT 2252  Rooms Division Management  3 hours
      FSS 2202C  Food Production Techniques  3 hours
      HFT 3420  Managerial Accounting for the
      Hospitality Industry  3 hours
      FSS 3223  Quantity Food Management  3 hours
      HFT 3603  Legal Environment of the Hospitality
      & Tourism Industry  3 hours
      HFT 3444  Management Information Systems for the
      Hospitality Industry  3 hours
      HFT 3930  Guest Lecture Series  1 hour
      HFT 4503  Hospitality & Tourism Marketing  3 hours
      HFT 4700  Travel & Tourism Administration  3 hours
   c. Practical Industry Experience
      Eight hundred hours of travel industry work experience are required of all students.
      This experience must be in some aspect of the industry in which the student is
      particularly interested. This experience has to be approved by the departmental work
      experience coordinator.
4. Restricted Electives
   Hospitality Management majors will be required to take four (4) electives from the
   following courses for a total of twelve (12) hours beyond the required courses.
      HFT 3313  Hospitality Property Management  3 hours
      FSS 3120  Quantity Food Purchasing  3 hours
      HFT 4717  Tourism Planning and Development  3 hours
      HFT 4753  Conference and Convention Planning  3 hours
      HFT 4932  Current Topics in Hospitality Management  3 hours
      HFT 4860  Beverage Management  3 hours
      AVM 4510  Airline Management  3 hours
      HFT 4722  Travel Agency Management  3 hours
      MCB 3930  Microbiology and Sanitation in
      Food Service Operations  3 hours
5. Electives
   Total Semester Hours Required  120 - 121

DEPARTMENT OF MANAGEMENT
Chair: H. Jones, PH 343, Phone 275-2376
Faculty: Berry, Bogumil, Burnett, Callarman, Eubanks, Fandt, Fernald, Goodman, T. Jones, P. Lewis, Martin, McCartney, Ragusa, Richardson, A. Schou, Souder, Stevens

The study of management includes an investigation into the processes and techniques of
leadership, planning, staffing, and controlling of both small and complex organizations.
Course offerings are designed to show how technological factors, the framework for
decision making, and the human contributions have impact on productivity, satisfaction of
job-related needs, and effectiveness of actual organization.
A student majoring in management may find a wide variety of career opportunities in
business, industry, or government.
BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: MANAGEMENT

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 118 and 125)
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

DEPARTMENT OF MARKETING
Chair: A. Burns, PH 410, Phone 275-2108
Faculty: Conley, Davis, Elmendorf, Fuller, Gillett, Joyce, Krainik, Morris, Paul, 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 57-59)
2. Special college and/or department requirements
   (See page 118)
3. Required Courses
   a. Business College Common Body of Knowledge
   b. MAR 3503 Consumer Market Behavior 3 hours
      MAR 3613 Marketing Research 3 hours
      MAR 4722 Marketing Management 3 hours
      MAR 4713 Marketing Strategy 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 Marketing Channel Systems 3 hours
   MAR 4243 International Marketing 3 hours
   MAR 4453 Industrial Marketing 3 hours
   MAR 4703 Contemporary Marketing Issues 3 hours
   MAR 4941 Internship 3-6 hours
5. Electives

Total Semester Hours Required 120
COLLEGE OF EDUCATION

UNDERGRADUATE PROGRAMS

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

GRADUATE PROGRAMS*

Masters Programs
Administration & Supervision (MA) (M.Ed)
**Art Education (MA) (M.Ed)
**Business Education (Comprehensive) (MA) (M.Ed)
Counselor Education (MA) (M.Ed)
Educational Media (M.Ed)
Elementary Education (MA) (M.Ed)
English Language Arts Education (MA) (M.Ed)
Exceptional Child (MA) (M.Ed)
Instructional Systems (MA)
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)
Vocational Education (MA) (M.Ed)

Doctoral and Specialist Programs
Administration & Supervision (Ed.D) (Ed.S)
Curriculum and Instruction (Ed.D) (Ed.S)

*See the Graduate catalog for information
**Students will not be admitted to these programs during the 1987-1988 academic year.
More information may be obtained from the office of the Dean of the College of Education (275-2366).
The undergraduate role of the College of Education is to provide programs for individuals interested in careers as teachers of elementary, secondary and/or exceptional students. The degree of Bachelor of Science is offered by the College of Education with the following majors:

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

The program combines general education, a subject matter specialization and a sequence of professional education courses and experiences necessary for preparing students to qualify for teacher certification and entry into the profession of teaching.

The professional sequence provides students an opportunity to translate classroom learning into practice through planned learning experiences in elementary or secondary school settings. Public schools in Central Florida serve as the University Laboratory for students preparing for careers in teaching and those seeking other careers in schools.

The professional sequence of courses and field laboratory experiences are designed to address the competencies required for initial certification and include particular attention to the following:

- Knowledge about the growth and development of children and youth
- Knowledge of how children and youth learn
- Knowledge and skills for accurately measuring student performance
- Knowledge of the role and function of schools in a free society
- Designing educational teaching objectives
- Designing and implementing effective teaching strategies
- Utilizing computers and other forms of instructional technology

PROGRAMS FOR POST BACCALAUREATE STUDENTS

Students who have earned a Bachelor's degree may complete course requirements for teaching in Florida by enrollment as a Post Baccalaureate non-degree seeking student. Post Baccalaureate students are admitted to the University and to the College of Education by receipt of an application and transcript, and the achievement of a 2.5 GPA in the area of undergraduate specialization. Counselors are available to assist in developing a program of studies that will meet certification requirements.

In addition to course requirements the following requirements for initial certification to teach in Florida also apply: (1) Show evidence of a score of 17 on the American College Testing Program (ACT) or a score of 835 on the Scholastic Aptitude Test (SAT); (2) Pass a written Competency Exam administered by the Florida Department of Education; and (3) Successfully complete the Florida Beginning Teacher Program.

GRADE POINT AND OTHER REQUIREMENTS

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 (GPA) of 2.0 or above, 3) have satisfactorily completed EDG 4321, 4) have passed the College Level Academic Skills Test (CLAST) and 5) submit a formal junior student teaching application to the college Student Internships Office.

To qualify for graduation, a student must have a 2.0 GPA in all course work and a 2.5 in each of the areas of specialization and professional preparation.

COMMON CORE REQUIREMENTS IN CAREER TEACHING PROGRAM

The core requirements provide learning experiences to develop skills required by all teachers. These include the teaching competencies required for initial teacher certification by the Florida Department of Education.

The core requirements are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDG 4321</td>
<td>Teaching Strategies</td>
<td>4</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<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>EDF 3603</td>
<td>Analysis of Education Foundations</td>
<td>3</td>
</tr>
<tr>
<td>EDF 4214</td>
<td>Classroom Learning Principles</td>
<td>3</td>
</tr>
</tbody>
</table>

JUNIOR STUDENT TEACHING

Laboratory experience 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 Junior Student Teaching must be submitted. Applications are due at least one semester (summer excluded) prior to registration.

SENIOR YEAR STUDENT TEACHING

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 a student must have a 2.5 GPA in the courses in the professional sequence and a 2.5 GPA in the area of specialization and satisfied Junior Student Teaching requirements; have a 2.0 GPA UCF overall academic average; be recommended by his/her department.

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

Courses to fulfill the Special Methods and Specialization certification requirements are offered by other departments within the college and university and listed under the appropriate departments.

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).

All applicants for a teaching certificate in Florida must pass a written competency examination administered by the Florida State Department of Education.

All applicants for their First Regular Florida Teaching Certificate must satisfy requirements of the Florida Beginning Teacher Program.

STUDENT INTERNSHIPS PROGRAM
Director: Jack H. Armstrong, 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. This office administers the internship program.

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

The Educational Foundations Department teaches the courses in the core which include the competencies and skills needed by all teachers. Foundation courses are also provided for students pursuing graduate degrees in teacher education. The undergraduate core courses include:
EDG 4321  Teaching Strategies  4 hours
EDF 4285  Application of Technology in Education  3 hours
EDG 4324  Teaching in the Schools  3 hours
EDF 3603  Analysis of Educational Foundations  3 hours
EDF 4214  Classroom Learning Principles  3 hours

DEPARTMENT OF EDUCATIONAL SERVICES
Chair: J. Powell, ED 318, Phone 275-2047
Faculty: Baumbach, Bell, Bollet, Bozeman, Clark, Cleland, Cornell, Cowgill, Crocitto, Gergley, Haughee, Hernandez, Higginbotham, Hunter, Johnson, Marowitz, Martin, Mealor, Miller, Midgett, Olson, Orwig, Platt, Renner, Rohrer, Rothberg, Shadgett, Tubbs

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. Separate elementary and secondary certification programs are offered in 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. An affiliated doctoral program is available in the areas of Administration and Supervision leading to the Specialist and Doctorate of Education degrees.

BACHELOR OF SCIENCE: EXCEPTIONAL CHILD EDUCATION

1. University graduation requirements
   (See pages 57-59)

2. Special college and/or department requirements
   (See pages 128 and 129)

3. Required courses
   Specialization
   RED 3012  Foundations of Reading  3 hours
   RED 4519  Diag and Corrective Reading Strategies  3 hours
   EEX 3241  Methods for Academic Skills for Exceptional Students  4 hours
   MAE 3112  Instruction of Math in the Elementary School  4 hours
   PET 4601  Motor Development: Habilitation & Remediation for Exceptional Students  3 hours
   EEX 3010  Orientation to Special Education  3 hours
   EEX 3102  Language Development and Common Disorders  3 hours
   EEX 3221  Assessment of Exceptional Learners  3 hours
   EEX 4601  Behavioral Management  3 hours
   EEX 3263  Arts and Sciences for Exceptional Students  4 hours
   EEX 4243  Techniques for the Exceptional Adolescent-Adult  3 hours
   EED 4011 or ELD 4011  Introduction to the Emotionally Disturbed  4 hours
   EEX 4212 or ELD 4242  Program Planning for Specific Learning Disabilities  4 hours
   EMR 4011 or EMR 4372  Introduction to Specific Learning Disabilities  4 hours
   EMR 4372  Curriculum Method and Materials for Retarded Persons  4 hours

4. Restricted Electives
5. Electives
   None

Minimum Total Semester Hours Required 120
### BACHELOR OF SCIENCE: PHYSICAL EDUCATION

1. University graduation requirements  
   (See pages 57-59)
2. Special college and/or department requirements  
   (See pages 128 and 129)
3. Required Courses
   Specialization
   I. Elementary Physical Education (K-8)
      - PET 3012 Physical Education Professional Development 1 hour
      - PET 4640 Adapted Physical Education 3 hours
      - PET 4401 Organization & Administration of Typical/Atypical PE Programs 3 hours
      - PEO 3011 I/A Team Sports 3 hours
      - PET 4351 Physiology & Human Performance 3 hours
      - PET 4622 Human Injuries 3 hours
      - PET 4312 Biomechanics 3 hours
      - PET 4382 Fitness Assessment & Exercise Intervention 3 hours
      - PEP 3201 Gymnastics 2 hours
      - PET 4035C Motor Development & Learning 3 hours
      - DAE 3370 Dance & Rhythms 3 hours
      - PET 3041 Games for the Elementary School PE Program 2 hours
      - RED 3012 Basic Foundations of Reading 3 hours
      - or LAE 4314 Language Arts in the Elementary School 3 hours
      - MUE 3210 Music in the Elementary School 3 hours
      - or ARE 4313 Art in the Elementary School 3 hours
   Total Hours 38

   II. Secondary Physical Education (6-12)
      - PET 3012 Physical Education Professional Development 1 hour
      - PET 4640 Adapted Physical Education 3 hours
      - PET 4401 Organization & Administration of Typical/Atypical PE Programs 3 hours
      - PEO 3011 I/A Team Sports 3 hours
      - PET 4351 Physiology & Human Performance 3 hours
      - PET 4622C Human Injuries 3 hours
      - PET 4312 Biomechanics 3 hours
      - PET 4382 Fitness Assessment & Exercise Intervention 3 hours
      - PEP 3201 Gymnastics 2 hours
      - DAE 3300 Dance Techniques 3 hours
      - PET 3453 Coaching and Officiating 3 hours
      - PEO 3005 Advanced Sports Analysis 3 hours
      - PEO 3031 Individual Sport Activities 3 hours
   Total Hours 36

   4. Restricted Electives
      None
   5. Electives
      None
   Minimum Total Semester Hours Required 120

### BACHELOR OF SCIENCE: EDUCATIONAL MEDIA SPECIALIST

1. University graduation requirements  
   (See pages 57-59)
2. Special college and/or department requirements  
   (See pages 128 and 129)
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
   To be chosen in consultation with advisor

5. Electives

DEPARTMENT OF INSTRUCTIONAL PROGRAMS

Chair: R. Martin, ED 346, Phone 275-2939

Faculty: Anderson, Armstrong, Bird, Brumbaugh, Clarke, Cox, Green, Gurney, Hall, Hopkins, Hudson, Hynes, Joels, McGee, Miller, Palmer, Paugh, Sanford, Siebert, Sorg, Thompson, Weidenheimer, White, Williams

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, reading, mathematics, music, physical education, science and social studies; and (3) professional study which includes planned laboratory activities with children in schools identified as Teacher Education Centers.

Early Childhood Education (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 Science, and Speech.

Art/Music

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

Vocational Education

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 or licensure in the area in which they wish to teach. A maximum of 30 semester hours of credit by examination or credit granted through licensing may count toward the degree.

Business Education

A bachelor's degree comprehensive curriculum is planned for students who desire to specialize in Business Education.
### BACHELOR OF SCIENCE: ART EDUCATION

**Degree Requirements**

1. University graduation requirements  
(See pages 57-59)
2. Special college and/or department requirements  
(See pages 128 and 132)
3. Required Courses

#### Specialization

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 2201C</td>
<td>Design Fundamentals I</td>
<td>3</td>
</tr>
<tr>
<td>ART 2300C</td>
<td>Drawing Fundamentals I</td>
<td>3</td>
</tr>
<tr>
<td>ART 3110C</td>
<td>Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>ART 3230C</td>
<td>Design in Advertising</td>
<td>3</td>
</tr>
<tr>
<td>ART 3400C</td>
<td>Printmaking</td>
<td>3</td>
</tr>
<tr>
<td>ART 3510C</td>
<td>Painting</td>
<td>3</td>
</tr>
<tr>
<td>ART 3600C</td>
<td>Photography</td>
<td>3</td>
</tr>
<tr>
<td>ART 4130C</td>
<td>Fibers, Fabrics, Textiles and Synthetics</td>
<td>3</td>
</tr>
<tr>
<td>ART 4165C</td>
<td>Metals, Woods, Leather and Stones</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>ARE 4143</td>
<td>Methodology for Teaching K-12 Art Education I</td>
<td>2</td>
</tr>
<tr>
<td>ARE 4144</td>
<td>Methodology for Teaching K-12 Art Education II</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARE 4440</td>
<td>Two-Dimensional Instructional Materials</td>
<td>3</td>
</tr>
<tr>
<td>ARE 4443</td>
<td>Three-Dimensional Instructional Materials</td>
<td>3</td>
</tr>
<tr>
<td>ARE 4441</td>
<td>Graphics Instructional Materials</td>
<td>3</td>
</tr>
<tr>
<td>ART 5109C</td>
<td>Crafts Design</td>
<td>3</td>
</tr>
</tbody>
</table>

4. Restricted Electives (select one)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARH 2050</td>
<td>2051, or 4700.</td>
<td>3</td>
</tr>
</tbody>
</table>

5. Electives

None

**Minimum Total Semester Hours Required** 120

### BACHELOR OF SCIENCE: BUSINESS EDUCATION

**Degree Requirements**

1. University graduation requirements  
(See pages 57-59)
2. Special college and/or department requirements  
(See pages 128 and 132)
3. Required Courses

#### Specialization

<table>
<thead>
<tr>
<th>Course</th>
<th>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>OST 2110</td>
<td>Typewriting Production</td>
<td>3</td>
</tr>
<tr>
<td>OST 3120</td>
<td>Professional Typewriting Production</td>
<td>3</td>
</tr>
<tr>
<td>OST 3781</td>
<td>Office Technology</td>
<td>3</td>
</tr>
<tr>
<td>BTE 4366</td>
<td>Business Correspondence</td>
<td>3</td>
</tr>
<tr>
<td>BUL 3111</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>CAP 3001</td>
<td>Computer Fund. Business</td>
<td>3</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>MAR 3023</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3025</td>
<td>Management of Organizations</td>
<td>3</td>
</tr>
<tr>
<td>EVC 3062</td>
<td>Professional Role of the Vocational Teacher</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>BTE 3391</td>
<td>Business Instructional Analysis I</td>
<td>2</td>
</tr>
<tr>
<td>BTE 4393</td>
<td>Business Instructional Analysis III</td>
<td>2</td>
</tr>
</tbody>
</table>

4. Restricted Electives  
Select two of the following (6 semester hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACG 3103</td>
<td>Financial Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>CAP 3002</td>
<td>Business Application Programming</td>
<td>3</td>
</tr>
<tr>
<td>ECP 4403</td>
<td>Business Gov. &amp; Ind. Organizations</td>
<td>3</td>
</tr>
</tbody>
</table>
### ECS 4003
Com. Economic Systems 3 hours

### MAN 3301
Personnel Management 3 hours

### MAN 4150
Human Relations Management 3 hours

#### 5. Electives
None

**Minimum Total Semester Hours Required** 120

### BACHELOR OF SCIENCE: ELEMENTARY EDUCATION

#### Degree Requirements

1. **University graduation requirements**
   (See pages 57-59)

2. **Special college and/or department requirements**
   (See pages 128 and 132)

3. **Required Courses**

   **Specialization**
   - ARE 4313: Art in the Elementary School 3 hours
   - HLP 4460: Teaching Elementary School Health/Physical Education 3 hours
   - LAE 3414: Literature for Children 3 hours
   - LAE 4314: Language Arts in the Elementary School 3 hours
   - MAE 4326: How Children Learn Mathematics 4 hours
   - MUE 3210: Music in the Elementary School 3 hours
   - SCE 3310: Teaching Science in the Elementary School 4 hours
   - SSE 3312: Teaching Social Science in the Elementary School 4 hours

   **Special Methods**
   - RED 3012: Basic Foundations of Reading 3 hours
   - RED 4519: Diagnostic and Corrective Reading Strategies 3 hours

4. **Restricted Electives**

   Ten semester hours in science are required for majors: GEO 1200, BSC 2010C, and PHY 3014C. Twelve semester hours in mathematics are required for majors: MAE 1810 and MAE 2811 are required in addition to MAC 1104 or MGF 1202 and COC 1100 or STA 2014. The AA degree transfer student from a Florida public community college is required to select MAE 3112.

5. **Electives**
None

**Minimum Total Semester Hours Required** 121

### BACHELOR OF SCIENCE: ENGLISH LANGUAGE ARTS EDUCATION

#### Degree Requirements

1. **University graduation requirements**
   (See pages 57-59)

2. **Special college and/or department requirements**
   (See pages 128 and 132)

3. **Required Courses**

   **Lower Division**
   - ENC 1101: Composition I 3 hours
   - ENC 1102: Composition II 3 hours
   - SPC 1014: Fundamentals of Oral Communication 3 hours

   **Literature**
   - ENL 2010: English Literature I: Beowulf to 1660 3 hours
   - ENL 3021: English Literature II: From 1660 to 1870 3 hours
   - AML 2011: American Literature I 3 hours
   - AML 3020: American Literature II 3 hours
   - AML 4321: Modern American Literature OR 3 hours
   - ENL 4373: Modern British Literature 3 hours
   - ENL 4330: Shakespeare 3 hours
   - LIT 3000: Literary Analysis 3 hours

   **Composition**
   - ENC 3311: Advanced Expository Writing 3 hours

   Choose one:
   - ENC 3311, CRW 3001, CRW 3002, CRW 3310 3 hours

**Total Semester Hours Required** 135
Language
LIN 4341 Modern English Grammar 3 hours
LAE 4342 Teaching Language and Composition 3 hours
Special Methods
LAE 3335 English Instructional Analysis 4 hours
4. Restricted Electives
Recommended: LIN 4100, LIT 3120
Approved: ENL 3273, 4101, 4311, 4341,
LIT 3313, 4312, AML 4101, LIN 3010 6 hours
5. Electives
None
Minimum Total Semester Hours Required 120

BACHELOR OF SCIENCE: SPEECH EDUCATION (7-12); ENGLISH (7-9)
Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See page 128)
3. Required Courses
   Lower Division
   ENC 1101 Composition I 3 hours
   ENC 1102 Composition II 3 hours
   Literature (Choose two)
   ENL 2010, 3021, AML 2011, 3020
   AML 4321 or ENL 4373, LIT 3000, LAE 5464
   Language and Composition
   ENC 3310 Magazine Writing I 3 hours
   LIN 4341 Modern English Grammar 3 hours
   Speech (19)
   SPC 1014 Fundamentals of Oral Communication 3 hours
   LIN 3200 English Phonetics 4 hours
   ORI 3001 Interpretation I 3 hours
   SPC 3511 Argumentation and Debate 3 hours
   SPC 3425 Group Interaction and Decision Making 3 hours
4. Restricted Electives
   One upper level speech or drama course 3 hours
5. Electives
   None
Minimum Total Semester Hours Required 124

BACHELOR OF SCIENCE: FOREIGN LANGUAGE EDUCATION
Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 128 and 132)
3. Required Courses
   AREAS OF SPECIALIZATION (Select one)
   French Language
   FLE 3063 Foreign Language as Human Behavior 2 hours
   FRE 1120 Elementary Language and Civilization I 4 hours
   FRE 1121 Elementary Language and Civilization II 4 hours
   FRE 2200 Intermediate Language and Civilization I 4 hours
   FRE 2201 Intermediate Language and Civilization II 4 hours
   FRE 3244 French Conversation 3 hours
   FRE 3420 French Composition 3 hours
   FRW 3100 Survey of French Literature I 3 hours
   FRW 3101 Survey of French Literature II 3 hours
   Spanish Language
   FLE 3063 Foreign Language as Human Behavior 2 hours
   SPN 1120 Elementary Language and Civilization I 4 hours
### Special Methods

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN 1121</td>
<td>Elementary Language and Civilization II</td>
<td>4 hours</td>
</tr>
<tr>
<td>SPN 2230</td>
<td>Intermediate Language and Civilization I</td>
<td>4 hours</td>
</tr>
<tr>
<td>SPN 2231</td>
<td>Intermediate Language and Civilization II</td>
<td>4 hours</td>
</tr>
<tr>
<td>SPN 3241</td>
<td>Spanish Conversation</td>
<td>3 hours</td>
</tr>
<tr>
<td>SPN 3420</td>
<td>Spanish Composition</td>
<td>3 hours</td>
</tr>
<tr>
<td>SPW 3100</td>
<td>Survey of Spanish Literature I</td>
<td>3 hours</td>
</tr>
<tr>
<td>SPW 3101</td>
<td>Survey of Spanish Literature II</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

### 4. Restricted Electives

Select upper division courses in Area of Specialization.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIN 3010 or 4801</td>
<td>Language and Meaning</td>
<td>3 hours</td>
</tr>
<tr>
<td>ANT 3410</td>
<td>Cultural Anthropology</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

### 5. Electives

See your advisor concerning courses related to “English for Speakers of other Languages” (ESOL) and Bilingual Education.

Minimum Total Semester Hours Required: **123**

---

**BACHELOR OF SCIENCE: MATHEMATICS EDUCATION**

### Degree Requirements

1. University graduation requirements
   
   (See pages 57-59)

2. Special college and/or department requirements
   
   (See pages 128 and 132)

3. Required Courses

<table>
<thead>
<tr>
<th>Specialization</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 1104</td>
<td>College Algebra</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAC 1114</td>
<td>College Trigonometry</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAC 3311</td>
<td>Calculus w/Analytic Geometry I</td>
<td>4 hours</td>
</tr>
<tr>
<td>MAC 3312</td>
<td>Calculus w/Analytic Geometry II</td>
<td>4 hours</td>
</tr>
<tr>
<td>MGF 1202</td>
<td>Finite Mathematics</td>
<td>3 hours</td>
</tr>
<tr>
<td>MHF 2300</td>
<td>Logic &amp; Proof</td>
<td>3 hours</td>
</tr>
<tr>
<td>MTG 4212</td>
<td>Modern Geometry</td>
<td>4 hours</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3 hours</td>
</tr>
<tr>
<td>COP 2510</td>
<td>Programming I</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAE 5637</td>
<td>Lab Program in Math</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

4. Restricted Electives

   (Select two: MHF 3104, 4404, MAP 3302, MAS 3203, 3103, 3113, 4301, MAC 3313, or approved by advisor)

5. Electives

   Select in consultation with advisor.

Minimum Total Semester Hours Required: **120**

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**BACHELOR OF SCIENCE: SCIENCE EDUCATION**

### Degree Requirements

1. University graduation requirements
   
   (See pages 57-59)

2. Special college and/or department requirements
   
   (See pages 128 and 132)

3. Required Courses

   **Biology Specialization**

<table>
<thead>
<tr>
<th>CORE</th>
<th>Course Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSC 2010C</td>
<td>General Biology</td>
<td>4 hours</td>
</tr>
<tr>
<td>CHM 1034</td>
<td>General Chemistry</td>
<td>3 hours</td>
</tr>
<tr>
<td>CHM 2205</td>
<td>Intro to Organic and Biochemistry</td>
<td>5 hours</td>
</tr>
<tr>
<td>BOT 2010C</td>
<td>General Botany</td>
<td>3 hours</td>
</tr>
<tr>
<td>BOT 4303C</td>
<td>Plant Kingdom</td>
<td>5 hours</td>
</tr>
<tr>
<td>PCB 3043</td>
<td>Principles of Ecology</td>
<td>3 hours</td>
</tr>
<tr>
<td>PCB 3043L</td>
<td>Principles of Ecology Laboratory</td>
<td>1 hour</td>
</tr>
<tr>
<td>PCB 3063</td>
<td>Genetics</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>PCB 3063L</td>
<td>Genetics Laboratory</td>
<td>1 hour</td>
</tr>
<tr>
<td>ZOO 2010C</td>
<td>General Zoology</td>
<td>3 hours</td>
</tr>
<tr>
<td>ZOO 3733C</td>
<td>Human Anatomy</td>
<td>4 hours</td>
</tr>
<tr>
<td>SCE 3330</td>
<td>Science Instructional Analysis</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

4. Restricted Electives
- Select one: BOT 3800, MCB 3013C, PCB 3703C, 4302C3-4 hours

5. Electives
- Select in consultation with advisor.

Minimum Total Semester Hours Required: 120

### Chemistry Specialization

**CORE**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2045</td>
<td>Chemistry Fundamentals I</td>
<td>4 hours</td>
</tr>
<tr>
<td>CHM 2046</td>
<td>Chemistry Fundamentals II</td>
<td>3 hours</td>
</tr>
<tr>
<td>CHM 2046L</td>
<td>Chemistry Fundamentals Laboratory</td>
<td>1 hour</td>
</tr>
<tr>
<td>CHM 3121C</td>
<td>Analytical Chemistry</td>
<td>5 hours</td>
</tr>
<tr>
<td>CHM 3210</td>
<td>Organic Chemistry I</td>
<td>3 hours</td>
</tr>
<tr>
<td>CHM 3211</td>
<td>Organic Chemistry II</td>
<td>3 hours</td>
</tr>
<tr>
<td>CHM 3211L</td>
<td>Organic Laboratory Techniques I</td>
<td>2 hours</td>
</tr>
<tr>
<td>BCH 4053</td>
<td>Biochemistry I</td>
<td>3 hours</td>
</tr>
</tbody>
</table>

**Special Methods**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCE 3330</td>
<td>Science Instructional Analysis</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

**Mathematics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 1104</td>
<td>College Algebra</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAC 1114</td>
<td>College Trigonometry</td>
<td>3 hours</td>
</tr>
<tr>
<td>MAC 3311</td>
<td>Calculus with Analytic Geometry I</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

4. Restricted Elective
- Select two: BCH 4054, MCB 3013C, PCB 3063, PHY 2051C

5. Electives
- Select in consultation with Advisor.

Minimum Total Semester Hours Required: 120
Physics Specialization

CORE
- PHY 2053C: College Physics I (4 hours)
- PHY 2054C: College Physics II (4 hours)
- PHY 3048: Physics for Engineers & Scientists I (3 hours)
- PHY 3048L: Physics Lab for Engineers & Scientists I (1 hour)
- PHY 3101: Modern Physics (3 hours)
- PHY 3752C: Physics of Scientific Instruments (4 hours)
- PHY 4942C: Practicum in Physics (3 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 Electives
Select one: PHY 3049 and 3049L, PHY 3802L, PHS 3151, CDA 4012
3-4 hours

5. Electives
Select in consultation with Advisor.

Minimum Total Semester Hours Required 120

BACHELOR OF SCIENCE: SOCIAL SCIENCE EDUCATION

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 128 and 132)
3. Required Courses
   Specialization (52 hours)
   Lower Division Requirements:
   - ECO 2013: Principles of Economics I (3 hours)
   - ECO 2023: Principles of Economics II (3 hours)
   - EUH 2000: Western Civilization I (3 hours)
   - EUH 2001: Western Civilization II (3 hours)
   - AMH 2010: U.S. History 1492-1877 (3 hours)
   - AMH 2020: U.S. History 1877-Present (3 hours)
   - POS 2041: American National Government (3 hours)
   - SYG 2000: General Sociology (3 hours)
   Upper Division Requirements:
   - CPO 3103: Comparative Politics (3 hours)
   - GEO 3370: Resources Geography (3 hours)
   - GEO 3470: World Political Geography (3 hours)
   - AMH 4231: U.S. History 1914-1945 (3 hours)
   - AMH 4270: U.S. History 1945-Present (3 hours)
   Special Methods
   - SSE 3333: Social Science Instr. Analysis (4 hours)
4. Restricted Electives (9 hours)
   American History (select one)
   - AMH 3370: American Economic History (3 hours)
   - AMH 4130: American Revolution (3 hours)
   - AMH 4170: Civil War & Reconstruction (3 hours)
   European History (select one with approval by advisor)
   Political Science (select one)
   - POS 3122: State Government & Public Policy (3 hours)
   - POS 3273: Voting & Elections (3 hours)
   - INR 3002: International Relations (3 hours)
5. Electives
   None

Minimum Total Semester Hours Required 120
BACHELOR OF SCIENCE: TECHNICAL/VOCATIONAL EDUCATION

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
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
- EDF 4214

Phase II Developmental
- EDF 4285
- EVT 3365
- EVT 3367
- EVT 3562
- EVT 3815

Phase III Application
- EVT 3311
- EVT 3062
- EVT 4066

EDG 4941

Required Courses

Professional Education

Phase I Exploration

Essential Teaching Skills in VOED 3 hours
Classroom Learning Principles 3 hours

Phase II Developmental

Application of Technology in Education 3 hours
Methods of Teaching in VOED Subjects 4 hours
Evaluation of Vocational Instruction 3 hours
Special Needs of Vocational Students 3 hours
Management of Vocational Classroom & Laboratory OR

Phase III Application

Preparation for Clinical Teaching in VOED 3 hours
Professional Role of the Vocational Teacher 3 hours
Principles and Practices of VOED 3 hours

AREAS OF SPECIALIZATION

Health Occupations

Students must complete a specialization in the Health Occupations area by meeting the licensure/registration requirements for teacher certification set forth in the Florida Accreditation Code. Verification of current licensure/registration must be completed before the student is eligible for EDG 4941, Directed Field Experience.

Industrial/Technical

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
Air Conditioning & Refrigeration
Architectural Drafting
Audio-Visual Communication
Automotive Body & Fender
Brick Masonry
Cabinet Making & Millwork
Carpentry
Cosmetology
Commercial Art
Diesel Engine
Electrical Installation
Electronics Communication

(For further information about NOCTI, or about other available tests, consult Dr. Robert Paugh, Regional Director, NOCTI (305-275-2939)

4. Restricted Electives (none)

5. Electives (must be upper-division level) (EVT 4368 recommended) 9 hours

Minimum Total Semester Hours Required 123
COLLEGE OF ENGINEERING

UNDERGRADUATE PROGRAMS

ENGINEERING
- Aerospace Engineering (BSE)
- 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)
- Information Systems Technology (BET)
- Operations Technology (BET)

GRADUATE PROGRAMS*

ENGINEERING
- Civil Engineering (MSE, MCE, Ph.D.)
- Computer Engineering (MSE, Ph.D.)
- Electrical Engineering (MSE, Ph.D.)
- Engineering (MS)
- Environmental Engineering (MSE, Ph.D.)
- Industrial Engineering (MSE, Ph.D.)
- Industrial Engineering/Manufacturing Engineering (MSE)
- Mechanical Engineering (MSE, Ph.D.)

ENVIRONMENTAL SYSTEMS MANAGEMENT
- Environmental Systems Management (MSESM)

*See the Graduate Studies Catalog for information
PROFESSIONAL COLLEGE OF ENGINEERING

The College of Engineering at the University of Central Florida was formally organized by the Engineering faculty in the Fall of 1968. The objective of the College of Engineering is to produce well qualified, competent graduates from outstanding accredited programs for the professional practice of engineering and to conduct research and service responsive to the State of Florida and national needs. To achieve high professional status, the 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 based on a broad unified core program.

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 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 should possess an Associate in Science (or equivalent education) degree from a Florida community college or approved out-of-state institution 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. 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.

MINOR: TECHNOLOGY AND SOCIETY
Contact Person: J. Paul Hartman, CB 281, Phone 275-2455

The College of Engineering offers a minor in Technology and Society to interested students within the University of Central Florida. The program is intended for students not enrolled in the College of Engineering, although students in the College taking these additional 18 hours may also be awarded the minor. To meet the requirements, the student must complete a minimum of 18 hours taken from the courses listed. It is preferred that students complete the following GEP coursework prior to the taking of this minor: EGO 2013, MAC 1104, PHY 2050C, and the History or Humanities sequence. The 18 hours are to be selected from:

- EGN 4033: Technology and Social Change
- EGN 4811: Engineering and Technology in Canada
- EGN 4813: Science in History
- EGN 4814: Engineering and Technology in History
- EGN 4815: Historical Architecture
- EGN 4818: Engineering and Technology in America
- EGN 4823: Topics in Urban Development
- EGN 4824: Energy and Society
- EGN 4825: Environment and Society
- EGN 4832: Computers, Cybernetics and Society
- EGN 4843: Systems Modeling
- EGN 4844: Man and Machine

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 or her 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 the Basic Phase of the engineering core; (2) 2.250 in the Professional Phase of the engineering core; (3) 2.250 in all courses in the major (option) and (4) 2.000 in remaining course work presented for the degree.
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>CGS 3422</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>
<tr>
<td>CHS 1440</td>
<td>Fundamentals of Chemistry For Engineers³</td>
<td>4</td>
</tr>
<tr>
<td>PHY 3048</td>
<td>Physics For Engineers and Scientists I⁴</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3049</td>
<td>Physics For Engineers and Scientists II</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3048L or PHY 3049L or CHM 2046L</td>
<td>Laboratory Elective²</td>
<td>1</td>
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<tr>
<td>EGN 3311</td>
<td>Engineering Analysis-Statics</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3363C</td>
<td>Structure and Properties of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EGN 3613</td>
<td>Engineering Economic Analysis</td>
<td>2</td>
</tr>
<tr>
<td>EGN 3704</td>
<td>Engineering and the Environment</td>
<td>2</td>
</tr>
<tr>
<td>MAC 3311,3312,3313</td>
<td>Calculus and Analytic Geometry</td>
<td>12</td>
</tr>
<tr>
<td>Biological or Earth Science Electives³</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

¹Includes portions of the General Education Program.
²Consult Department Chair for specific course required in option.
³Students without one secondary school unit of Chemistry should enroll in CHM 1034 and CHM 2046L prior to taking CHS 1440.
⁴Students without one secondary school unit of Physics should enroll in PHY 2050C prior to taking PHY 3048.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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 4703</td>
<td>Systems Analysis and Control&lt;sup&gt;6&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGN 4714</td>
<td>Linear Control Systems&lt;sup&gt;5&lt;/sup&gt;</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>
</tr>
<tr>
<td>MAP 3302</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>PHY 3101</td>
<td>Modern Physics&lt;sup&gt;6&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>STA 3032</td>
<td>Probability and Statistics for Engineers</td>
<td>3</td>
</tr>
</tbody>
</table>

<sup>5</sup> Consult Department Chair for specific course required in option.

<sup>6</sup> Or approved science course - see option.
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, transportation and urban systems engineering, and construction engineering. 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 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 57-59)
2. Special college and/or department requirements
   (See page 142)
3. Required Courses
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CES 4124</td>
<td>Structural Engineering Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CES 4605</td>
<td>Structural Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>CES 4704</td>
<td>Structural Concrete Design</td>
<td></td>
</tr>
<tr>
<td>ECI 4305C</td>
<td>Geotechnical Engineering I</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4403C</td>
<td>Civil Engineering Design Courses</td>
<td>4</td>
</tr>
<tr>
<td>ENV 4404C</td>
<td>Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4504</td>
<td>Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>TTE 4004</td>
<td>Transportation Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>
4. Restricted Electives
   Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chair. 3 hours

5. Electives
   None

Total Semester Hours Required: 132

BACHELOR OF SCIENCE IN ENGINEERING: ENVIRONMENTAL ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See page 142)
3. Required Courses
   
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EES 4202C</td>
<td>Chemical Process Control</td>
<td>3</td>
</tr>
<tr>
<td>EES 4204C</td>
<td>Biological Process Control</td>
<td>3</td>
</tr>
<tr>
<td>ENV 4119</td>
<td>Air Pollution</td>
<td>3</td>
</tr>
</tbody>
</table>

146
ENV 4355  Solid and Hazardous Wastes  3 hours
ENV 4403C  Hydrology  3 hours
ENV 4404C  Hydraulics  3 hours
ENV 4433  Water Resources Design  2 hours
ENV 4434  Environmental Engineering Systems Design  2 hours
ENV 4504  Environmental Engineering Process Design  4 hours

4. Restricted Electives
   Technical Electives are to be courses consistent with department objectives and chosen
   with the approval of the student's faculty advisor and department chair.  3 hours

5. Electives
   None

Total Semester Hours Required  132

DEPARTMENT OF COMPUTER ENGINEERING
Chair: C. Bauer, CB 207, Phone 275-2236
Faculty: Gatt, Gonzalez, Klee, Linton, Myler, Papadourakis, Patz

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
management of complex technical problems. Many 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 be carried out effectively
only through the use of modern, high speed 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 Engineer-
ing will enjoy a broad spectrum of challenging opportunities.

The undergraduate degree program in Computer Engineering is accredited by the
Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering
and Technology (ABET).
BACHELOR OF SCIENCE IN ENGINEERING: COMPUTER ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 142 and 147)
3. Required Courses
   - ECM 4230 Engineering Data Structures 2 hours
   - ECM 4301 Engineering Applications of Computer Methods 3 hours
   - ECM 4504C Embedded Computer Systems 3 hours
   - ECM 4708 Modeling & Design of 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 4 hours
   - EEL 4702C Digital Systems Design 4 hours
4. Restricted Electives
   Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chair.
5. Electives
   None

Total Semester Hours Required: 132

DEPARTMENT OF ELECTRICAL ENGINEERING AND COMMUNICATION SCIENCES

Chair: N. Tzannes, CB 407, Phone 275-2786
Faculty: Alsaka, Belkerdid, Boreman, Brown, Christodoulou, Georgiopoulos, Harris, Lane, Liou, Litka, Malochas, Mathews, R. Martin, R. Miller, Petrasko, R. Phillips, Richie, Towle, Wahid, 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 application 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 digital systems, electrical networks, electronics, electromagnetic fields and microwaves, electromechanics and control, 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 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 57-59)
2. Special college and/or department requirements
   (See page 142)
3. Required Courses

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4. Restricted Electives

Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chair, and must include one additional design course. 8 hours

5. Electives

None

Total Semester Hours Required 132

DEPARTMENT OF INDUSTRIAL ENGINEERING & MANAGEMENT SYSTEMS

Chair: W. Swart, CB 381, Phone 275-2204
Faculty: Biegel, Brooks, Elshennawy, Hosni, Lee, Morse, Schrader, Sepulveda, Wasserman, Whitehouse

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 computers and micro-processors 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 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 57-59)
2. Special college and/or department requirements
   (See page 142)
3. Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APA 3471</td>
<td>Accounting for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>EIN 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></td>
<td>of Computers</td>
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<tr>
<td>EIN 4332</td>
<td>Industrial Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EIN 4364C</td>
<td>Industrial Facilities Planning and Design</td>
<td>3</td>
</tr>
<tr>
<td>ESI 4314</td>
<td>Quantitative Techniques in Industrial</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
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<tr>
<td>ESI 4234</td>
<td>Engineering Reliability and</td>
<td>3</td>
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<tr>
<td></td>
<td>Quality Assurance</td>
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<tr>
<td>EIN 4142C</td>
<td>Industrial Engineering Senior Design Project</td>
<td>3</td>
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</table>

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4. Restricted Electives
Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student’s faculty advisor and department chair, and must include one additional design course.

5. Electives
None

DEPARTMENT OF MECHANICAL ENGINEERING AND AEROSPACE SCIENCES
Chair: S. Rice, CB 307, Phone 275-2416
Faculty: Anderson, J. Beck, Bishop, Desai, Eno, Grogan, Gunnerson, Hagedoorn, Henry, Hosler, Kitis, Metwalli, Minardi, Moslehy, Nuckolis, W. Smith, Ventre

The Department of Mechanical Engineering and Aerospace Sciences offers an option in Aerospace Engineering and an option in Mechanical Engineering and is primarily concerned with dynamic physical systems involving transportation, production and energy conversion. Because such systems require 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 this energy. When dealing with problems of this nature, the engineer must consider the economic constraints and the social implications of proposed solutions.

The Aerospace Engineering option prepares the student for a wide range of entry positions in the aeronautical and space-related industries. Emphasis is placed upon the subdisciplines of aerodynamics, stability and control, propulsion, flight structures, and flight vehicle design.
The Mechanical Engineering option provides the student with the opportunity to pursue educational objectives within the framework of several broad themes. Primary emphasis is given to the departmental subdisciplines of measurement systems, mechanical systems design and control, energy conversion and power systems, thermal sciences, materials science, computer aided design bioengineering, tribology, and experimental mechanics.

Both programs are specifically designed to give the student a broad-based undergraduate engineering program which provides sufficient knowledge to allow him/her to converse with specialists in other fields of engineering and to analyze the basic problems in these fields. By judiciously selecting courses from departmental sub-disciplines, a firm foundation is laid so that the student will obtain the theoretical tools and the design methodology necessary 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 accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

BACHELOR OF SCIENCE IN ENGINEERING:
AEROSPACE ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 142 and 150)
3. Required Courses
   EAS 4101          Aerodynamics I     3 hours
   EAS 4105          Aerodynamics II    3 hours
   EAS 4200          Flight Structures  3 hours
   EAS 4300          Propulsion Systems 3 hours
   EML 4142          Heat Transfer      3 hours
   EML 4222          Vibration Analysis 3 hours
   EML 4505          Engineering Design 3 hours
   EML 4709          Intermediate Fluid Mechanics 3 hours
4. Restricted Electives
   Technical electives are to be courses consistent with department objectives and chosen with approval of the student's faculty advisor and department chair, and must include one additional design course. 5 hours
5. Electives
   None
   Total Semester Hours Required 132

BACHELOR OF SCIENCE IN ENGINEERING:
MECHANICAL ENGINEERING

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 142 and 150)
3. Required Courses
   EML 3106          Thermodynamics of Mechanical Systems 3 hours
   EML 3262          Kinematics of Mechanisms             3 hours
   EML 3502          Machine Design and Analysis        3 hours
   EML 4142          Heat Transfer                      3 hours
   EML 4222          Vibration Analysis                 3 hours
   EML 4412C         Experimental Design                3 hours
   EML 4505          Engineering Design                3 hours
4. Restricted Electives
   Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chair, and must include one additional design course. 8 hours
5. Electives
   None
   Total Semester Hours Required 132
The Bachelor of Engineering Technology (B.E.T.) program is designed for students who have completed an Associate of Science (A.S.) degree in an appropriate area of technology or who have completed an Associate of Arts (A.A.) degree with approximately 25 semester hours in an appropriate area of technology. The A.S. degree granted is a career program designed to prepare graduates to enter the workforce as Engineering Technicians. As such, the A.S. program does not require completion of the General Education program that is required by A.A. degree programs. While the A.S. graduate is granted admission into UCF’s BET program, completion of UCF’s General Education is required before the BET degree is granted. It is strongly recommended that A.S. graduates planning to transfer to UCF, complete as many as possible of the General Education courses, which will apply at UCF (as part of their A.S. program). It is not recommended that both the A.S. and A.A. requirements be completed prior to transfer to UCF as the maximum number of 2-year credits which can be effectively used in the BET program is 64 semester hours. If a student completes the general education program of a Florida public community college, it will substitute for UCF’s Lower Division General Education Program without doing a course-by-course match.

The upper division Bachelor of Engineering Technology (BET) program at the University of Central Florida is designed to advance the engineering technician to the engineering technologist level. Graduates of baccalaureate programs are termed Engineering Technologists and graduates of two year programs are termed Engineering Technicians. The Engineering Technologist or Technician works with both the scientist and the engineer, helping them convert ideas into accomplishments. The engineering technologist is primarily involved in building and maintaining equipment, conducting test and other engineering application functions.

Principal areas of study in the engineering technology curriculum, building on a sound base attained through the two-year degree, will include mathematics and communications. In addition, substantial additional work will be taken in the technical sciences and technical specialty. The courses will include theory and practical laboratory experience. Hence they will provide a technical base for subsequent work.

The five Engineering Technology options (majors) offered with the Bachelor’s of Engineering Technology degree program are:
- Computer Technology
- Design Technology
- Electronics Technology
- Information Systems Technology
- Operations Technology

The Design, Electronics, and Operations options are accredited by Technology Accreditation Commission (TAC) of the Accreditation Board for Engineering and Technology (ABET). The Computer Technology and Information Systems options are newly implemented programs.

BACHELOR OF ENGINEERING TECHNOLOGY

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (See pages 142 and 151)
3. Required Courses
   A. Transferred from Community College
      Lower Level Technical Specialty 28 hours
      General Education Program (includes Science & Math)\(^1\) 36 hours
      TOTAL (Maximum transfer credit) 64 hours

\(^1\)Includes college algebra, trigonometry, English, speech, humanities, and social sciences. At least one course each in chemistry, college physics, and computer programming (Fortran) should be completed at the Community College. Credit shown is maximum transferable under this program.
B. Course work at UCF

Engineering Technology Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 3123C</td>
<td>Microprocessor Electronics</td>
<td>3</td>
</tr>
<tr>
<td>EET 3036C</td>
<td>Electricity and Electronics</td>
<td>4</td>
</tr>
<tr>
<td>or EET 3716</td>
<td>Electrical Network Analysis</td>
<td>4</td>
</tr>
<tr>
<td>ETG 3510</td>
<td>Applied Mechanics</td>
<td>4</td>
</tr>
<tr>
<td>ETI 3421C</td>
<td>Materials and Processes</td>
<td>3</td>
</tr>
<tr>
<td>ETI 3671</td>
<td>Technical Economic Analysis</td>
<td>2</td>
</tr>
<tr>
<td>ETM 4310</td>
<td>Applied Thermodynamics and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluid Mechanics</td>
<td></td>
</tr>
<tr>
<td>MAC 3253, 3254</td>
<td>Applied Calculus I, II or</td>
<td>6</td>
</tr>
<tr>
<td>MAC 3311, 3312</td>
<td>Calculus &amp; Anal. Geometry I, II</td>
<td>8</td>
</tr>
<tr>
<td>MAP 3401</td>
<td>Problem Analysis</td>
<td>3</td>
</tr>
<tr>
<td>STA 3023</td>
<td>Statistical Methods I</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional General Education and other requirements

4. Restricted Electives

Area of Specialization (see below) 20 hours

Technical Electives are to be upper-division courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department advisor.

TOTAL MINIMUM HOURS REQUIRED

(64 is minimum required at Senior Institution) 128

5. Electives

None

AREAS OF SPECIALIZATION

1. Computer Technology

The specialization in Computer Technology is designed to present hardware analysis and applications of microprocessors/micro-computers in electronics, industrial, and business environments. Typical community college 2-year programs used for entrance into UCF's Computer Technology program include associate degrees in Engineering Technology, Electronics, and Computer Technology. A minimum of 12 semester hours of Circuit Fundamentals, Digital Circuits, and Computer Technology coursework must be included in the community college program.

Required Courses (12 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 3144C</td>
<td>Applied Microprocessor Technology</td>
<td>4</td>
</tr>
<tr>
<td>CET 3303C</td>
<td>Microcomputer Technology</td>
<td>4</td>
</tr>
<tr>
<td>CET 4333C</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 chair.

2. Design Technology

The specialization in Design Technology will present the student with the knowledge and skills needed for application to problems concerning specifications, calculations, and procedures involving the design, redesign, testing, and operations of mechanical parts, units and assemblies. Typical community college associate degree programs used for entrance to UCF's Design Technology specialization are Mechanical, Drafting Design, Civil, and Air Conditioning technologies. A minimum of five semester hours of engineering drawing must be included in the Community College program.

Required Courses (13 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETG 4530</td>
<td>Strength of Materials</td>
<td>3</td>
</tr>
<tr>
<td>CET 4131C</td>
<td>Microprocessor Electronics II</td>
<td>4</td>
</tr>
<tr>
<td>EST 4535C</td>
<td>Electro-Mechanical Design</td>
<td>3</td>
</tr>
<tr>
<td>ETM 4403C</td>
<td>Applied Kinematics</td>
<td>3</td>
</tr>
</tbody>
</table>

Upper Level Technical Electives (7 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 chair.

3. Electronics Technology

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 associate degree programs used for entrance to UCF's Electronics Technology specialization are Electronic, Electrical, and Instrumentation Technologies. A minimum of 15 semester hours of DC/AC circuit analysis, electronic devices/circuits, and digital devices/circuits 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>CET 3303C</td>
<td>Microcomputer Technology</td>
<td>4</td>
</tr>
<tr>
<td>EET 4329C</td>
<td>Electronic and Digital Communications</td>
<td>4</td>
</tr>
<tr>
<td>EET 4732</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 chair.

4. **Information Systems Technology**

The specialization in Information Systems Technology is designed to present the organizing, designing, writing, documenting, and putting into operation large-scale programs from general specifications supplied by the engineer or professional manager. The curriculum is designed to build on the computer programming skills studied in the first two years. A minimum of 15 semester hours of computer programming including COBOL, FORTRAN, Assembler, and a high level structured language (Pascal, PL/I, C, etc.) 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>CET 3323</td>
<td>Computer Organization Technology</td>
<td>4</td>
</tr>
<tr>
<td>CET 3383</td>
<td>Applied Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>CET 4427</td>
<td>Applied Data Base Systems</td>
<td>3</td>
</tr>
<tr>
<td>CET 4505</td>
<td>Applied Microcomputer Operating Systems</td>
<td>3</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 chair.

5. **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 Associate Degree backgrounds and develop the management and supervisory skills necessary to produce a marketable graduate. 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. Engineering drawing must be included in the Community College program.

**Required Courses (10 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 4131C</td>
<td>Microprocessor Electronics II</td>
<td>4</td>
</tr>
<tr>
<td>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>
</tbody>
</table>

**Upper Level Technical Electives (9 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 chair.
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)

OTHER PROGRAMS
  Pre-Occupational Therapy
  Pre-Physical Therapy

*See the Graduate Studies catalog for information.
The mission of the College of Health is to provide quality undergraduate and graduate academic and clinical instruction. The College seeks to identify and develop new programs which fulfill documented need for humanistic health care resources and health care technology within the central Florida community. An intertwined mission to professional education within the College is to foster the development and transmission of knowledge and the generation and transmission of research findings via grantsmanship, publication, and presentation at scientific conferences. In addition, the College supports development of continuing education programs for community professionals and innovative health care services within its academic units.

The college believes that through a liberal arts education, intensive study in a specific health related discipline, and appreciation of scientific method the graduate will be a valuable asset to health care in Florida as well as the nation.

**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/chair 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 overall grade point average of 2.5 and a minimum grade of C in the major and in prerequisite courses are required for admission to, continuation in, and graduation from a College of Health program.

In addition to University and program requirements, each student is required to complete 6 hours of College of Health courses outside of the major.

**DEPARTMENT OF COMMUNICATIVE DISORDERS**

**Chair:** D. Ratusnik, HP 113, Phone 275-2121

**Faculty:** Hedrick, Ingram, Mullin, Utt

The primary goal of the Department of Communicative Disorders is the preparation of clinical specialists in Speech/Language Pathology and Audiology. Undergraduate offerings are consistent with philosophies of the American Speech-Language-Hearing Association in that most coursework is designed to provide the student theoretical foundations on which to build competent clinical skills. An on-campus clinic as well as external affiliations including area public schools, community speech and hearing centers, hospital clinics, physicians' offices and industrial settings are available for the development of various clinical competencies. Faculty are engaged in generation and transmission of knowledge concerning speech-language-hearing processes and impairments via ongoing research projects.

**MINOR**

The Department of Communicative Disorders offers a minor consisting of a minimum of 22 semester hours.

Required courses: LIN 3710, 3710L and SPA 3001, 3101, 3112, 3112L, 4030, 4222, 4222L, and 4402, 4402L.

**BACHELOR OF ARTS: COMMUNICATIVE DISORDERS**

**Degree Requirements**

1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
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
   - SPA 3101: Physiological Bases of Speech and Hearing: 3 hours
   (Taken in Fall & Spring of Senior year)
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 Audiology I 3 hours
SPA 4033 Audiology II 3 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 3 hours
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
The two statistics courses are required for graduation.

5. Electives 14 hours
Students who wish to obtain a Teachers Certificate for the State of Florida must include necessary coursework as electives.

Total Semester Hours Required 130

PROGRAM IN HEALTH SCIENCES

Director: T. Mendenhall, HP 123, Phone 275-2972
Faculty: Bergner, Edwards, Gerughty

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: HSA 4121, HSA 4180, or HUN 3011, HSC 3110 and 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, HP 216, Phone 275-2359
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) the design and management of health information systems which collect, process, store, retrieve, and release health information and statistics, (3) assistance to administration, other health professionals and medical staff in developing quality assurance programs by abstraction of medical data, preparation of statistical reports, and analysis of information, and (4) assistance in collection and analysis of data for public health services planning.

The curriculum of the Medical Record Administration program is approved by the Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with the Council on Education of the American Medical Record Association.
Before acceptance to the professional phase of the program, students are required to complete the following prerequisite courses: biology with lab, anatomy with lab, physiology with lab, statistics, an introduction to data processing or computer science, and an introduction to accounting or finance.

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 personal interview is also a requirement.

Upon completion of the approved program, the student is eligible to apply to write the national registration examination administered by the American Medical Record Association to qualify as a Registered Record Administrator.
**BACHELOR OF SCIENCE: MEDICAL RECORD ADMINISTRATION**

**Degree Requirements**

1. University graduation requirements  
   (See pages 57-59)

2. Special college and/or department requirements  
   (See pages 157 and 158)

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>HSC 3170</td>
<td>Health Care Finance</td>
<td>3</td>
</tr>
<tr>
<td>HSC 3640</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 4550</td>
<td>Pathophysiologic Mechanisms</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3025</td>
<td>Management of Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MAN 3301</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>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 4202</td>
<td>Coding Procedures</td>
<td>4</td>
</tr>
<tr>
<td>MRE 3800</td>
<td>Directed Practice I</td>
<td>1</td>
</tr>
<tr>
<td>MRE 3810</td>
<td>Directed Practice II</td>
<td>1</td>
</tr>
<tr>
<td>MRE 4211</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>4</td>
</tr>
<tr>
<td>MRE 4400</td>
<td>Health Care Delivery Systems</td>
<td>4</td>
</tr>
<tr>
<td>MRE 3432</td>
<td>Fundamentals of Medicine</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>
</tr>
<tr>
<td>MRE 4830</td>
<td>Directed Practice III</td>
<td>1</td>
</tr>
<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

5. Electives: None

**Total Semester Hours Required**

133

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**PROGRAM IN MEDICAL LABORATORY SCIENCES**

**Director:** M. Kangelos, HP 216, Phone 275-2359  
**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 Laboratory Sciences Program. Separate application must be made through the Medical Laboratory Sciences Office prior to February 1 of the year for which admission is sought. For the last seven months of the program the students will be assigned to a hospital laboratory for clinical experience. The affiliated hospitals are located in Lakeland, Orlando, and Winter Haven. It may be necessary for the student to move to Lakeland, Orlando, or Winter Haven for this period.

The degree in Medical Laboratory Sciences will be awarded upon completion of the University’s didactic program and the clinical program in an affiliated hospital.
Upon receiving the degree in Medical Laboratory Sciences, the graduate will be eligible to write a national certification examination and the State of Florida licensure examination.

BACHELOR OF SCIENCE: MEDICAL LABORATORY SCIENCES

Degree Requirements
1. University graduation requirements
(See Pages 57-59)
2. Special college and/or department requirements
(See pages 156 and 159)
3. Required Courses
   Prerequisites for professional phase admission
   BSC 2010C General Biology 4 hours
   MCB 3013C General Microbiology 5 hours
   MCB 3203 Pathogenic Microbiology 3 hours
   CHM 2045, 2046 Chemistry Fundamentals I & II 7 hours
   CHM 2046L Chemistry Fundamentals laboratory I 1 hour
   CHM 2205 Introduction to Organic & Biochemistry 5 hours
   CHM 3121C Analytical Chemistry 5 hours
   MAC 1104 College Algebra 3 hours
   STA 3023 Statistical Methods I 3 hours
   CGS 3000 Computer Fundamentals for Business Applications I 3 hours

   Upper Division Professional Phase
   PCB 3233 Immunology 3 hours
   MLS 3220C 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 4334C Hemostasis 2 hours
   MLS 4550 Clinical Immunohematology 4 hours
   MLS 4420C Clinical Mycology 1 hour
   MLS 4431C Clinical Parasitology 2 hours
   MLS 4511 Immunodiagnosics 5 hours
   MLS 4910 Fundamentals of Research for Health Professionals 3 hours
   MLS 4932 Medical Technology Seminars 2 hours

   4. Restricted Electives:
      HSA 4180 Organization & Management for Health Agencies 3 hours
      HSC 4243 Analysis of Instruction in Health Professions 3 hours

   5. Electives: None
      Total Semester Hours Required 140

NURSING DEPARTMENT
Chair: J.C. Kijek, HP 410, Phone 275-2744
Faculty: Chase, Dorner, Douglas, Eldredge, Guarda, Judkins, Koch, Moore, Peterson, Richards, Smith

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 Admissions Office 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. Graduates are eligible to take the licensing examination for registered nurses.

Courses for nurses registered in the United States are offered at the Orlando, Daytona, and Brevard campuses, including examinations for selected courses. R.N. students must be registered professional nurses in the State of Florida.

BACHELOR OF SCIENCE: NURSING

Degree Requirements
1. University graduation requirements; General Education Program
   (See pages 57-59)
2. Special college and or department requirements
   (See pages 156 and 160)
3. Required Courses
   Prerequisites to Nursing Major
   BSC 2010C General Biology 4 hours
   MCB 3013C General Microbiology 5 hours
   ZOO 3733C Human Anatomy 4 hours
   PCB 3703C Human Physiology 4 hours
   CHM 1032 General Chemistry 3 hours
   CHM 2205 Introduction to Organic/Biochemistry 5 hours
   MAC 1104 College Algebra 3 hours
   or
   MGF 1203 Finite Mathematics 3 hours
   STA 2014
   or 3023 Principles of Statistics 3 hours
   SOW 3104 Assessing Human Development 3 hours
   or
   DEP 3004 Developmental Psychology 3 hours
   HUN 3011 Human Nutrition 3 hours
   Upper-Division Professional Phase
   NUR 3119 Introduction to Baccalaureate Nursing 2 hours
   *NUR 3748C Concepts Basic to Nursing Practice 9 hours
   NUR 3066 Health Assessment 2 hours
   *NUR 3749C Scientific Theories of Nursing I 11 hours
   *NUR 3795 Nursing Seminar I 1 hour
   *NUR 3755C Scientific Theories of Nursing II 6 hours
   *NUR 3796 Nursing Seminar II 1 hour
   NUR 3166 Critical Inquiry 3 hours
   NUR 4756C Scientific Theories of Nursing III 6 hours
   NUR 4758C Scientific Theories of Nursing IV 6 hours
   NUR 4660 Complex Nursing Problems 3 hours
   NUR 4757C Scientific Theories of Nursing V 7 hours
   NUR 4797 Seminar III 1 hour
   NUR 4941 Selected Nursing Practicum
   (4 hrs. required for senior students) 4 hours
   4. Restricted Electives: One course in nursing 2 hours
   5. Electives: None
   Total Semester Hours Required 138

*Students who are Registered Nurses in Florida may write examinations for credit for these courses during enrollment in:
   NUR 3709 Transitional Concepts in Nursing 6 hours

PROGRAM IN RADIOLOGIC SCIENCES

Director: T. J. Edwards III, HP 323, Phone 275-2757
Faculty: Sheehan, Welker

The baccalaureate Radiologic Sciences program is designed with two areas of specialization: (1) Radiography and (2) Radiation Therapy Technology. Additional areas of specialization planned are: Medical Sonography; and Advanced Imaging Procedures
including Computed Tomography, Digital Vascular Imaging, Magnetic Resonance Imaging, and Angiography.

An extension study program for registered technologists is offered through the Brevard Center, Cocoa, Florida.

Radiographers are integral members of a team dedicated to patient care. Their primary role is to perform medical imaging procedures for the diagnosis of disease and injury.

The Radiography specialization is designed to provide the graduate with radiography, management and/or 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 to the cancer site and monitor the patient's progress throughout the period of treatment.

The program works in conjunction with Halifax Hospital Medical Center, Daytona; Florida Hospital, Altamonte Springs; Central Florida Regional Hospital, Sanford; Waterman Memorial Hospital, Eustis; Winter Park Memorial Hospital, Winter Park; and Jewett Orthopaedic Clinic, Winter Park. The programs in Radiography and Radiation Therapy Technology are accredited by the Committee on Allied Health Education and Accreditation (CAHEA) in cooperation with the Joint Review Committee on Education in Radiologic Technology (JRCERT). Graduates are eligible to apply for admission to the certification exam administered by the American Registry of Radiologic Technologists (ARRT). The University of Central Florida is the sponsoring institution of the Radiography program. Halifax Hospital Medical Center is the sponsoring institution of the Radiation Therapy program.

Application deadline is February 1 for acceptance into the upper-division, limited access phase which begins with the Summer semester. After successful completion of the Summer semester and continuance in the Fall semester, a student may apply to the Radiation Therapy Program. Classes in Radiation Therapy begin in January.

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. Radiologic Sciences majors must complete seventeen (17) semester hours credit in addition to their required courses to complete the Health Physics Technology minor.

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 57-59)
2. Special college and/or department requirements  
   (See pages 156 and 162)
3. Required courses

#### Prerequisites
- BSC 2010C: General Biology  
  - 4 hours
- CGS 1060: Introduction to Computer Science  
  - 3 hours
- MAC 1104: College Algebra  
  - 3 hours
- PCB 3703C: Human Physiology  
  - 4 hours
- PHY 2053C: College Physics I  
  - 4 hours
- ZOO 3733C: Human Anatomy  
  - 4 hours

#### Professional Phase
- PHY 2054C: College Physics II  
  - 4 hours
- *RTE 3002: Fundamentals of Radiologic Technology*  
  - 1 hour
- *RTE 3832L: Clinical Education Orientation*  
  - 1 hour
- 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 3566: Advanced Imaging Modalities  
  - 3 hours
- HSC 4550: 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 4856L: Clinical Education VII  
  - 3 hours
- RTE 4362: Radiobiology  
  - 1 hour
- *RTE 3564: Radiologic Sciences Seminar*  
  - 2 hours
- STA 3023: Statistical Methods I  
  - 3 hours

4. Restricted Electives
5. Electives: None

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<tr>
<th>Course</th>
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<td>Human Anatomy</td>
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<td>Fundamentals of Radiologic Technology</td>
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<td>Clinical Education Orientation</td>
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<td>Principles of Radiographic Exposure I</td>
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<td>Principles of Radiographic Exposure II</td>
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<td>Anatomy for the Medical Imager</td>
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<td>Advanced Imaging Modalities</td>
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<td>Pathophysiologic Mechanisms</td>
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<td>Statistical Methods I</td>
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*Students who are Registered Technologists (ARRT) may write examinations for credit for these courses during enrollment in:*
- RTE 3050: Transitional Concepts in Radiologic Sciences  
  - 6 hours

### AREAS OF SPECIALIZATION (Select one course of study)

1. Radiography (Select one option)
   - **Option I: Management**
     - 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: Education**
     - 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

Total Semester Hours Required: 138

163
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<tr>
<th>Course Code</th>
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<tr>
<td>HSC 4244</td>
<td>Curriculum Planning in the Health Professions</td>
<td>2 hours</td>
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<td>HSC 4243</td>
<td>Analysis of Instruction in Health Professions</td>
<td>3 hours</td>
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<tr>
<td>RTE 4256L</td>
<td>Directed Clinical Study in Education</td>
<td>1 hour</td>
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<tr>
<td>RTE 3387C</td>
<td>Medical Physics</td>
<td>2 hours</td>
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<tr>
<td>RTE 4569</td>
<td>Quality Assurance</td>
<td>2 hours</td>
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<td>RTE 4362</td>
<td>Radiobiology</td>
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<td>RTE 3341</td>
<td>Environmental Monitoring Techniques</td>
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<td>RTE 3365</td>
<td>Radiation Monitoring Instrumentation</td>
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<td>RTE 3388</td>
<td>Inspection and Compliance Evaluation</td>
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<td>RTE 3841</td>
<td>Radiation Monitoring Practicum</td>
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Option III: Health Physics Technology

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<tr>
<td>RTE 4027</td>
<td>Radiation Oncology I</td>
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<tr>
<td>RTE 4028</td>
<td>Radiation Oncology II</td>
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<td>HSC 4243</td>
<td>Analysis of Instruction in the Health Professions</td>
<td>3 hours</td>
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<tr>
<td>HSA 4180</td>
<td>Organization and Management of Health Agencies</td>
<td>3 hours</td>
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<tr>
<td>RTE 4256L</td>
<td>Directed Study in Education</td>
<td>1 hour</td>
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</table>
The Department of Cardiopulmonary Sciences currently encompasses two academic areas: the undergraduate curriculum leading to the Bachelor of Science Degree in Cardiopulmonary Sciences (includes Respiratory Therapy program) and the graduate curriculum leading to the Cardiopulmonary Sciences Option in the Master of Science Degree in Health Sciences (see graduate catalog for further information).

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.

In addition to completing the Respiratory Therapy Program, which is accredited by the American Medical Association in collaboration with the Joint Review Committee for Respiratory Therapy Education, the student will complete coursework in other related areas. These include didactic and clinical courses in cardiopulmonary diagnostics, computer application in health care, management techniques, neonatal intensive care, and teaching skills for health professionals. The intent of this is to produce graduates who possess a diverse academic and clinical background to meet the changing needs of today's health care industry.

During the course of the program, students are evaluated in a variety of ways. Traditional lecture, laboratory, and clinical examinations are administered in addition to an entry level qualifying exam for admission to the senior year and an exit examination administered prior to graduation. Students must pass both of these exams before the degree is certified.

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. Students must complete the prerequisite coursework before entering the upper-division program in the Fall of the junior year.

BACHELOR OF SCIENCE: CARDIOPULMONARY SCIENCES

Degree Requirements
1. University graduation requirements
   (See pages 57-59)
2. Special college and/or department requirements
   (see pages 156 and 164)
3. Required Courses
   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 2053C College Physics I 4 hours
   MAC 1104 College Algebra 3 hours
Upper-Division Professional Phase

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<tr>
<td>HSC 4550</td>
<td>Pathophysiologic Mechanisms</td>
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<td>RET 3026C</td>
<td>Intro to Respiratory Therapy</td>
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<td>PCB 3233</td>
<td>Immunology</td>
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<td>APB 3263C</td>
<td>Cardiopulmonary Physiology</td>
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<td>HSC 3122</td>
<td>U.S. Health Care Systems</td>
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<td>RET 3874</td>
<td>Clinical Practice I</td>
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<td>RET 3264C</td>
<td>Mechanical Ventilation</td>
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<td>APB 4650</td>
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<td>RET 3244C</td>
<td>Life Support Systems</td>
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<td>RET 4932</td>
<td>Health Data Management</td>
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<tr>
<td>RET 4714</td>
<td>Pediatric Respiratory Care</td>
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<td>RET 4414C</td>
<td>Pulmonary Function Studies</td>
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<td>RET 4503</td>
<td>Chest Medicine</td>
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<td>STA 3023</td>
<td>Statistics</td>
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<td>RET 3483</td>
<td>R.T. Disease Assessment</td>
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<tr>
<td>RET 3875</td>
<td>Clinical Practice II</td>
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<td>RET 4284C</td>
<td>C.P. Diagnostics I</td>
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<td>RET 4616</td>
<td>Cardiopulmonary Services</td>
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<tr>
<td>RET 4034</td>
<td>Problems in Pt. Mgmt.</td>
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<td>RET 4876</td>
<td>Clinical Practice III</td>
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<td>RET 4285C</td>
<td>C.P. Diagonostics II</td>
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<td>RET 4040</td>
<td>R.T. Education Systems</td>
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<td>RET 4933</td>
<td>Medical Research Seminar</td>
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Total Semester Hours Required: 140

4. Restricted Electives
5. Electives: None

COLLEGE OF EXTENDED STUDIES

Dean: John B. O'Hara, AD 145 Phone 275-2123
Associate Dean: Jennie L. Loudermilk, AD 145, Phone 275-2123

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.

Registration in the College of Extended Studies courses does not require admission to the University nor does it imply admission.

OFFICE OF UNDERGRADUATE STUDIES

Associate Vice President and Dean: Charles N. Micarelli, AD 210, Phone 275-2691
Associate Dean: Paul R. McQuilkin, AD 210, Phone 275-2691
Assistant Dean: David Dees, AD 210, Phone 275-2691
Assistant 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 and the Gordon Rule. Undergraduate Studies reviews student problems in such areas as class schedules, withdrawals, 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 Programs, and the Liberal Studies Program; and it oversees Air Force and Army ROTC Programs, the Office of High School and Community College Relations, and the Office of Minority Students Services.

AEROSPACE STUDIES

Chair: R. E. Ceruti, FA 214, Phone 275-2264
Faculty: Mendez, Willis

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

CURRICULUM

Students enrolled in the Air Force ROTC program may major in any academic discipline and earn a minor in Aerospace Studies. A major is not offered by this department. An Aerospace Engineering Degree is offered under the College of Engineering. AFROTC courses are listed under the prefix AFR. The curriculum is divided into two phases:

1. General Military Course (GMC)
   The General Military Course of the freshman and sophomore courses for students in the four-year AFROTC program. These courses deal with the mission, organization, and structure of the U.S. Air Force, and the development of air power into a prime element of American national security.

2. Professional Officer Course (POC)
   The Professional Officer Course consists of Aerospace Studies offered during the junior and senior years. 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 leader-
ship 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 26½ if entering Flight Training, or before age 30 if entering a non-flying Air Force specialty. (Under special conditions, age can be waived up to 35).
3. Pass the Air Force Officer Qualifying Test.
5. Complete the application and examination process, preferably prior to January 14 of the year in which they plan to enroll.
6. Selection by the Professor of Aerospace Studies and acceptance by the University.
7. Successful completion of a summer Field Training Course.
8. Enlistment in the Air Force Reserve certifying agreement to complete the POC and accept an Air Force Commission. This enlistment is terminated upon receipt of a commission.

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

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

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

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

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

ARMY ROTC-MILITARY SCIENCE
Chair: James W. Tarleton, FA 209, Phone 275-2430
Faculty: Armstrong, Berry, Burns, Fernandez, Harris, Soto, Tollison

The University of Central Florida, in cooperation with the U.S. Army, provides an opportunity to earn a commission as a lieutenant, and compete for an active duty assignment or accept a guaranteed Army Reserve or National Guard position. The program offers both a four-year and two-year option for students working on their Associate of Arts or Baccalaureate degrees. The two-year option allows students with at least two academic years remaining in either undergraduate or graduate studies to meet all requirements for commissioning. If you are in the Army Reserve or National Guard and are 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 19 semester hours. Required courses: MIS 3301, 3410, 4421, 4430 and AMH 3540.

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 reading, land navigation, use of a compass, grade structure, the Threat, communications, and leadership. There are no contractual obligations for students in the basic course and no commitments. It's an opportunity to see what Army ROTC is all about.

2. Advanced Military Science
   The Advanced Military Science courses are normally taken during the junior and senior years. These courses specialize in small unit tactics, how to prepare and conduct military training, military justice system, staff procedures, decision making, and leadership. Students who desire a commission as a second lieutenant are contracted and paid a subsistence allowance of $100.00 a month up to ten months during the school year.

3. Summer Camp
   Prior to commissioning each cadet must successfully complete an evaluation of skills learned. This evaluation is conducted at Ft. Bragg, North Carolina, during June and July. Summer Camp requirements apply only to Advanced Military Science students. Students attending the advanced camp receive approximately $650.00.

SUMMER TRAINING
1. A summer training program is offered for students who are to be academic juniors without previous ROTC or military training. A student can earn placement credit for the Basic Course classes and allow entry into the Advanced Courses by attending a six-week course at Fort Knox, Kentucky, thereby allowing completion of all requirements for commissioning within two years. Students attending the summer course at Fort Knox will receive approximately $650 pay for the period. Additionally, all lodging, meals, transportation, and uniforms will be provided at no expense.

2. Qualified students can be selected to attend specialized military training during the summer months. Some of the areas of training available are:
   a. Airborne Training
   b. Air Assault Training
   c. Ranger Training
   d. Northern Warfare Training

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

SCHOLARSHIPS
Four-, three, and two-year scholarships are available for all students who qualify. These scholarships provide full tuition, fees, and required textbooks. Additionally, scholarship recipients receive $100 (tax free) per month. Scholarship applications are processed in the December-February time frame.

REQUISITES FOR ADMISSION TO THE BASIC COURSE
1. Enrollment in a Baccalaureate or Masters degree program.
2. 18 years of age at the time of entry but not more than 30 years of age at the time of commissioning.

REQUISITES FOR ADMISSION TO THE ADVANCED COURSE
1. Successful completion of Basic Course, Basic Camp, JROTC, prior military service, or permission of Department Chair.
2. Successful completion of an Army physical examination.
3. Agreement to complete the Advanced Course requirements and serve on active, reserve, or national guard duty as a commissioned officer.
4. Full time student status.
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 4564 Health Care Needs of the Elderly 3 hours
- SYP 4730 Sociology of Aging 3 hours
- SOW 4644 Social Services for the Elderly 3 hours

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

Students who are interested in certification should consult Dr. David Dees 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., Professor of Health Sciences, BL 104.
- Psychology - Richard D. Tucker, Ph.D., Associate Professor and Chair, Psychology, PH 317.
- Social Work - Eileen M. Abel, M.S.W., Assistant Professor, Sociology, FA 414.
- Sociology - Charles M. Unkovic, Ph.D., Professor of Sociology, FA 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
Director: 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 General Education Program or the General Education requirement at a Florida State Community College. In addition, foreign language proficiency is 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 15 semester hours in each area with an additional 20 semester hours to be completed in a fifth area or used to strengthen one or more of the four course area groupings. Students choosing only four course area groupings may include a maximum of 11 semester hours of general electives as well as 9 hours of supporting electives in completing the fifth area.
3. A minimum of 48 upper-level hours must be earned in the 5 areas.

In addition to the university-wide degree requirements, a minimum grade point average of 2.0 must be achieved in each course grouping.
The areas of Education and Engineering may be used twice provided a specific concentration corresponding to a traditional major is chosen for one of the area course groupings.

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

**COURSE AREA GROUPINGS**
(Four areas must be represented -- chosen from three disciplines)

**AIR FORCE OR ARMY ROTC**
For students who take and complete the Air Force or Army ROTC four-year or two-year upper-division programs.

**HEALTH SCIENCES**
Communicative Disorders, Health Sciences, Medical Record Administration, Medical Laboratory Science, Nursing, Radiologic Sciences, Cardiopulmonary Sciences, and other Health Related Professions.

**BEHAVIORAL SCIENCES**
Anthropology, Psychology, Sociology, and Social Welfare.

**BIOLOGICAL SCIENCES**
Biology, Botany, Limnology, Microbiology, Zoology.

**BUSINESS ADMINISTRATION**
Accounting, Business Administration, Economics +, Finance, Hospitality Management, Management, Marketing.

**COMMUNICATION**
Film, Journalism, Radio-Television, Speech, and general courses in Communication.

**EDUCATION**
Art Education, Business Education, Educational Media, Exceptional Child, Physical Education, Teaching Analysis, Vocational Education, and selected courses from Elementary and Secondary Education.
ENGINEERING
Selected courses from the Engineering core and departmental offerings. The certificate program in Engineering Technology and Society may also be used.

FINE ARTS
Art, Music and Theatre.

HUMANITIES
English, Foreign Literature, History, Humanities, Philosophy, and Religion.

LANGUAGES
Chinese, French, German, Hebrew, Italian, Latin, Russian, Spanish.

MATHEMATICAL SCIENCES
Computer Science, Mathematics, and Statistics

PHYSICAL SCIENCES
Astronomy, Chemistry, Forensic Science, Geography (Physical), Geology, Physics, and general courses in the Earth and Space Sciences.

SOCIAL SCIENCES
Allied Legal Services, Criminal Justice, Economics+, Geography (Social), Political Science, and Public Administration.

*Consult your advisor. Many Education courses require concurrent public school practicum.
+This course shown in two areas.
**Please note that those courses used to satisfy the G.E.P. cannot also be used to satisfy the hours needed to complete a course area grouping.

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

I. Business Administration
II. Education
III. Engineering
IV. Health
V. Fine Arts, Humanities, and Languages
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.

COMMUNITY COLLEGE RELATIONS
Director: Ralph Boston, AD 210, Phone 275-2231

Community College Relations is responsible for: keeping community college students and counselors informed about UCF, its programs and policies; making state-wide and local visits to community colleges; annually publishing the UCF "Transfer Student Counseling Manual"; monitoring the statewide community college/university articulation agreement; serving as liaison with community college officials; conducting appropriate workshops/meetings to maintain and improve community college relations.
COURSE DESCRIPTIONS

CLASSIFICATION OF COURSES
The University course numbering system is as follows:
1000-2999 are freshman and sophomore level courses and are designed primarily for these students.
3000-4999 are junior- and senior-level courses and are designed primarily for these and other advanced students. When approved for inclusion in an individual program of graduate study by a supervisory committee approved by the Dean of Graduate studies, selected 4000-4999 courses may serve the needs of individual graduate students.
5000-5999 are beginning graduate and advanced undergraduate level courses—open to graduate students and those seniors who receive approval of the appropriate Dean(s).
6000-6999 are beginning and professional level courses open only to graduate students.

FLORIDA STATEWIDE COURSE NUMBERING SYSTEM
The course numbers appearing in the catalog are part of a statewide system of prefixes and numbers developed for use by all public postsecondary and participating private institutions in Florida. One of the major purposes of this system is to make transferring easier by identifying courses which are equivalent, no matter where they are taught in the state. All courses designated as equivalent will carry the same prefix and last three digits.
The classifying and numbering of courses was done by community college and university faculty members in each academic discipline. Their work was reviewed by faculty members in all of Florida’s postsecondary institutions who made suggestions and criticisms to be incorporated into the system.
The course numbering system is, by law, descriptive and not prescriptive. It in no way limits or controls what courses may be offered or how they are taught. It does not affect course titles or descriptions at individual schools. It seeks only to describe what is being offered in postsecondary education in Florida in a manner that is intelligible and useful to students, faculty, and other interested users of the system.
The course numbering system was developed so that equivalent courses could be accepted for transfer without misunderstanding. Each public institution is to accept for transfer credit any course which carries the same prefix and last three digits as a course at the receiving institution. For example, if a student has taken SYG-000 at a community college, he cannot be required to repeat SYG-000 at the school to which he transfers. Further, credit for any course or its equivalent, as judged by the appropriate faculty task force and published in the course numbering system, which can be used by a native student to satisfy degree requirements at a state university can also be used for that purpose by a transfer student regardless of where the credit was earned.
It should be noted that a receiving institution is not precluded from using nonequivalent courses for satisfying certain requirements.

General Rule for Course Equivalencies
All undergraduate courses bearing the same alpha prefix and last three numbers (and alpha suffix, if present) have been agreed upon to be equivalent. For example, an introductory course in sociology is offered in over 40 postsecondary institutions in Florida. Since these courses are considered to be equivalent, each one will carry the designator SYG-000.

First Digit
The first digit of the course number is assigned by the institution, generally to indicate the year it is offered—i.e., 1 indicates freshman year, 2 indicates sophomore year. In the sociology example mentioned above one school which offers the course in the freshman year will number it SYG 1000; a school offering the same course in the sophomore year will number it SYG 2000. The variance in the first number does not affect the equivalency. If the prefix and last three digits are the same, the courses are substantially equivalent.

Titles
Each institution will retain its own title for each of its courses. The sociology courses mentioned above are titled at different schools “Introductory Sociology,” “General Sociolo-
gy,” 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/place.

Examples: Marine Biology

Marine Biology with lab

Therefore, OCB 013C is equivalent to OCB-013 plus OCB-013L.

An alphabetical listing of prefixes:

ACG Accounting General
ACO Accounting: Occupational/Technical
ADV Advertising
AFH African History
AFR Air Force ROTC
AMH American History
AML American Literature
ANT Anthropology
APA Applied Accounting
APB Applied Biology
ARE Art Education
ARH Art History
ART Art
ASH Asian History
AST Astronomy
AVM Aviation Management
BCH Biochemistry
BCN Building Construction
BOT Botany
BSC Introductory Biology
BTE Business Teacher Education
BUL Business Law
CAP Computer Applications
CBH Comparative Psychology & Animal Behavior
CCJ Criminology & Criminal Justice
CDA Computer Design/Architecture
CES Civil Engineering Structure
CET Computer Engineering Technology
CGS Computer General
CHI Chinese
CHM Chemistry
CHS Chemistry-Specialized
CIS Computer & Information Systems
CJT Criminal Justice Technology
CLP Clinical Psychology
COC Computer Concepts
COM Communications
COP Computer Programming
COT Computer Theory
CPO Comparative Politics
CRM Computer Resources/Management
CRW Creative Writing
CYP Communication Psychology

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<table>
<thead>
<tr>
<th>Code</th>
<th>Field</th>
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<tbody>
<tr>
<td>DAA</td>
<td>Dance Activities</td>
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<tr>
<td>DAE</td>
<td>Dance Education</td>
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<tr>
<td>DEP</td>
<td>Development Psychology</td>
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<tr>
<td>EAB</td>
<td>Experimental Analysis of Behavior</td>
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<tr>
<td>EAS</td>
<td>Engineering: Aerospace</td>
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<tr>
<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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<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>
<td>Engineering: Electrical</td>
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<tr>
<td>EES</td>
<td>Environmental Engineering Science</td>
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<tr>
<td>EET</td>
<td>Electrical Electronic Technology</td>
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<tr>
<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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<td>EGM</td>
<td>Engineering: Mechanical</td>
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<td>EGN</td>
<td>Engineering: General</td>
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<td>EIN</td>
<td>Engineering: Industrial</td>
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<td>ELD</td>
<td>Education: Specific Learning Disabilities</td>
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<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>
<td>Engineering: Mechanical</td>
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<td>EMR</td>
<td>Education: Mental Retardation</td>
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<td>ENC</td>
<td>English Composition</td>
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<td>ENL</td>
<td>English Literature</td>
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<td>ENU</td>
<td>Engineering: Nuclear</td>
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<td>ENV</td>
<td>Engineering: Environmental</td>
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<td>ENY</td>
<td>Entomology</td>
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<td>EPH</td>
<td>Education: Physical &amp; Multiple Handicapped</td>
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<td>ESE</td>
<td>Education: Secondary</td>
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<td>ESI</td>
<td>Engineering Systems-Industrial</td>
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<td>ESL</td>
<td>English as a Second Language</td>
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<td>EST</td>
<td>Electronic Specialty Technology</td>
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<td>ETC</td>
<td>Engineering Tech: Civil</td>
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<td>ETG</td>
<td>Engineering Tech: General</td>
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<td>ETI</td>
<td>Engineering Tech: Industrial</td>
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<td>ETM</td>
<td>Engineering Tech: Mechanical</td>
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<td>EUH</td>
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<td>EVI</td>
<td>Education: Visually Impaired-Blind</td>
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<td>EVS</td>
<td>Environmental Science</td>
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<td>EVT</td>
<td>Education: Vocational/Technical</td>
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<td>EXP</td>
<td>Experimental Psychology</td>
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<td>FIL</td>
<td>Film</td>
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<td>Finance</td>
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<td>FLE</td>
<td>Foreign Language Education</td>
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<td>FOT</td>
<td>Foreign &amp; Biblical Languages in Translation</td>
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<td>FRE</td>
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<td>FRW</td>
<td>French Literature (Writings)</td>
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<td>GEA</td>
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<td>GEB</td>
<td>General Business</td>
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<td>Acronym</td>
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<td>Geography</td>
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<td>GER</td>
<td>German Language</td>
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<td>GEW</td>
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<td>GLY</td>
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<td>HLP</td>
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<tr>
<td>HMW</td>
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<td>HSA</td>
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<td>HSC</td>
<td>Health Science</td>
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<td>Human Nutrition</td>
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<td>INP</td>
<td>Industrial &amp; Applied Psychology</td>
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<td>INR</td>
<td>International Relations</td>
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<td>JOU</td>
<td>Journalism</td>
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<td>JST</td>
<td>Judaic Studies</td>
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<td>LAE</td>
<td>Language Arts &amp; English Education</td>
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<td>LAH</td>
<td>Latin American History</td>
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<td>LEA</td>
<td>Legal Assistant</td>
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<td>LEI</td>
<td>Leisure</td>
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<td>MAA</td>
<td>Mathematics-Analysis</td>
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<td>MAC</td>
<td>Mathematics-Calculus &amp; Precalculus</td>
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<td>MAD</td>
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<td>MAE</td>
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<td>MAP</td>
<td>Mathematics-Applied</td>
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<td>MAR</td>
<td>Marketing</td>
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<td>MAS</td>
<td>Mathematics: Algebraic Structures</td>
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<td>MAT</td>
<td>Mathematics</td>
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<td>MCB</td>
<td>Microbiology</td>
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<td>MET</td>
<td>Meteorology</td>
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<td>MGF</td>
<td>Mathematics: General &amp; Finite</td>
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<tr>
<td>MHF</td>
<td>Mathematics: History &amp; Foundations</td>
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<td>MIS</td>
<td>Military Science</td>
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<td>MLS</td>
<td>Medical Laboratory Science</td>
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<td>MMC</td>
<td>Mass Media Communication</td>
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<td>MRE</td>
<td>Medical Records</td>
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<tr>
<td>MTG</td>
<td>Mathematics: Topology &amp; Geometry</td>
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<td>MUC</td>
<td>Music: Composition</td>
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<td>MUE</td>
<td>Music Education</td>
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<td>MUH</td>
<td>Music: History/Musicology</td>
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<td>MUH</td>
<td>Music: Music Literature</td>
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<td>MUN</td>
<td>Music: Musical Ensembles</td>
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<td>MUS</td>
<td>Music</td>
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<td>Music: Theory</td>
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<td>MVB</td>
<td>Music: Applied-Brasses</td>
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<td>MVK</td>
<td>Music: Applied-Keyboard</td>
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<td>MVO</td>
<td>Music: Applied-Other Instruments</td>
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<td>MVP</td>
<td>Music: Applied-Percussion</td>
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<td>MVS</td>
<td>Music: Applied-Strings</td>
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<td>MVV</td>
<td>Music: Applied-Voice</td>
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<td>MVW</td>
<td>Music: Applied-Woodwinds</td>
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<td>NUR</td>
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<td>Nursing Universals</td>
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<td>OCE</td>
<td>Oceanography</td>
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<tr>
<td>ORI</td>
<td>Oral Interpretation</td>
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<tr>
<td>OST</td>
<td>Office Systems Technology</td>
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<tr>
<td>PAD</td>
<td>Public Administrator</td>
</tr>
</tbody>
</table>

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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.

<table>
<thead>
<tr>
<th>Special Courses</th>
<th>Undergraduates</th>
<th>Grad 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed Independent Studies</td>
<td>3905</td>
<td>4906</td>
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<tr>
<td>Special Topics/Seminars</td>
<td>3930</td>
<td>4932</td>
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<tr>
<td>Directed Independent Research</td>
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<tr>
<td>Internships, Practicums, Clinical Practice</td>
<td>3940</td>
<td>4941</td>
</tr>
<tr>
<td>Study Abroad</td>
<td>3955</td>
<td>4956</td>
</tr>
</tbody>
</table>

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

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

2 Enrollment is limited to those students who are fully admitted to the Graduate Program.

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

College designation: AS = Arts and Sciences; BA = Business Administration; ED = Education; EN = Engineering; 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 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: Cost Accounting I: PR: Junior standing, MAC 1104, ECO 2013, and ECO 2023, and ACG 2011 with a grade of "C" in ACG 2011, completion of or concurrent enrollment in ACG 3103. Cost concepts, cost of goods manufactured, job order costing, process costing, standard costing, and relevant cost analysis.

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Department</th>
<th>Credits</th>
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<tbody>
<tr>
<td>AFR 1111</td>
<td>The Air Force Today: Capability and National Security II: PR: AFR 1101 or permission of Professor</td>
<td>US</td>
<td>1(1,1)</td>
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<tr>
<td></td>
<td>operations and counterinsurgency.</td>
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<td>AFR 2130</td>
<td>The Development of Airpower: PR: AFR 1111 or approval of the PAS. A study of the development of</td>
<td>US</td>
<td>1(1,1)</td>
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<tr>
<td></td>
<td>airpower from experiments by 18th century balloonists to the achievement of combat airpower capa-</td>
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<tr>
<td></td>
<td>bilities during World War II.</td>
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<tr>
<td>AFR 2131</td>
<td>The Aerospace Age: PR: AFR 2130 or approval of PAS. A study of the development of aerospace</td>
<td>US</td>
<td>1(1,1)</td>
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<td></td>
<td>capabilities since World War II, highlighting technological advancements and the role of aero-</td>
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<td></td>
<td>space power in the contemporary world.</td>
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<tr>
<td>AFR 3220</td>
<td>Air Force Management and Leadership: PR: GMC or Two-Year Program Selection and/or approval of</td>
<td>US</td>
<td>3(3,1)</td>
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<td>the PAS. An introductory study of Air Force management fundamentals, communications skills and</td>
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<td>basic leadership styles.</td>
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<td>AFR 3230</td>
<td>Air Force Management and Evaluation: PR: AFR 3220 or approval of the PAS. A concluding study of</td>
<td>US</td>
<td>3(3,1)</td>
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<td>Air Force management fundamentals including performance evaluation skills.</td>
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<td>AFR 4201</td>
<td>Societal Role and Defense Strategy: PR: AFR 3230 or approval of PAS. Examination of the military</td>
<td>US</td>
<td>3(3,1)</td>
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<td></td>
<td>and its role in American society. A study of the framework and formation of defense strategy.</td>
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<td>AFR 4210</td>
<td>Implementation of Defense Policy: PR: AFR 4201 or approval of PAS. An examination of defense</td>
<td>US</td>
<td>3(3,1)</td>
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<td>implementation and its impact on the decision-making process. A study of the military justice</td>
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<td>system and its protection of individual rights.</td>
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<td>AMH 2010</td>
<td>U.S. History: 1492-1877: Survey of U.S. history from 1492-1877.</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>AMH 2020</td>
<td>U.S. History: 1877-Present: Survey of U.S. history from 1877 to the present. May be taken before</td>
<td>AS</td>
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<td>AMH 2010.</td>
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<td>AMH 3370</td>
<td>American Economic History: PR: AMH 2010 and 2020 or C.I. An introduction to the economic</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>development of the U.S. with emphasis on agriculture, labor, industrialization, transportation</td>
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<td>and banking.</td>
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<td>AMH 3402</td>
<td>History of the South to 1865: PR: AMH 2010 or 2020 or C.I. Development of the southern colonies,</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>beginning sectionalism, the cotton economy, slavery. Calhoun's constitutional theories, seces-</td>
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<td>sion, Civil War and its aftermath.</td>
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<td>AMH 3403</td>
<td>History of the South Since 1865: PR: AMH 2010 and 2020 or C.I. Reconstruction, the &quot;solid South&quot;</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>and the racial dilemma, progressivism for whites only, southern literature, 20th century eco-</td>
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<td>nomic, political and social changes, and the new Reconstruction.</td>
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<td>AMH 3421</td>
<td>History of Florida to 1845: PR: AMH 2010 and 2020 or C.I.</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>AMH 3423</td>
<td>Florida History 1845-Present: PR: AMH 2010 and 2020 or C.I.</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>AMH 3441</td>
<td>History of the Frontier: Eastern America: PR: AMH 2010 and 2020 or C.I. The progression of the</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>westward movement from the colonial settlements to the Mississippi considered as an interpretive</td>
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<td>approach to American history.</td>
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<td>AMH 3442</td>
<td>History of the Frontier: Western America: PR: AMH 2010 and 2020 or C.I. The development of the</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>trans-Mississippi West and its impact upon American history.</td>
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<td>AMH 3445</td>
<td>Spanish Borderlands: PR: AMH 2010 and 2020 or C.I. Survey of Spanish settlement in South and</td>
<td>AS</td>
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<td>Southwestern U.S. with emphasis upon cultural conflicts found in the imperial rivalries for con-</td>
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<td>trol of the area.</td>
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<td>AMH 3460</td>
<td>History of Urban America: Cities as &quot;spearheads in the wilderness, antiurban bias, urban promo-</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>tion, rivalry, industrialization, ethnicity, reform movements including public health, housing,</td>
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<td>planning.&quot; Metropolitanism and demographic trends.</td>
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<td>AMH 3540</td>
<td>Military History: A survey of US military history from the European background of the colonial</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>period through the contemporary military experience.</td>
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<td>AMH 3560</td>
<td>Women in American History: Women in colonial America, &quot;republican&quot; motherhood, &quot;separate</td>
<td>AS</td>
<td>3(3,0)</td>
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<td>spheres,&quot; suffrage battle, entry into paid labor force, new educational and professional op-</td>
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<td>portunities, changing family pattern, &quot;new&quot; feminism.</td>
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AMH 3570: Black American History: PR: AMH 2010 and 2020 or C.I. History of Negroes from their African heritage through American Slavery to freedom and their role in 20th century America.

AMH 3800: Canadian History: Canada since Colonial times and the present but with emphasis on the period since the British North America Act, 1867.

AMH 4110: Colonial America, 1607-1763: PR: AMH 2010 and 2020 or C.I. The voyages of discovery, the origins of the thirteen colonies, and their political, economic, social, and religious life in the 17th and 18th centuries.

AMH 4130: The Age of the American Revolution, 1763-1789: PR: AMH 2010 and 2020 or C.I. The American Revolution — its origins, course, and impact upon American society — the Articles of Confederation, the Philadelphia Convention and its work.

AMH 4140: Jeffersonian America: PR: AMH 2010 and 2020 or C.I. The Confederation era, the Federalists, Jeffersonian Democracy, and the War of 1812.

AMH 4160: Jacksonian America: PR: AMH 2010 and 2020 or C.I. The risk of American nationalism, Jacksonian Democracy, the Mexican War and sectional conflict.

AMH 4170: Civil War and Reconstruction: PR: AMH 2010 and 2020 or C.I. Reconstruction, and impact of industrialism.

AMH 4201: Robber Baron Era: PR: AMH 2010 and 2020 or C.I. The Agrarian Revolt, the Spanish-American War, and the Progressive Era.

AMH 4231: United States History: 1914-1945: PR: AMH 2010 and 2020 or C.I. The progressive Reforms of Woodrow Wilson, World War I, post-war prosperity, the Depression, and the New Deal; World War II.

AMH 4270: United States History: 1945-Present: PR: AMH 2010 and 2020 or C.I. Contemporary America from World War II.

AMH 4311: American Culture I: PR: AMH 2010 and 2020 or C.I. The European Backgrounds: Puritanism; Enlightenment, the Great Awakening; Revolutionary Thought; Romanticism; the Southern Mind and the Yankee Response; Popular Culture and the rise of recreation.

AMH 4313: American Culture II: PR: AMH 2010 and 2020 or C.I. The Darwinian Revolution; revolt of the intellectuals; the media explosion; mass entertainment in mass culture; the loss of community, the nuclear age, and presentism.

AMH 4510: Rise of the United States to World Power, 1776-1914: PR: AMH 2010 and 2020 or C.I. The evolution of basic American policies. American expansion, America’s major wars, and the emergence of America as a world power.


AMH 5116: Colloquium in U.S. Colonial History: PR: Senior Standing or C.I. Reading and discussion of the literature on selected topics in U.S. History.

AMH 5137: Colloquium in U.S. Revolutionary Period: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics in the Revolutionary Era, 1763-1789.

AMH 5149: Colloquium in Early U.S. Hist., 1789-1815: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of the early national period.

AMH 5169: Colloquium Age of Jackson: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of the Jacksonian age.

AMH 5176: Colloquium in Civil War and Reconstruction: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of the Civil War and Reconstruction era.

AMH 5219: Colloquium in Late 19th Century U.S.: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of late 19th century U.S.

AMH 5296: Colloquium in 20th Century U.S.: PR: Senior Standing or C.I. Reading and class discussion on selected topics in 20th century U.S.

AMH 5391: Colloquium in U.S. Cultural History: PR: Senior Standing or C.I. Students will read and discuss a common or diverse body of the significant literature in the field.
AMH 5407
Colloquium in American South: PR: Senior Standing or C.I. Intensive reading and class discussion on selected topics of Southern history from colonial origins to the Present.

AMH 5446
Colloquium in U.S. Frontier: PR: Senior Standing or C.I. Reading and class discussion of the literature on selected topics of frontier history.

AMH 5515
Colloquium in U.S. Diplomatic History: PR: Senior Standing or C.I. A survey of the historical literature of American foreign policy.

AML 2011
American Literature I: PR: ENC 1102. Major American writers from beginning through Whitman.

AML 3020
American Literature II: PR: ENC 1102. Major American writers from Twain to present.

AML 4101

AML 4261
Literature of the South: PR: ENC 1102 or C.I. Development of Southern literature from its beginnings in the “Old South” through the post-Civil War and the Southern Renaissance to the present. Emphasizes reading from Poe, Ransom, Tate, Faulkner, Porter, Warren, O’Connor, Percy and Styron.

AML 4321

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

ANT 3000
Human Origins (Anthropology I): The evolution of human society from foraging and hunting groups to the earliest cities and states.

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

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

ANT 3142
Old World Prehistory: A comparative study of social evolution in Africa, Europe and Asia from the earliest humans to the beginnings of recorded history.

ANT 3144
Prehistory of the American Indians: The trajectory of New World society from the earliest big game hunters to the European conquest of the American civilizations.

ANT 3145
Archaeology of Complex Society: Theoretical perspectives on ancient hierarchies of power.

ANT 3153
Archaeology of North America: An introduction to the archaeology of North America including its prehistoric and historic aspects.

ANT 3162
Archaeology of Middle and South America: An introduction to the prehistory of Middle and South America focusing on the high civilizations up to and including the Spanish conquest.

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

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

ANT 3262

ANT 3271
Law and Culture: An introduction to law as an organizing force in society including a study of primitive forms of law and social control.

ANT 3302
Sex, Gender and Culture: The traditional and changing roles of women and men viewed in a cross-cultural perspective.

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

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

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

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.

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

Anthropology of Japan: An examination of Japanese culture and its contemporary behavioral and organizational patterns by drawing upon archaeology, cultural history, linguistics, cultural anthropology, and social organization.

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

Aging and Death: General considerations and theories of aging and death in a cross-cultural perspective.


Culture and the Individual: Focus on the socio-cultural dimensions of child rearing, mental illness/mental health, sexual behavior, personality, and testing.

Medical Anthropology: The therapeutic environment examined in a cross-cultural perspective. The implications of the comparative approach to health care in the industrialized world.

The Human Species: Human biological variation in an evolutionary perspective.

Biobehavioral Anthropology: An introduction to the study of human behavior in terms of mutual interaction between human biology and cultural environments.

Language and Culture: PR: Sophomore standing. The study of language in a non-western setting; language and behavior; language and perception.

Action Anthropology: Application of principles of anthropology to problems of directed social and technological change.

Anthropological Method and Theory: Method, theory, research design and field techniques in the anthropological endeavor.

Advanced Archaeological Fieldwork: Supervised archaeological fieldwork. Students admitted only with permission of instructor.

Seminar in Laboratory Analysis: The processing of archaeological finds from excavation through publication.

Comparative Cultural Analysis: The dynamics of cultural processes in a multi-ethnic setting.

Accounting for Engineers: General Accounting principles and practice, cost accounting, budgeting and control techniques. Not usable for BSBA degree credit.


Introduction to Pharmacology: Review of terminology and regulations. Study of drug types and usage.

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.

Applied Microbiology: PR: MCB 3013C or C.I. Microbial biochemistry of industrial processes including: economics, screening, scale up, quality control and applied genetics.
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: ARE 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 appropriate levels of instruction: wood, paper, plaster, stone, clay, wax fiber, metal, and synthetics. Lab. TBA.

ARE 5251
Art for Exceptionalities: Concepts, principles, and methods of integrating art processes into the education of the physically, emotionally, and mentally handicapped.

ARE 5255
Arts in Recreation: Art activities and experiences appropriate for use in playground, leisure services, occupational orientation and other recreational areas.

ARE 5358
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

ARE 5648
Contemporary Visual Arts Education: PR: ARE 4443 or C.I. Continued study of current programs and innovations in public school Visual Arts Programs.

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

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

ARH 3060
History of Architecture: History of Architecture - Survey of Western architectural styles.

ARH 3456
Art After 1945: A seminar for upper level art students to examine historically the art of Post WWII.

ARH 3520
African Art: Teach the continuatives between African, Afro-Caribbean and Afro-American Arts.

ARH 3530
Asian Art: History of visual arts of China, Japan, India and other Eastern cultures.

ARH 3683
Southern Folk Arts: History of Folk Architecture, Ceramics, Painting, Sculpture, Textiles and Toys in three main Southern ethnic cultures: Euro-American, Afro-American, and American Indian.

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

ARH 3802
Happenings Art: To study the aesthetic and social significance of "Total Art" in its attempt to break down the customary distinctions between life and art.

ARH 3820
Visual Arts Administration: Vitas; grant applications; Personnel; copyright laws; museum practices, etc.

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

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

ARH 4311
Early Italian Renaissance Art: A survey of Italian Art and Architecture from 1300 to 1500.

ARH 4312
Later Italian Renaissance Art: A survey of Art in Italy, from the High Renaissance through Mannerism.
ARH 4350: Baroque Art: A study of European Art in the 17th and 18th centuries.
ARH 4430: 19th Century Art: A survey of the trends and developments in art during the 19th century, including the art of America and of Western Europe.
ARH 4450: 20th Century Art: A survey of the art from Fauvism, Futurism, Cubism to the art of the present.
ARH 4655: Meso American Art: A survey of the art of Mexico and Central America, from the Pre-Columbia, through the Spanish Colonial, to the 20th century.
ARH 4690: Mexican Art—Fieldwork: A field trip in connection with ARH 4655.
ARM 4730: Environmental Art: Analysis of aesthetic design factors, related to city planning, architecture, product design, and experimental environmental arts.
ART 2201C: Design Fundamentals I: Materials, processes, form. Emphasis on two-dimensional design problems, including problems in black and white and basic color theory.
ART 2202C: Design Fundamentals II: Continuation of color theory and basic three-dimensional design using the various sculptural media.
ART 2300C: Drawing Fundamentals I: Drawing as a means of formal organization. Introduction to problems in drawing methods and media. Emphasis on description techniques.
ART 2301C: Drawing Fundamentals II: Continuation of ART 2300C.
ART 2481C: Computer Graphic Design I: The principles underlying the generation and display of graphical pictures by computer. Topics include: graphical software packages and graphics systems.
ART 3110C: Ceramics: Basic concepts of ceramic design, experience in processes of forming, decorating, glazing, and firing pottery.
ART 3232C: Graphic Design II: PR: ART 3280C or C.I. Methods, materials and processes related to perceptual studies in graphic design.
ART 3280C: Graphic Design I: PR: ART 2201C, 2202C, or C.I. Current: Use of type, color and illustration on layout elements and mechanical separations.
ART 3330C: Intermediate Drawing I: PR: Six semester hours of Drawing Fundamentals or C.I. Intermediate problems in drawing with emphasis on the human form.
ART 3331C: Intermediate Drawing II: PR: C.I. Continuation of Intermediate Drawing I.
ART 3400C: Printmaking: PR: 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 3701C: Sculpture: PR: Six semester hours in Design Fundamentals, to include those 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 4235C
Advanced Graphic Design: PR: ART 3280C, ART 3232C, or C.I. Practical studio problems with emphasis on organization of visual design elements.

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

ART 4320C
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 4703C
Advanced Sculpture: PR: ART 3701C. May be repeated for credit.

ASH 3300
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.

ASH 4404
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.

AST 3002
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.

AST 5061C
Astronomy for Teachers: PR: C.I. Elliptical Orbits, binary stars, luminosity, doppler shift, spectroscopy, steller evolution.

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

BCH 4053

BCH 4054
Biochemistry II: PR: BCH 4053. Continuation of BCH 4053.

BCH 4103L
Biochemical Methods: PR: BCH 4053 and CHM 3120C. A laboratory course stressing the application of the chemical arts to the separation, identification, and quantification of materials of biological significance.

BCN 4230

BES 3512
Behavioral Weight Control: Application of behavioral techniques to produce weight loss. Diet, exercise, and behavioral self regulation principles are used in an individual student case study approach.

BOT 2010C
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.

BOT 3154
Local Flora: PR: BOT 2010C or C.I. Recognition and identification of Florida higher plants, especially those common to central Florida, stressing environmental and ethnobotanical significance. Weekend field trips may be required.

BOT 3800
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.

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

BOT 4223C
Plant Anatomy: PR: BOT 2010C. A study of development, structure and function of the principal organs and tissue of vascular plants.
BOT 4303C
Plant Kingdom: PR: BOT 2010C. A survey of the plant kingdom utilizing comparative morphology, structure and functions to demonstrate relationships among extant and extinct forms.

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

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

BOT 4713C

BOT 5495C
Bryology: PR: BOT 4303C or C.I. A lecture-laboratory survey course on the diversity and classification of mosses, liverworts, and hornworts with special emphasis on those found in Florida.

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

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

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

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

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

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

BTE 3391

BTE 4071
Professional Student Leadership Development: Knowledge and application of objectives for vocational student organizations. Participation in local, state and national business education organization functions. (May be repeated once.)

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 4321. Techniques, materials, and instructional media; psychological principles, evaluation and current trends in shorthand 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
Legal Environment of Business: PR: Junior standing. Analysis of the law as a dynamic social and political institution in the business environment, including ethical considerations. (Not open to Accounting majors.)

BUL 3112

BUL 3121
Business Law II: PR: BUL 3112. Coverage of the Uniform Commercial Code; the law of commercial transactions, including sales, commercial paper, secured transactions and suretyship, contracts, wills and trusts, and property law.

BUL 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 5600 Artificial Intelligence and Prolog: PR: CAP 4600. Analysis of deductive databases, applications of logic programming to knowledge representation and "expert systems."


CAP 5652 Computer Vision: PR: COP 3530. Image formation, binary vision, region growing and edge detection, shape representation, dynamic scene analysis, texture, stereo and range images, and knowledge representation.

CAP 5700 Computer Graphics Systems I: PR: COP 3530 or equivalent. Architecture of graphics processors; display hardware; principles of programming and display software; problems and applications of graphic systems.

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

CCJ 3010 Crime in America: A survey of crime and criminality in the United States with emphasis on crime data, its weaknesses, and types of criminal behavior.

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

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

CCJ 3290 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.

CCJ 3300 The Corrections and Penology: Theories, structures and methods of institutional and non-institutional processing and treatment of convicted criminals and juvenile offenders.

CCJ 3341 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.

CCJ 3451 Justice System Technology: Examination of the relevance of scientific and technological developments to justice systems and their applicability to the operations and management of the systems.

CCJ 3452 The Criminal Justice Manager: PR: C.I. Elements of first-line supervision and executive development. Administrative leadership; its nature; methods and traits. Recent theories and research in leadership.

CCJ 3483 Public Sector Labor Relations in Criminal Justice: Examine the role of public sector labor relations in criminal justice to include management-employee relationships and the collective bargaining process, criminal justice employee organizations, and federal and state collective bargaining laws.

CCJ 4450 Justice Agency Operations: Elements, functions, and processes essential to the continuing management of various criminal justice agencies, institutions and court systems.

CCJ 4481 Police and Society: PR: CCJ 3020. Examination of the dynamics of public expectations of police, the impact of community demographic changes and police alienation from the community.

CCJ 4840 Delinquency Control: Examination of programs and institutions including juvenile court process, intake services, and remedial procedures and practices.

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

CCJ 4640 Organized Crime: An examination of organized crime including structures, history and activities, and of issues surrounding efforts to define and control it.
CCJ 4941 AS 6-9(0.12-36)
Criminal Justice Internship: PR: C.I. Internship in municipal, county, state or federal criminal justice agency. Includes assignments in police, courts, corrections components.

CCJ 5485 AS 3(3.0)
Issues in Justice Policy: Examination of selected issues of public policy regarding the functions and roles of criminal justice agencies vis-a-vis other government departments or agencies and public purposes.

CDA 4105 AS 3(3.0)
Introduction to Computer Architecture: PR: Computer Science Major or C.I. and COP 3402C and EEL 3341C. Survey of machine instructions, processor characteristics, and microprogramming concepts.

CDA 4131 AS 3(3.0)
Programming for Large Scale Digital Systems: PR: Computer Science Major or C.I. and COP 3402C. Programming techniques and instruction sets for large scale digital computers.

CDA 4300 AS 3(2.2)
Microprocessor Fundamentals: PR: Computer Science Major or C.I., COP 3402C and EEL 3341C. Semiconductor Technology, 8-bit and 16-bit Microprocessor Architectures and programming, memory system design, I/O methods, interrupts, development system concepts.

CDA 4311 AS 3(2.2)
Microprocessor Application: PR: Computer Science Major or C.I. and CDA 4300. Total system design methodology and applications, advanced topics on microprocessors, patent search and applications.

CDA 4312 AS 3(2.2)
Microprocessor Interface: PR: Computer Science Major or C.I. and CDA 4300. Interfacing of CPU to various devices, CPU support devices, peripheral devices and controllers, BUS concepts and standards, single chip computers.

CDA 5106 AS 3(3.0)
Advanced Computer Architecture I: PR: CDA 4105. 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 5109 AS 3(3.0)
Parallel Architecture & Algorithms: PR: COT 4210, CDA 5106. General-purpose vs. special-purpose parallel computers; arrays, message-passing; shared-memory; Taxonomy; parallelization techniques; communication synchronization and granularity; parallel data structures; automatic program restructuring.

CDA 5210 AS 3(3.0)
Architecture and Design of VLSI Systems: PR: CDA 4105 or equivalent. Overview of VLSI technology. Stick diagrams; logical design of basic subsystems; integrated system design tools; design of a VLSI computer system.

CDA 5212 AS 3(3.0)
VLSI Design Tools: PR: CDA 5210, a strong programming background and C.I. VLSI implementation systems; layout languages; graphic tools; sticks compactor; design rule checking algorithms; simulation models; routing algorithms; silicon compilers; knowledge-based VLSI tools.

CDA 5213 AS 3(3.0)
VLSI Testing and System Integration: PR: CDA 5210. Test vectors; fault models; design for testability; LSSD; languages for testing; performance measurements; interrupts, BUS concepts and standards; testing and systems integration.

CES 4124 EN 3(2.2)

CES 4144 EN 3(3.0)

CES 4605 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 EN 2(1.2)
Steel Design: PR: CES 4605. Project course on design of steel structures using steel and structural analysis methodologies.

CES 4704 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 EN 2(1,2)
Concrete Design: PR: CES 4704. Project course on design of concrete structures using concrete and structural analysis methodologies.

CES 5107 EN 3(3.0)
Matrix Structural Analysis: PR: CES 4124 or equivalent. Optimization and matrix methods applied to the design of real structures.

CET 3123C EN 3(2.2)
Microprocessor Electronics: CR: EET 3035C. Introduction to the Electronics of Basic Microprocessing.

CET 3144C EN 4(3.2)
Applied Microprocessor Technology: PR: CET 3123C. Analysis and design of machine language controlled microprocessor interfacing in a real world environment.
CET 3303 Microcomputer Technology I: PR: CET 3123C. Microcomputer assembly programming including overview of architecture and operating system environment.
CET 3323C Computer Organization Technology: PR: CET 3123C. Digital logic, memory devices, interrupt and I/O handling techniques.
CET 4131C Microprocessor Electronics II: PR: CET 3123C. A continuation of CET 3123C with emphasis on Applications of Microprocessor applications in Engineering Technologies.
CET 4198 Microcomputer Technology II: PR: CET 3303. Continuation of CET 3303. Macros, high-level language interfacing, device drivers.
CET 4334C Applied Computer Systems II: PR: CET 4333C. Continuation of computer systems with emphasis on advanced hardware and I/O devices.
CET 4505 Applied Data Base Systems: PR: CET 3383. Design and implementation of data base systems within the concept of central administration, structured data storage. Programming project.
CET 4523 Applied Systems Analysis II: PR: CET 3383. Continuation of CET 3383 with emphasis on distributed processing which include the interfacing of minis, mainframes, software, communications, and data base technology into a responsive information system.
CET 4527 Applied Data Center Operations: PR: CET 3323C. Provides a thorough knowledge of data center operations management.
CET 4915 Senior Computer Systems Laboratory: PR: CET 3303. Experiments covering topics and devices in microcomputer electronics.

CGS 1060 Introduction to Computer Science: History, typical computer, number systems, control and data flow, peripheral components, memory devices, effects of computers on society, applications of computers. Not open to Computer Science Majors.

CGS 3000 Computer Fundamentals for Business Applications: Hardware/software for business data processing; survey use of business applications programs utilizing prewritten programs. Not open to Computer Science Majors.

CGS 3061 Personal Computing: Survey of personal computers on the market; applications for education, entertainment and clerical work; programming in BASIC with exercises. Not open to Computer Science Majors.


CGS 3110 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.
CHM 3411

CHM 3211
Chemistry Laboratory Techniques II: PR: CHM 3210. Continuation of CHM 3210. An introduction to the laboratory techniques of organic chemistry including the preparation, reaction, and analysis of organic compounds.

CHM 3212

CHM 3212L
Organic Laboratory Techniques II: PR: CHM 3211 and 3210L. An introduction to the laboratory techniques of organic chemistry including the preparation, reaction, and analysis of organic compounds.

CHM 3410
Physical Chemistry I: PR: CHM 3046, PHY 3049, and MAC 3312. Rigorous treatment of atomic and molecular structure, thermodynamics, kinetics, and chemical bonding.

CHM 3411
Physical Chemistry II: PR: CHM 3410. Continuation of CHM 3410.
CHM 3411L
Physical Chemistry Laboratory: PR: CHM 3120C, CHM 3410 and COP 1200 or CGS 3422. Classical as well as modern instrumental techniques coupled with computer data processing to measure physical properties and determine atomic and molecular parameters.

CHM 4130C
Advanced Analytical Laboratory Technique: PR: CHM 3211, CHM 3120C and CHM 3411. A lecture-laboratory course designed to give in-depth coverage to modern methods of analysis including electrochemistry, spectroscopy, and separation techniques.

CHM 4220

CHM 4221

CHM 4235

CHM 4580

CHM 4610

CHM 5710
Chemical Structure I: PR: CHM 3211, 3120C, and 3411; or equivalent. Concepts in molecular structure and the relationships between structure and the chemical and physical properties of a substance.

CHM 5711
Chemical Structure II: PR: CHM 5710. Continuation of CHM 5710.

CHS 1440
Fundamentals of Chemistry for Engineers: PR: One year of high school chemistry or CHM 1032. Basic concepts of chemistry with emphasis on problem solving and engineering applications. Atomic and molecular structure, states of matter, stoichiometry, equilibria, electrochemistry and thermodynamics.

CHS 3501
Introduction to Forensic Science: Intended for majors and non-majors to provide an overview of the specialty areas in Criminalistics (crime lab).

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

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

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

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

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

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

CHS 5240
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.

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

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

CHS 5251
Chemical Synthesis II: PR: CHS 5250. Continuation of CHS 5250.
CIS 4321  
Data Processing Systems Analysis and Design: PR: Computer Science Major or C.I. and COP 3530. Data organization; physical storage; database system architecture. Students participate in the design of a data processing system.

CIS 4322  
Data Processing Systems Implementation: PR: Computer Science Major or C.I. and CIS 4321. System implementation project. Students experience the task of implementing a large computing system.

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

CIS 5420  
Managing the Computer Professional: PR: COP 5711 and MAN 5051; or C.I. The programming group, team and project tasks, personality factors, motivating, training, experience.

CIS 5610  
Software Engineering: PR: COP 4020. Study of design techniques for large software systems, modularization, task assignment, management techniques, implementation techniques, testing quality control, documentation and maintenance.

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

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

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

CLP 3003  

CLP 3143  

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

CLP 4440  

CLP 3004  
Psychology of Adult Adjustment: A survey of situations encountered during adulthood, including marriage, birth, parenthood, trauma, illness, death, etc. Effective adjustment.

CLP 5166  
Advanced Abnormal Psychology: Consideration of classification, causation, management and treatment of emotional disorders. Review of theories and research in the field. Lecture-Laboratory.

COM 1000  
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  
Business and Professional Communication: PR: SPC 1014 or C.I. Theoretical and practical training in effective presentational speaking for business and professions.

COM 3120  
Organizational Communication: A study of communication functions and problems within the contexts of hierarchies.

COM 3311  
Communication as a Behavioral Science: PR: Grammar proficiency examination. Basic principles of the behavioral science approach to the study of contemporary communication.

COM 4453  
Communication and Court Room Advocacy: A study of the application of communication theory and practice to the judicial setting.

COM 5625  
Ethics In Communication: The critical examination of ethical issues in human communication.

COP 1200  
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.

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COP 2000
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 2001
Programming II: PR: COP 2000. Continuation of COP 2000; recursion; simple data structures; program verification; continued experience with a procedure-oriented language.

COP 3120

COP 3400C
Assembly Language: PR: COP 2001 or equivalent programming experience. Computer structure, number systems, data representation, arithmetic and logic instructions, addressing schemes, looping techniques, sequential input/output, subroutines, macros, and other topics.

COP 3402C
Computer Systems Concepts/Programming: PR: COP 3400C. 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
Data Structures: PR: COP 3400C and COT 3100. Basic concepts of data and abstract data types (arrays, linear lists, trees, etc.) and their possible implementations. Searching, sorting and other applications.

COP 4020

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 4600
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 4710
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.

COP 5021
Programming Languages II: PR: COP 4020 and COT 4210. Introduction to compiler construction, parsing, parser generators, attributed grammars and the implementation of block structures and recursion. Students write a high-level language translator.

COP 5570
Software Tools: PR: COP 4600 and COP 5021. Systems programming languages, concurrent programming, design and implementation of software development/maintenance tools. A large programming project is required.

COP 5611
Operating System Design Principles: PR: COP 4600. Structure and functions of operating systems, process communications techniques, high-level concurrent programming, virtual memory systems, elementary queueing theory, security, distributed systems, case studies.

COP 5711

COT 3100

COT 4210
Discrete Computational Structures: PR: Computer Science Major or C.I. and COT 3100, MAC 3312. Review of discrete structures, introduction to automation theory, computational complexity, analysis of algorithms, computability theory, and formal languages.

COT 4500

COT 5310
Formal Languages and Data Theory: PR: COP 4020 and COT 4210. Classes of formal grammars and their relation to automata, normal forms, closure properties, decision problems, LR(K) grammars.
COT 5400

COT 5410
Computational Complexity: PR: COT 4210. 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 5501
Computational Methods/Applications: PR: COT 4500. Computational solution techniques for algebraic equation, ODE and PDE Models of applications selected from science, engineering, applied mathematics, and computer science.

COT 5510
Computational Methods/Linear Systems: PR: COT 4500 and MAS 3113. Mathematical models for linear systems, linear programming, the simplex method, integer and mixed-integer programming, introduction to nonlinear optimization and linearization.

CPO 3034
Politics of Developing Areas: Comparative analysis of theories, problems and politics of development in Third World nations.

CPO 3103
Comparative Politics: Government and politics in selected nations with emphasis upon comparative analysis of contemporary problems, politics, political culture, behavior and institutions.

CPO 3132
Introduction to Canadian Studies: A multi-disciplinary approach to the study of Canada, its people, culture, government and economy.

CPO 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
Comparative Latin American Politics: Comparative analysis of politics, society and culture in Latin America and selected countries of the region.

CPO 4643
Government and Politics of the Soviet Union: Study of the origins, institutions, and functioning of the Soviet system, including the role of the Communist party; its influence on domestic and foreign policy formation and implementation.

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

CRW 2100
Introduction to Fiction Writing: PR: ENC 1102. Practice in writing the short story; group analysis and criticism of work produced by individual students.

CRW 2300
Introduction to Verse Writing: PR: ENC 1102. Practice in writing poetry; group analysis and criticism of work produced by individual students.

CRW 3001
Creative Writing Workshop I: PR: C.I. Practice in established forms: essay, short story and poetry.

CRW 3002
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

CRW 3410
Writing Scripts: PR: ENC 1102. Theory and practice of writing scripts for theatre, film and TV.

CRW 4940
Advanced Writing Workshop I: PR: C.I. Intensive writing practice in fiction, non-fiction, or verse.

CRW 4941
Advanced Writing Workshop II: PR: CRW 4940. Continuation of CRW 4940.

CRW 5932
Teaching Creative Writing: PR: Senior standing or C.I. Creative writing practicum.
Theatre Dance: PR: DAA 3200 & 3201 or C.I. Specialized study of Theatre Dance styles of the 1920s to the 1980s. Demonstration and performance of students highlighting segments of Broadway shows. May be repeated for credit.

Theatre Modern Dance: PR: DAA 3200 & 3201 or C.I. Exploration of form, style, and technique in creative movement. Includes practical class work and history lectures.

Movement as an Art Form: Analysis of creative movement techniques that increase body awareness and enhance the communicative potential through the instrument of dance.

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

Intermediate Classical Ballet: PR: DAA 3200 or C.I. Indepth study of classical ballet technique including principles, theory and practice technique.

Beginning Jazz Dance: PR: DAA 3200 or C.I. Introduction of the basic movements of American Jazz Dance, including practical class work as well as Jazz Dance history.

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

Intermediate Jazz Dance: PR: DAA 3200 & DAA 3500 or C.I. Indepth study of Jazz Dance as a major style of dance, using theory and practice in jazz technique.

Theatre Dance Choreography and Performance: PR: By audition. Students will create and present a piece choreographed and performed by other dancers in concert. May be repeated for credit.

Dance Techniques: Analysis of creative dance and movement techniques as they relate to the teaching of physical education.

Dance and Rhythmics: An analysis of creative movement and rhythmical activity as they relate to teaching physical education in grades K-8.


Psychology of Exceptional Children: Psychological problems of exceptional children including diagnosis, associated emotional problems, effects of institutionalization, special class placement, attitudes, and appropriate intervention methods.

Psychological Approaches to Mental Retardation: The problems of mentally retarded citizens including diagnosis, environment versus heredity, legal restrictions, institutionalization, as well as methods of behavioral remediation.

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.

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.

Aerodynamics I: PR: EML 4709. Fundamental aerodynamic analysis of wings and bodies in incompressible and compressible flows.


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: CHS 1440 or equivalent. Principles of physical geology with emphasis on engineering and environmental topics. Study of land forms, geologic maps, geologic structure, weathering, groundwater, mass wasting, and earthquakes. Lab sessions are practical applications.


Construction Engineering I: PR: EGN 3331C and ECI 4305C. Building construction, materials and types of construction, soils in construction and handbook applications in the field of construction engineering. Also form work design.

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

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

Construction Engineering II: PR: ECI 4145 or C.I. Construction planning, equipment, and methods used in heavy construction.

Construction Law and Project Management: PR: C.I. Contracts, specifications, and law for engineers. Strategic planning, management, development, design, and production of construction projects. Value engineering, project funding and cash flow.

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 4305C 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.

Computer-Aided Engineering Design: PR: EGN 5210 and EEL 3342C or C.I. Review of currently available CAE tools for digital hardware and software design applications.

Engineering Mathematical Analysis: PR: MAP 3302. The application of mathematical methods to engineering problems. Vector and tensor fields, state space, coordinate systems, orthogonal functions.

Engineering Data Structures: PR: EGN 3210 or equivalent, EEL 4701C or C.I. Analysis and design of data structures and associated processing algorithms. File system access, integrity, and design. Data retrieval and data management concepts.


Engineering Applications of Intelligent Systems: PR: ECM 4504C, ECM 4230. Methods of intelligent machine design and engineering including intelligence models, computer vision, natural language understanding, pattern analysis, adaptive control, expert systems and advanced architectures.
Embedded Computer Systems: PR: EGN 3210 or equivalent, EEL 4701C. Computer applications in systems role, software tools, sensor interaction, interfacing.


Systems Lab Instrumentation: PR: EGN 4703. Introduction to the types of instrumentation used in the field of Industrial Process Control. Hands-on experience with controllers, sensors, transmitters and final control elements.


Senior Project In Computer Engineering: PR: Senior Standing and C.I. Front-End Analysis, Design, Implementation, and Documentation of a representative Industrial System Design Project.


Image Processing: PR: MAP 3302, EGN 4703. Two dimensional signal processing techniques; pictorial image representation; spatial filtering; image enhancement and encoding; segmentation and feature extraction; introduction to image understanding techniques.

Pattern Recognition: PR: MAP 3302, EGN 4703. Graph-theoretic and syntactic methods of pattern analysis. Decision functions; optimum decision criteria; training algorithms; feature extraction; unsupervised learning; data reduction and potential functions.

Microcomputer-based Monitoring and Control Systems: PR: EEL 3342C or equivalent, CGS 3422 or equivalent. Machine-language programming; software development aids; Interfacing considerations.

Engineering Applications of Computer Graphics: PR: CGS 3422. Introduction to the use of computer graphics with engineering applications. Laboratory program assignments.

Software Engineering I: PR: CGS 3422, ECM 4504C 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.


ECO 4224
EO 4303
ECO 4412
ECO 4504
Economics of the Public Sector: PR: ECO 2023. A study of fiscal institutions and decision-making and how government budgetary policy (spending, taxing, borrowing, and debt management) affects the economy and its citizens.
ECO 5005
Economic Concepts: PR: Acceptance into the graduate program. Introduction to micro and macro economic analysis.
ECO 5415
Statistics for Business and Economics: PR: Acceptance into the graduate program and MAC 3233. Statistical theory and problems relating to business and economics including time series and correlation theory, index number theory and statistical inference.
ECP 3203
Contemporary Labor Economics: PR: ECO 2023 and ECO 2013. The analysis of labor problems and issues in a dynamic contemporary economy through the interaction of the four major institutions: households, firms, government, and unions.
ECP 3424
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.
ECP 3433
Transportation Economics: PR: ECO 2023 and ECO 2013. Economic characteristics and governmental regulation of public carriers. Consideration of competitive relations between modes of transportation and criteria for public investment in transportation and criteria of public investment in transportation systems.
ECP 4403
Business, Government, and Industrial Organizations: PR: ECO 2023 and ECO 2013. A study of the performance of industries representative of various types of market structure and practices as well as the public policies affecting these industries.
ECP 4603
Urban and Regional Economic Problems: PR: ECO 2023 and ECO 2013. Analysis of the location, organization and problems of urban and regional economic activities.
ECP 4703
Managerial Economics: PR: Junior standing. ACG 2011 or ACG 3023, ECO 2023, ECO 2013 and ECO 3411. The uses of economic analysis in economic decision making and business policy formulation.
ECS 4003
ECS 4013
EDE 3942
Junior Student Teaching-Elementary: PR: EDG 4321, RED 3012, MAE 1810 and 2811 or MAE 3112. Student teaching assignment in an elementary school under the supervision of a certified classroom teacher.
EDE 3943
Junior Student Teaching-All K-12 Majors: PR: EDG 4321. Student teaching under the supervision of a certified teacher. Half in elementary, half in secondary.
EDE 4937
EDE 4943
Senior Student Teaching-Elementary: PR: EDE 3942 or EDE 3943. Student teaching in an elementary school under the supervision of a certified classroom teacher. Scheduled concurrent seminars.
EDE 5541
Individualized Instruction in the Elementary School: PR: Regular Certificate or C.I. Study of basic philosophy, organizational patterns, techniques, materials, and activities related to individualizing instruction in the elementary school classroom.
EDF 3337
EDF 3603 Analysis of Educational Foundations: PR: Junior standing or C.I. Analysis of and participation in general and specific dimensions of teaching with socio-economic, historical and philosophical factors emphasized.
EDF 4214 Classroom Learning Principles: PR: Junior standing or C.I. Principles of learning as applied to classroom teaching situations with emphasis on student development, behavior, self-concept and motivation.
EDF 4285 Applications of Technology in Education: Classroom applications of instructional media including computers. Includes experiences with equipment, commercial and teacher made media, and their uses.
EDF 4604 Overview of Education: A brief analysis of the American educational system; focusing on social, political, economic and intellectual development through an internal atmosphere of interaction and discussion.
EDG 4321 Teaching Strategies: Analysis of the learning environment; emphasis on planning for instruction, skill development and measurement and evaluation.
EDG 4324 Teaching in the Schools: PR: Teaching Strategies or C.I. Selected dimensions of teaching; teaching skills; reading and writing in content areas; problem solving, school organization and professional ethics.
EDG 4941 Directed Field Experience: PR: Approval of Professional Laboratory. Field experience in an appropriate educational setting under the direction of a supervising teacher and/or university supervisor.
EDG 5745 Teaching the Non-English Student: PR: FLE 3063 or C.I. Bilingual and non-linguistic instruction in curriculum areas in English as a second language.
EDM 5235 Teaching in the Middle School: Methods of middle school teaching; team planning and teaching; development and learning patterns of the emerging adolescent; use of alternative teaching strategies.
EDP 3004 Educational Psychology: PR: PSY 2013. Application of psychological principles and research methods to classroom behavior and learning.
EDS 5356 Supervision of Professional Laboratory Experiences: PR: C.I. Study of the undergraduate professional laboratory experiences program with emphasis on the role and responsibilities of the Teacher Education Associate or Supervising Teacher.
EEC 4204 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.
EEC 5205 Programs and Trends in Early Childhood Education: PR: Regular Certificate or C.I. Philosophy, content, facilities, instructional materials, and activities appropriate for children ages 3 to 8 years; current research; issues and trends. Concurrent laboratory experiences.
EEC 5206 Organization of Instruction in Early Childhood Education: PR: Regular Certificate or C.I. Organization in instruction relating to language arts, social sciences, sciences, mathematics, health and physical education, problems relating to reading readiness and cognition (K-3). Concurrent laboratory experiences.
EEC 5208 Creative Activities in Early Childhood: PR: Regular Certificate or C.I. Organization of instruction and methods for creative activities involving music, art, literature and educational toys, integration of activities and basic skills curriculum (K-3). Concurrent laboratory experience.
EED 4011 Introduction to the Emotionally Disturbed: PR: Senior standing. Development and practice of appropriate cognitive, affective and motor strategies for selected categories, levels, and degrees of severity of exceptional population.
EED 4212 Curriculum and Program Adaptations, E.H.: PR: Senior Standing. Development of highly specialized techniques and materials to be used with exceptional students.
EEL 3140 Analog Filter Design: PR: EEL 3307C, EEL 3122. Analog filter design, both passive and active, from low pass prototypes using frequency transformations and based on low sensitivity.
EEL 3306 Semiconductor Devices I: PR: EGN 3373. Electronic devices including p-n junctions, bipolar transistors, field effect transistors and device models.
EEL 3307C
Electronic Engineering: PR: EEL 3306, EGN 3375C and MAP 3302. Electronic devices and circuits design including small signal amplifiers, and switching circuits.

EEL 3341C

EEL 3342C
Introduction to Digital Circuits and Systems: PR: PHY 3049 or C.I. Switching theory and devices. Combinational and sequential logic. Logic design using standard components such as ROM, arithmetic units, multiplexers, registers and counters.

EEL 3470
Electromagnetic Fields: PR: EGN 3375C and MAP 3302. Introduction to electric and magnet fields and electromagnetic waves.

EEL 3552C

EEL 4090C

EEL 4343C

EEL 4436C
Microwaves: PR: EEL 3470. Microwave devices and systems and measurement techniques.

EEL 4440
Optical Engineering: PR: PHY 3049 or C.I. Lens systems, aberrations, sources, radiometry, detectors, physical optics, interferometric devices. Applications to engineering design problems.

EEL 4512C
Communication Systems: PR: STA 3032, EEL 3552C and EEL 3307C. Information transmission, modulation, and noise; design and comparison systems in the presence of noise.

EEL 4570C
Data Communications Engineering: PR: EEL 4701C or ECM 4504C. Analysis, design and operation of Data Communications Systems. Applications in remote computing networks and process monitoring.

EEL 4571C
Data Acquisition and Control: PR: EEL 3122, EEL 3307C, EEL 3342C. Fundamentals of signal acquisition and conditioning, filtering, signal conversion, microcomputer input and output interface circuits, channels, transducers, feedback.

EEL 4701C
Digital Systems Organization: PR: EEL 3342C. The study of basic machine organization, operation, and subsystem integration. System investigation and design using a register transfer and control-sequence design language.

EEL 4702C
Digital Systems Design: PR: EEL 4701C or C.I. Continuation of EEL 4701C. Microprocessor and LSI based approaches to the design of digital systems. Current topics in the design of control communications, and display systems.

EEL 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 3306. 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 5434
Microwave Solid-State Devices: PR: EEL 3470. Device and circuit principles of p-n junctions, BJTs, FETs, gunn, IMPATT, TRAPATT and BARITT diodes.
EEL 5441 Coherent Optics Applications: PR: EEL 3470 or C.I. Coherent optical radiation and propagation. Design and analysis of optical components and systems.

EEL 5446 Optical Systems Design: PR: C.I. Design principles of lens and mirror optical systems' evaluation of designs using computer techniques.

EEL 5451L Electro-Optics Laboratory: PR: EEL 3470 or C.I. Study of laboratory techniques for optical measurements and performance of measurements on electro-optic devices to determine operational characteristics.

EEL 5461C Antenna Analysis and Design: PR: EEL 3470 or equivalent. Fundamentals of antennas; dipoles, loops, arrays, apertures, and horns. Analysis and design of various antennas.

EEL 5517 Surface Acoustic Wave Devices and Systems: PR: EEL 3552C. Course discusses SAW technology which includes the physical phenomenon, transducer design and synthesis, filter design and performance parameters. Actual devices and communication systems are presented.


EEL 5555 RF Communications: PR: EEL 3552C. RF communication systems, 10 MHz to 1500 MHz. Scattering parameter noise, receiver design, system implementation, spread spectrum. RF network and spectrum analyzers, PC board layout.


EEL 5630 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 4202C Chemical Process Control: PR: EGN 3704. Engineering design, measurements, and analysis of chemical systems in environmental engineering to control treatment processes such as softening, coagulation, disinfection, scrubbing, neutralization and others.


EES 4404C 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.

EET 3035C Electricity and Electronics: PR: MAC 1104 and MAC 1114. Basic principles of electric circuits and electronic amplifiers. Introduction to integrated circuits.


EET 4158C Linear Integrated Circuits: PR: EET 3716. Study of linear integrated circuits and design of electronic systems.

EET 4292C Electronic and Digital Communications: PR: EET 3716. The study of active RF circuits and modulation/demodulation systems. Introduction to digital and data communications.

EET 4339C Antennas and Propagation: PR: EET 3716 and CGS 3422 or equivalent. Basic theory and technology used in high frequency transmission lines and wave-guides, propagation and radiation, antennas.

EET 4389C Satellite Communication Systems: PR: EET 4329C. Analysis of communications satellites and how they affect systems design; technology, tradeoffs, design strategies.


Feedback Control: PR: EET 3716 and CGS 3422 or equivalent. LaPlace transform analysis of electrical networks and feedback control systems. Analysis and design techniques, control system components, and applications to practical control systems.

EEX 3010 Orientation to Special Education: Definition, characteristics, theories, current trends, and controversies in the various categories of exceptional education.

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 3243 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 4243 Techniques for the Exceptional Adolescent-Adult: A study of strategies, skills and alternative procedures when teaching adolescents and adults.

EEX 4601 Behavioral Management: Study of management techniques based on behavioral management (applied behavioral analysis) principles for modifying the effective behavior of exceptional students.

EEX 5051 Exceptional Children in the Schools: PR: Senior standing or C.I. Characteristics, definitions, educational problems, and appropriate educational programs for the exceptional children in schools.

EGC 5005 Introduction to Guidance and Human Services: PR: Completion of Phase II of Educ. Prof. Prep. or Certificate or C.I. A basic course presenting an overview of the philosophy, organization, administration and operation of guidance and human services.

EGC 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 3311 Engineering Analysis-Statics: PR: PHY 3048; CR: MAC 3312. Fundamental concepts of mechanics including resultants of force systems, free-body diagrams, equilibrium of rigid bodies and analyses of structures.

EGN 3321 Engineering Analysis-Dynamics: PR: EGN 3311; CR: MAC 3313. Kinematics and kinetics of particles and rigid bodies; mass and acceleration, work and energy impulse and momentum.


EGN 3420 Engineering Analysis: PR: MAC 1104; MAC 1114; a previous high order computer language. Computer-based applications of matrices, graphics and numerical methods for engineers.


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 4524 Technology 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 4703 Systems Analysis and Control: PR: EGN 3343, 3353C, 3373; MAP 3302. Analysis and design of process control systems including first and second order systems and classical linear control theory.

EGN 4714 Linear Control Systems: PR: MAP 3302 and EGN 3375C. Theoretical and experimental study of the dynamics of linear, lumped parameter models of mechanical, electrical, fluid, and thermal systems as applied to control systems and design applications.

EGN 4811 Engineering and Technology in Canada: 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 Engineering and Technology in America: Episodes and periods of significant American technological change with emphasis on 19th and early 20th 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.
<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>EGN 4824</td>
<td>Energy and Society: Investigation of available energy forms; energy resources versus requirements in an increasingly complex technological society; possible solutions and future predictions.</td>
<td>EN 3(3,0)</td>
<td></td>
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<tr>
<td>EGN 4825</td>
<td>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.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EGN 4832</td>
<td>Computers, Cybernetics and Society: The effects of computers and the cybernetic revolution of the individual and society. Effects of positive and negative feedback on biological, technological and social systems. Computers and their interactions with the human system.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EGN 4843</td>
<td>Systems Modeling: PR: CGS 1060 or equivalent. Representation of man/machine systems through analytic and computer-based models. Case studies in the analysis and improvement of systems in industry, education and government.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EGN 4844</td>
<td>Man and Machine: The influence and interrelationship of invention and technical progress on the evolution of social forms and institutions.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EGN 5034</td>
<td>Engineering and Public Works: PR: C.I. The purposes, function, and role of engineering within public works.</td>
<td>EN 3(3,0)</td>
<td></td>
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<tr>
<td>EGN 5035</td>
<td>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.</td>
<td>EN 2(2,0)</td>
<td></td>
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<tr>
<td>EGN 5036</td>
<td>Engineering Codes and Standards: PR: C.I. Development, history and function of engineering codes and standards and their use in protecting public health and safety.</td>
<td>EN 2(2,0)</td>
<td></td>
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<tr>
<td>EIN 3106</td>
<td>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.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EIN 3315C</td>
<td>Work Measurement &amp; Design: CR: EGN 3613 or equivalent. Management standards for evaluation and control of man and machine systems. Flow and operations analysis, work measurement, job evaluations. Laboratory assignments.</td>
<td>EN 3(2,2)</td>
<td></td>
</tr>
<tr>
<td>EIN 4116</td>
<td>Industrial Information Systems: PR: CGS 3422, 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.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EIN 4118</td>
<td>Industrial Engineering Applications of Computers: PR: CGS 3422. Survey of computer methods in industrial engineering practice. Topics include simulation, information systems, dedicated processors systems control. Lab exercises.</td>
<td>EN 3(2,3)</td>
<td></td>
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<tr>
<td>EIN 4142C</td>
<td>Industrial Engineering Senior Project Design: PR: Senior standing. Capstone design course, application of IEMS techniques to real world design applications.</td>
<td>EN 3(2,3)</td>
<td></td>
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<tr>
<td>EIN 4214</td>
<td>Safety Engineering and Administration: Analysis of accidents in the industrial operating environment. Application of fault trees, OSHA requirements. Consideration of accident costs and organizational aspects of accident prevention.</td>
<td>EN 3(3,0)</td>
<td></td>
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<tr>
<td>EIN 4243</td>
<td>Human Engineering: PR: Senior standing. Man/machine systems; design and conduct of human engineering studies.</td>
<td>EN 3(2,2)</td>
<td></td>
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<tr>
<td>EIN 4332</td>
<td>Industrial Control Systems: PR: STA 3032, EGN 4634. Decision rules in industrial environment including forecasting, scheduling, ordering, quality and inventory control.</td>
<td>EN 3(2,3)</td>
<td></td>
</tr>
<tr>
<td>EIN 4364C</td>
<td>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.</td>
<td>EN 3(2,2)</td>
<td></td>
</tr>
<tr>
<td>EIN 4391C</td>
<td>Manufacturing Engineering: Introduction to manufacturing engineering with emphasis on current and emerging technologies in metalworking and electronics.</td>
<td>EN 3(2,2)</td>
<td></td>
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<tr>
<td>EIN 4395C</td>
<td>Computer-Aided-Manufacturing: Computer-Aided-Manufacturing (CAM) including computer numerical control (CNC), robotics, parts classification (GT) and manufacturing resource planning (MRP).</td>
<td>EN 3(2,2)</td>
<td></td>
</tr>
<tr>
<td>EIN 5117</td>
<td>Management Information Systems I: PR: C.I. The design and implementation of computer-based Management Information Systems. Consideration is given to the organizational, managerial and economic aspects of MIS.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
</tbody>
</table>
EIN 5248C  Ergonomics: PR: C.I. Applications of anthropometry, functional anatomy, mechanics and physiology of musculoskeletal system concepts in the engineering design of industrial tools, equipments and workstations.

EN 3(2,2)

Training Simulator Engineering: Introduction to significant topics relative to the development and use of simulators for knowledge transfer in the technical environment.

EN 3(3,0)

Engineering Logistics: Study of the logistics life cycle involving planning, analysis and design, testing, production, distribution, and support.

EN 3(3,0)


EN 3(3,0)

Introduction to Specific Learning Disabilities: PR: Senior standing. Development and practice of appropriate cognitive, affective and motor strategies for selected categories, levels and degrees of severity of exceptional population.

ED 4(4,0)

Program Planning for Specific Learning Disabilities: PR: Senior standing. Development of highly specialized techniques and materials to be used with exceptional students.


EN 3(3,0)


EN 3(3,0)

Corrosion and Electrochemical Engineering: PR: EGN 3363C. Electrochemical principles and applications to detecting and monitoring corrosion processes. Various forms of corrosion, their causes and control. Application in electric vehicles and electrochemical machining.

EN 3(3,0)

Mechanical Metallurgy: PR: EML 3234. Study of the microscopic mechanical behavior of metals and alloys with emphasis on fracture, fatigue and creep.

EN 3(3,0)

Thermodynamics of Mechanical Systems: PR: EGN 3343. Applied thermodynamics, availability analysis, thermodynamics of reactive and non-reactive mixtures, thermodynamic relations of properties. Thermodynamic design analysis of complete mechanical systems.

EN 3(3,0)


EN 3(3,0)


EN 3(3,0)

Kinematics of Mechanisms: PR: EGN 3321. Graphical, mathematical, and computer-aided kinematics, analysis, and synthesis of basic mechanisms.

EN 3(2,2)


EN 1(0,3)

Machine Design and Analysis: PR: EGN 3331C. Application of the principles of mechanics of materials to the design of mechanical elements.

EN 3(3,0)


EN 3(3,0)

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Prerequisites</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EML 4272</td>
<td>Dynamics of Machinery: PR: EML 3262, EML 4222. Critical speeds and response of flexible rotor systems, whirl, gyroscopic effects; balancing of rotating and reciprocating masses; cam dynamics.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 4411</td>
<td>Mechanical Power Systems: 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>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 442C</td>
<td>Experimental Design: PR: EML 4142 and EML 4222. Fundamentals of static and dynamic measurements, transducer principles, and validation of experimental data. Design of experimental projects in mechanical and thermal systems.</td>
<td>EN 3(2,3)</td>
<td></td>
</tr>
<tr>
<td>EML 4505</td>
<td>Engineering Design: PR: EML 3106 and EML 3502 or EAS 4200 and EAS 4300. Application of the design process in the solution of a state-of-the-art problem. Aerospace, mechanical, thermal, or fluid problems are considered.</td>
<td>EN 3(2,3)</td>
<td></td>
</tr>
<tr>
<td>EML 4535</td>
<td>Computer Aided Design: PR: EML 3106, 3502, and CGS 3422 or equivalent. Introduction to computational methods in mechanical and thermal systems design.</td>
<td>EN 3(2,3)</td>
<td></td>
</tr>
<tr>
<td>EML 4709</td>
<td>Fluid Mechanics II: PR: EGN 3353C, continuation of EGN 3353C. Application of fundamentals to boundary layers, compressible flow, potential flow theory, submerged bodies, and measurements.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5105</td>
<td>Statistical Thermodynamics: PR: EGN 3343, PHY 3101. Statistical approach to thermodynamic concepts, laws, and methods of analysis. Generalized p-v-T data. Special systems.</td>
<td>EN 3(3,0)</td>
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</tr>
<tr>
<td>EML 5152</td>
<td>Intermediate Heat Transfer: PR: EML 4142. An intermediate level course dealing with heat and mass diffusion, boundary layer problems, and radiation from real bodies. Emphasis on combined modes, numerical methods.</td>
<td>EN 3(3,0)</td>
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</tr>
<tr>
<td>EML 5228</td>
<td>Acoustics: PR: MAP 3302. Elements of vibration theory and wave motion; radiation, reflection, absorption, and transmission of acoustic waves; architectural acoustics; control and abatement of environmental noise pollution; transducers.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5237</td>
<td>Intermediate 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.</td>
<td>ED 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5245</td>
<td>Tribology: Principles of fluid film lubrication; bearing design and application; friction and wear of materials.</td>
<td>EN 3(3,0)</td>
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</tr>
<tr>
<td>EML 5271</td>
<td>Intermediate 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.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5451</td>
<td>Energy Conversion: PR: EML 3106 and PHY 3101. Direct methods of energy conversion; particular emphasis on fuel cells, thermoelectrics, thermionics, solar energy, photovoltaics and magnetohydrodynamics.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5453</td>
<td>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.</td>
<td>EN 3(3,0)</td>
<td></td>
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<tr>
<td>EML 5454</td>
<td>Photovoltaics: PR: MAP 3302, or C.I. Basic operational principles, design, and current developments in solar cells.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5455</td>
<td>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.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5609</td>
<td>Environmental Thermodynamics: PR: EML 3106 and EML 4142. Thermodynamics of the environment emphasizing analysis and design of thermal systems. Building heating and cooling load calculations and energy conservation technologies analyzed.</td>
<td>EN 3(3,0)</td>
<td></td>
</tr>
<tr>
<td>EML 5713</td>
<td>Intermediate Fluid Mechanics: PR: EML 4709. Fluid Kinematics; Conservation Equations; Navier-Stokes equations; Boundary Layer Flow; Inviscid Flow; Circulation and Vorticity; Induced Drag; Low Reynolds Number Flow; Turbulence.</td>
<td>EN 3(3,0)</td>
<td></td>
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</tbody>
</table>
EMR 4011
Introduction to Mental Retardation: PR: Senior standing. Development and practice of appropriate cognitive, affective and motor strategies for selected categories, levels and degrees of severity of exceptional population.

EMR 4372
Curriculum Method and Materials for Retarded Persons: PR: Senior Standing. Development of highly specialized techniques and materials to be used with exceptional students.

ENC 1101
Composition I: Expository writing with emphasis on effective communication. Writing topics to be based on selected readings.

ENC 1102
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 1121
Honors Freshman Composition I: PR: Score of 60 + on TSWE of SAT or C.I.

ENC 1122
Honors Freshman Composition II: PR: Freshman Composition I instructor's recommendation or C.I.

ENC 2290
Careers In Writing: An examination of career opportunities in technical writing, emphasizing industrial, commercial, and governmental opportunities.

ENC 3210

ENC 3241

ENC 3283
Science and the Lay Reader: PR: ENC 3310, ENC 3311 or ENC 3341 or C.I. Analysis of lay scientific magazine articles and practice in scientific writing for the lay audience.

ENC 3310
Magazine Writing I: PR: ENC 1102. Intensive practice in description narration, exposition and argumentation; control of tone, mood, viewpoint, and level of diction. Applicable to article, essay, and short story writing.

ENC 3311
Advanced Expository Writing: PR: ENC 1102. Practice of expository writing directed to general reader.

ENC 3341
Magazine Writing II: PR: ENC 3310 or C.I. Structure and organization of articles, essays, profiles, and reviews, market analysis; data gathering. May be repeated for credit.

ENC 4215

ENC 4218
Graphics Capabilities for the Technical Writer: PR: ENC 4293; to be taken concurrently with ENC 4215. Study and preparation of visuals and graphics in technical writing and documentation: use of computer graphics; slides; transparencies; charts; graphs; drawings.

ENC 4245
Writing from Engineering Documents: PR: C.I. Introduction to reading and interpretation of basic engineering charts: specs, vocabulary, design and the writing techniques necessary for clear translation.

ENC 4254
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 4290

ENC 4293
Technical Documentation I: PR: ENC 3210 or 3341. Practice in translating highly technical information to organized documentation: hardware, software, military specifications. Theory of designing and organizing technical manuals. Preparation of proposals. Interview skills.

ENC 4294
Technical Documentation II: PR: ENC 4293. Practical application of editing theory to large ongoing projects from the student's particular field. Should be taken concurrently with ENC 4215.

ENC 4295
Technical Documentation III: PR: ENC 4294. Designing, writing, and illustrating manuals, e.g., repairs, maintenance or users. Project supervised by a member of a student's major department or technical editor of a corporation.
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<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>ENG 3010</td>
<td>Practical Criticism: PR: ENC 1102. Student evaluation of selected fiction,</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>poetry and drama through practical exercises in literary criticism.</td>
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<tr>
<td>ENG 3820</td>
<td>Careers in English:</td>
<td>AS 1(1,0)</td>
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<tr>
<td>ENG 5018</td>
<td>Literary Criticism: PR: Graduate standing or C.I. Historical survey of</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>major critics from classical antiquity to the modern era.</td>
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<tr>
<td>ENG 5028</td>
<td>Rhetoric and Literature: PR: Graduate standing or C.I. Investigates the</td>
<td>AS 3(3,0)</td>
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<tr>
<td></td>
<td>development of written strategies of persuasion. Traces their relation to</td>
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<td></td>
<td>practical and imaginative literature. Applications to classroom teaching of</td>
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<td></td>
<td>literature and composition.</td>
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<tr>
<td>ENL 2010</td>
<td>English Literature I: PR: ENC 1102. Beowulf to 1660.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 3021</td>
<td>English Literature II: PR: ENC 1102. From 1660 to 1870.</td>
<td>AS 3(3,0)</td>
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<tr>
<td>ENL 3273</td>
<td>Survey of British Literature Since 1914. PR: ENC 1102</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ENL 3334</td>
<td>Shakespeare Texts and Film: PR: ENC 1102. An introduction to the art of</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>William Shakespeare through comparative analysis of selected plays and their</td>
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<td></td>
<td>representation in film.</td>
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<tr>
<td>ENL 4101</td>
<td>English Novel: PR: Enc 1102. Analysis of major English novelists.</td>
<td>AS 3(3,0)</td>
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<tr>
<td>ENL 4311</td>
<td>Chaucer: PR: ENC 1102. The Canterbury Tales, Troilus and Criseyde, and other</td>
<td>AS 3(3,0)</td>
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<tr>
<td></td>
<td>works.</td>
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<tr>
<td>ENL 4330</td>
<td>Shakespeare Studies: PR: ENC 1102. Reading, analysis, and discussion of</td>
<td>AS 3(3,0)</td>
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<tr>
<td></td>
<td>Shakespeare's plays. May be repeated for credit.</td>
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<tr>
<td>ENL 4341</td>
<td>Milton: PR: ENC 1102. Paradise Lost, Paradise Regained, Samson Agonistes,</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>shorter poems and selected prose.</td>
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<tr>
<td>ENL 4353</td>
<td>18th Century Studies: PR: ENC 1102. Reading, analysis and discussion of</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>literature in English: 1660-1880. May be repeated for credit.</td>
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<tr>
<td>ENL 4375</td>
<td>Modern British Literature: PR: ENC 1102. Major writers of modern British</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>literature.</td>
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<tr>
<td>ENL 5176</td>
<td>Restoration and 18th Century English Drama. PR: Senior standing or C.I.</td>
<td>AS 3(3,0)</td>
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<tr>
<td>ENL 5226</td>
<td>English Renaissance Poetry and Prose: PR: Senior standing or C.I. The course</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>will examine selected poetry and prose of Wyatt, Surrey, Sidney, Spenser,</td>
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<td>Marlowe, Raleigh, Daniel, Shakespeare, Chapman, Lyly, and others.</td>
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<tr>
<td>ENL 5236</td>
<td>The Age of Dryden and Pope: PR: Senior standing or C.I. Prose, poetry,</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>drama and literary traditions of British neoclassicism.</td>
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<tr>
<td>ENL 5335</td>
<td>Studies in Shakespeare: PR: Senior standing or C.I. A selection of</td>
<td>AS 3(3,0)</td>
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<tr>
<td></td>
<td>representative plays with emphasis on Shakespeare's development as an artist:</td>
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<td>aesthetics of dramatic literature.</td>
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<tr>
<td>ENL 5347</td>
<td>The Age of Milton: PR: Senior standing or C.I. Emphasis on the non-dramatic</td>
<td>AS 3(3,0)</td>
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<td></td>
<td>works of John Milton. Selections from the non-dramatic works of other 17th</td>
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<td>Century figures.</td>
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<tr>
<td>ENU 4103</td>
<td>Nuclear Engineering: PR: PHY 3101. Introduction to the principles of nuclear</td>
<td>EN 3(3,0)</td>
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<tr>
<td></td>
<td>engineering, nuclear chain reactions, reactor systems and control, health</td>
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<td>physics, radiation shielding and applications of nuclear energy.</td>
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<tr>
<td>ENU 5005</td>
<td>Nuclear Reactor Engineering: PR: EML 4142 and PHY 3101. Application of</td>
<td>EN 3(3,0)</td>
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<tr>
<td></td>
<td>thermodynamics, fluid mechanics, heat transfer, and materials to nuclear</td>
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<td>reactor design. Emphasis placed on reactors for electric power production.</td>
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<tr>
<td>ENV 4119</td>
<td>Air Pollution: PR: EGN 3704, EGN 3353C. Sources, causes, and effects of</td>
<td>EN 3(2,3)</td>
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<tr>
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<td>air pollution. Engineering design, analysis and modeling for the control of</td>
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<td>air pollution.</td>
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<tr>
<td>ENV 4355</td>
<td>Solid and Hazardous Wastes: PR: EGN 3704 or C.I. Engineering design,</td>
<td>EN 3(3,0)</td>
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<td>planning, and analysis problems associated with storage, collection,</td>
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<td>processing, and disposal of solid and hazardous wastes.</td>
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<tr>
<td>ENV 4403C</td>
<td>Hydrology: PR: STA 3032; EGN 3353C. Hydrological cycle, probabilistic</td>
<td>EN 3(2,2)</td>
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<td>forecasting, rainfall excess, meteorology, groundwater, storm-water runoff,</td>
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<td>flood routing and design applications.</td>
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</tbody>
</table>
Topics include: failure data analysis, maintainability, reliability standards.


Discrete Systems Simulation: PR: STA 3032, CGS 3422. Methods for performing discrete systems simulation, including network modeling will be treated.
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.
EST 4535C EN 3(2,2)
Electro-Mechanical Design: PR: EET 3035C. Introduction to mechanical and electromechanical devices and their applications in industry.
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.
ETG 3510 EN 3(3,0)
Strength of Materials: PR: ETG 3510. 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 EN 3(3,0)
Materials and Processes: PR: MAC 1104 and 1114 or PHY 2053C or equivalent. Coplanar, parallel, noncurrent and non-concurrent force systems. Centroids, CG's, moments of inertia. Principles of dynamics, rectilinear motion and rotation, work, energy, power, impulse, momentum and impact.
ETG 4530 EN 3(3,0)
Strength of Materials: PR: ETG 3510. 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 3440 EN 3(2,2)
Product Design: Principles of layout and dimensions for production. Consideration of design factors, standards, specifications and codes with emphasis on productivity.
ETI 3651 EN 3(2,2)
Computer Methods in Industry: PR: COP 1200 or equivalent. Industrial application of a high level (BASIC) language to various static, dynamic, electrical and economic problems.
ETI 3671 EN 2(2,0)
ETI 3690 EN 2(2,0)
Technical Sales: Application of technical knowledge in sales and service. Relationship of technical sales organization to production, customers, and competitors.
ETI 4110 EN 3(3,0)
ETI 4522C EN 3(2,2)
Applied Servomechanisms and Robotics: PR: CET 4131C. Analysis and design of servo devices and systems. Real-time industrial robotics applications.
ETI 4611 EN 3(2,2)
ETI 4650 EN 4(4,0)
ETI 4700 EN 3(3,0)
Occupational Safety: Accident prevention and the operation of an industrial safety program. Basic requirements of the Occupational Safety and Health Act standards.
ETM 3314 EN 3(3,0)
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 EN 2(2,0)
ETM 4310 EN 4(4,0)
Applied Thermodynamics and Fluid Mechanisms: PR: MAC 3253 or equivalent; Chemistry; College Physics. Introduction to energy, work and thermal systems and processes. Flow through pipes, orifices and nozzles.
ETM 4403C EN 3(2,2)
ETM 4512C EN 3(2,2)
ETM 4590: Project design involving planning, control, prototype construction, testing and evaluation.

EN 2(2.0)

Design Integration: PR: ETI 3440. Project design involving planning, control, prototype construction, testing and evaluation.

EN 3(3.0)

ETM 4750: Analysis of body comfort, psychometrics, heat sources, cooling load, air distribution, duct sizing, control systems, and balancing.

EN 3(3.0)

Western Civilization I: A survey of western civilization from ancient to 1648.

AS 3(3.0)

EUH 2000

Western Civilization II: A survey of western civilization from 1648 to present. May be taken before EUH 2000.

AS 3(3.0)

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.

AS 3(3.0)

EUH 3122

Medieval Society and Civilization: PR: EUH 2000 and 2001 or C.I.

AS 3(3.0)

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.

AS 3(3.0)

EUH 3235

Romanticism and Realism: PR: EUH 2000 and 2001 or C.I. Napoleon and nationalism; new ideas; conservation; liberalism, romanticism, republicanism and socialism; urbanization, technology and mass culture, religious decline; Realpolitik, racism, imperialism and militarism.

AS 3(3.0)

EUH 3242


AS 3(3.0)

EUH 3261

Second World War and Rebirth of Europe: PR: EUH 2000 and 2001 or C.I. Origins of World War II; Hitler's "New Order," and resistance movements; Cold War; de-Stalinization of Russia; Sovietization of East Central Europe; Western reconstruction, and prosperity.

AS 3(3.0)

EUH 3401


AS 3(3.0)

EUH 3411


AS 3(3.0)

EUH 3651

War and Society: Evolution of weapons, tactics, strategy; role, social status, recruitment of soldiers; influence of military on governments; and international efforts to preserve peace.

AS 3(3.0)

EUH 4284

Fascism and the Totalitarian Dictatorships: PR: EUH 2000 and 2001 or C.I. Totalitarian ideologies, institutions, and practices in Lenin's and Stalin's Russia, Mussolini's Italy, and Hitler's Third Reich; fascist movements in the non-totalitarian states.

AS 3(3.0)

EUH 4456

France, 1914-Present: PR: EUH 2000 and 2001 or C.I. World War and aftermath; Locarno spirit; rise of Fascism and French response, World War II; Fourth Republic and Reconstruction; deGaulle and the Fifth Republic.

AS 3(3.0)

EUH 4461

Rise of Modern Germany: PR: EUH 2000 and 2001 or C.I. Central Europe from the Reformation to 1890; Thirty Years' War; Austro-Prussian rivalry; German Enlightenment, Bismarck, and Second Reich.

AS 3(3.0)

EUH 4465

Hitler's Third Reich: PR: EUH 2000 and 2001 or C.I. German nationalism and militarism; World War I and the Versailles Treaty; the Weimar Republic and the rise of the Nazis; Second World War, division and recovery.

AS 3(3.0)

EUH 4500

English History to 1485: PR: EUH 2000 and 2001 or C.I.

AS 3(3.0)

EUH 4501

English History: 1485-1815: PR: EUH 2000 and 2001 or C.I.

AS 3(3.0)

EUH 4502

British History: 1815-Present: PR: EUH 2000 and 2001 or C.I.

AS 3(3.0)

EUH 4530


AS 3(3.0)

EUH 4571

History of Russia to 1901: PR: EUH 2000 and 2001 or C.I. Kievian State; Mongol Yoke; Development of Muscovite Expansionism and Absolutism; Time of Troubles; Westernization of Russia under Peter I and Catherine; Role of Orthodox Church.

AS 3(3.0)
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EUH 5517</td>
<td>Colloquium in Tudor-Stuart England: PR: Senior standing or C.I. Intensive reading and class discussion on selected topics during the Tudor-Stuart era.</td>
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<tr>
<td>EUH 5527</td>
<td>Colloquium in 16th Century England: PR: Senior standing or C.I. An examination of the literature of selected topics in Hanoverian Britain.</td>
</tr>
<tr>
<td>EUH 5595</td>
<td>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.</td>
</tr>
<tr>
<td>EUH 6508</td>
<td>Colloquium European Intellectual History: PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics of European intellectual history.</td>
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<tr>
<td>EVS 4110</td>
<td>Remote Sensing of the Environment: PR: GEO 1200 or C.I. Interpretation and application of remote sensor imagery to physical, economic and urban analysis.</td>
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<tr>
<td>EVS 4362</td>
<td>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.</td>
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<tr>
<td>EVT 3062</td>
<td>Professional Role of the Vocational Teacher: PR: EVT 3371 or C.I.</td>
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<tr>
<td>EVT 3311</td>
<td>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.</td>
</tr>
<tr>
<td>EVT 3365</td>
<td>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.</td>
</tr>
<tr>
<td>EVT 3367</td>
<td>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.</td>
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<tr>
<td>EVT 3371</td>
<td>Essential Teaching Skills in Vocational Education: Study, practice, and achievement in selected essential teaching skills for beginning vocational instructors.</td>
</tr>
<tr>
<td>EVT 3562</td>
<td>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.</td>
</tr>
</tbody>
</table>
EVT 3815  ED 3(3,0)
Management of the Vocational Classroom and Laboratory: PR: EVT 3371 or C.I. Organization and management of school facilities for instructional purposes and skill in providing for student health and safety.

EVT 4066  ED 2-4(2-4,0)

EVT 4368  ED 2-4(2-4,0)
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.

EVT 5260  ED 2-4(2-4,0)
Cooperative Programs in Vocational Education: PR: Regular Certificate or C.I. Study of cooperative vocational programs, and achievement of competencies needed to establish, manage and coordinate co-op program activities in all vocational areas.

EVT 5315  ED 2-3(2-3,0)
Applied Clinical Teaching Techniques in Vocational Education: PR: Regular Certificate or C.I. Study and practice of clinical teaching methods, development of student performance assessment instruments, planning clinical learning experiences and record keeping.

EVT 5316  ED 2-3(2-3,0)
Clinical Coordination for the Health Occupations Teacher: PR: Regular Certificate or C.I. Development of clinical guidelines, resources, student schedules, and risk-management programs. Includes negotiating clinical contractual agreements and planning field supervision.

EVT 5381  ED 2-3(2-3,0)
Student Guidance in the Vocational Program: PR: Regular Certificate or C.I. Achievement of skills used by teachers as they gather student data, confer with students, and help students plan for employment or further education.

EVT 5584  ED 2-3(2-3,0)
Student Vocational Organizations: PR: Regular Certificate or C.I. Competencies needed by vocational teachers as they establish and supervise student vocational organizations in secondary and post-secondary schools.

EVT 5685  ED 2-4(2-4,0)
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.

EVT 5817  ED 2-4(2-4,0)
Management of Vocational Programs: PR: Rank III Certificate or C.I. Study and achievement of selected competencies needed by vocational teachers, supervisors, and local administrators in the management of vocational education programs in the schools.

EXP 3204C  AS 4(2,2)

EXP 3304  AS 3(3,0)

EXP 3404  AS 4(2,2)
Basic Learning Processes: PR: PSY 2013 and PSY 3214. Theories and research findings from basic laboratory investigation of learning phenomena. Lecture/Lab.

EXP 3513C  AS 4(2,2)

EXP 5445  AS 3(3,0)
Psychology of Learning and Motivation: PR: DEP 5057 or C.I. Examination of theories and research concerning the acquisition and retention of behavior as well as motivational factors which influence learning and behavior.

FIL 3100  AS 4(4,0)
Film and Television Writing: PR: Must pass Department of Communication English Proficiency Test and must have typing skills. Students will concentrate on writing screenplays for film and television as well as learn how to market their ideas to potential producers.

FIL 3200  AS 4(2,2)
Film Production: Pre-production planning, shooting, and editing of film.

FIL 3300  AS 4(2,2)
Film Documentary: The uses and analysis of the non-fiction film.

FIL 4201  AS 4(2,2)
Film Production II: Advanced pre- and post-production techniques including sound mixing and dubbing.

FIL 4208  AS 4(2,2)
Film Directing: PR: FIL 4201. Principles and practice in directing the production of motion pictures for the mass media.
FIN 3100: Personal Finance and Investments: PR: Junior standing. Fundamentals of managing and investing one's money and acquiring, safeguarding and disposing of one's assets. Not usable for credit by Finance majors.


FIN 3303: 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.

FIN 3324: Commercial Bank Administration: PR: FIN 3403. Administrative areas of a commercial bank including organization, management of bank assets and liabilities, lending policies, trust and fiduciary activities, international and regulatory aspects.

FIN 3403: 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.


FIN 3502: 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.

FIN 4126: Seminar in Financial Services: PR: FIN 3502, TAX 3000, RMI 3011, and FIN 4127. This course is designed to study current issues in financial planning in case analysis and discussion.

FIN 4127: Employee Benefits and Retirement Planning: PR: FIN 3403 and RMI 3011. This course considers the process of establishing specific financial objectives at various stages of life and how those objectives can be reached.

FIN 4430: Asset Selection Management: PR: FIN 3403. Decisions related to use of funds for working capital and fixed assets.

FIN 4431: Financial Structure Management: PR: FIN 3403. Funding decisions and the effects of these decisions on the value of the firm.

FIN 4520: 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.


FIN 5405: Financial Concepts: PR: Acceptance into the graduate program, ACG 5005 and ECO 5005 and ECO 5415 or equivalents. Effects of financial decisions upon the firm, interrelationships of these effects and alternatives available to financial managers in making these financial decisions.


FLE 3333: Foreign Language Instructional Analysis: EDG 4321. Objectives for a school curriculum and of methods and materials for teaching foreign language.

FRE 1005: French Diction: This course is especially designed for music and voice students with an emphasis on musical terms, French songs and opera libretti.

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

FRE 1121: Elementary French Language and Civilization II: PR: FRE 1120 or equivalent. Continuation of FRE 1120.

FRE 1170: Elementary French Study 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 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.

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.

Advanced French Conversation: PR: FRE 3244. Advanced conversation on directed topics from various disciplines. Literature, art, psychology, philosophy, music, business and the sciences.

Advanced French Composition: PR: FRE 3420. Readings and written limitations of modern literary styles in the form of themes, sketches, poems and original stories.

French Civilization and Culture: PR: FRE 3244 or FRE 3420. A survey analyzing development of key elements of French life: its historical, artistic, intellectual, scientific, spiritual contributions to the world via readings, lectures, films and other media. Conducted in French.

French Phonetics and Diction: PR: FRE 3244 or equivalent. French phonology with emphasis on phonetic groupings.

Survey of French Literature I: PR: FRE 2201 or equivalent. Main literary currents and works from the Middle Ages through the eighteenth century.

Survey of French Literature II: PR: FRE 2201 or equivalent. Main literary currents and works of the 19th and 20th centuries.

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.


Seventeenth Century French Theatre: PR: FRW 3100. Corneille, Racine, and Moliere. A study of the lives and principal works of the authors.


Stylistics: PR: FRE 3420 or equivalent. An intense study of textual criticism. An examination of the relationship between language and literature; explications and linguistic analysis of literary texts.

Food Production Techniques: PR: HFT 1000. Basic principles of menu planning, food and beverage preparation and service. Laboratory work.

Quantity Food Purchasing: PR: HFT 1000; FSS 2202C. The purchasing procedures, specifications and controls of food products in the hospitality industry.
volcanism.

Geology

GLY

energy,

GEW

Geology

GLY

Short

Survey of German Literature

19th Century

GER

German Composition: PR: GER 2201 or equivalent. Development of language skills: listening, speaking, reading, and writing.

GER 1120

Continuation of GER 1120.

GER 2200

Intermediate German Language and Civilization I: PR: GER 1121 or equivalent. Designed to continue development of language skills at the intermediate level, together with a review of grammar.

GER 2201

Intermediate German Language and Civilization II: PR: GER 2200 or equivalent. Continuation of GER 2200 with emphasis on German civilization.

GER 2210

Intensive German Conversation: PR: One year of German or equivalent. Practical use of the language leading toward fluency and correctness in speaking.

GER 3240

German Conversation: PR: GER 2201 or equivalent. Development of skills in conversation and comprehension through practice.

GER 3420

German Composition: PR: GER 2201 or equivalent. Development of skills in composition.

GEW 3100

Survey of German Literature I: PR: GER 2201 or equivalent. Main literary currents and works from the Middle Ages through the 19th Century Romanticism.

GEW 3101

Survey of German Literature II: PR: GER 2201 or equivalent. Main literary currents and works from 19th Century Realism to the present.

GEW 3370

Short Story: PR: GER 2201 or equivalent. German short prose works of the 19th and 20th centuries.

GLY 1000

Geology and its Applications: Geologic applications and hazards including: gemstones, geothermal energy, fossil fuels, groundwater, sinkholes, beach erosion, landslides, earthquakes, “tidal” waves, volcanism.

GLY 4006

Geology of Our National Parks and Monuments: Unique geologic features preserved in our national park system and the processes that gave rise to these features.
HBR 1120  
Elementary Modern Hebrew Language and Culture I: Designed to initiate the student to the major language skills: listening, speaking, reading and writing, as well as to constitute an introduction to Israeli culture.

HBR 1121  
Elementary Modern Hebrew Language and Culture II: PR: HBR 1120 or equivalent. Continuation of HBR 1120.

HBR 2200  
Intermediate Modern Hebrew I: PR: HBR 1121 or equivalent. Designed to continue the study of Modern Hebrew: increase proficiency in conversation, reading and writing skills, and further expose students to Israeli culture.

HBR 2201  

HFT 1000  
Introduction to the Hospitality and Tourism Industry: An orientation to the hotel, restaurant and travel industry, its history, structure and operating procedures.

HFT 2252  
Rooms Division Management: PR: HFT 1000. Practices and systems utilized in the operational management of the front office, reservation and housekeeping in hotels/motels.

HFT 3313  
Hospitality Property Management: PR: HFT 1000. Analysis of operational problems related to the physical plant and structure of enterprises in the hospitality industry.

HFT 3444  

HFT 3603  

HFT 4420  
Managerial Accounting for the Hospitality Industry: PR: ACG 2001, ACG 2011 (or ACG 3023), HFT 3444. The financial management and accounting practices of the hospitality industry and their implications on managerial decision making.

HFT 4503  
Hospitality and Tourism Marketing: PR: MAR 3023, HFT 1000. The application of marketing concepts to the Hospitality and Tourism Industry. Special emphasis on marketing planning and strategic marketing.

HFT 4700  
Travel and Tourism Administration: PR: HFT 1000. Foreign and domestic tourism supply and demand, economic impacts, organization of tourism, social and cultural aspects.

HFT 4717  
Tourism Planning and Development: PR: HFT 1000, HFT 4700. Analysis and review of physical, economic, social and environmental planning techniques used in tourism destination development.

HFT 4722  
Travel Agency Management: PR: HFT 1000, HFT 4700. The trends operation management procedures and practices of travel agents. Emphasis on tools utilized in agency operations.

HFT 4753  
Conference and Convention Planning: PR: HFT 1000, HFT 2252. Operational and marketing concepts in planning, developing and implementing conferences and conventions in hotels and convention centers.

HFT 4860  
Beverage Management: PR: HFT 1000, FSS 2202C, FSS 3223. The origin production, storing, marketing, and control of beverages in the hospitality industry.

HIS 3462  

HIS 4150  
History and Historians: PR: C.I. A study of European and/or American historiography. May be repeated once for credit.

HIS 4970  
Senior Thesis: Original research paper available to advanced history majors, topics to be selected in consultation with a directing professor.

HLP 4480  
Teaching Elementary School Health and Physical Education: PR: Admission to Phase II or C.I. Organization, practice, and conduct of health (including drug abuse) and physical education programs in the elementary school. Includes field experience.

HMW 3200  
Readings in Modern Hebrew Literature: PR: 2 years of Hebrew or equivalent.

HSA 3122  
U.S. Health Care Systems: PR: Major or minor in College of Health or C.I. A survey of the economic, social, and political aspects of the health care system in the United States.
HSA 3170 Health Care Finance: PR: MRE 3000. Budgeting; resources for funding current and long term assets; cost and cost behavior; prospective payment; DRGs as reimbursement base.

HSA 4120 Community and Public Health Services: History and philosophy of public health, interphase of governmental, voluntary, and private health agencies; current community health problems, issues, and needs; social and economic factors.

HSA 4121 History and Future of Health Care: Health care institutions; purposes of health agencies, organizations and allied health professionals; new trends in health care delivery. Designed for non-majors.

HSA 4180 Organization and Management for Health Agencies: PR: STA 2104 and Major or Minor in College of Health or C.I. Organization and management of health agency organizations and management procedures.

HSA 5198 Information Systems and Computer Applications in Medicine: PR: Graduate standing or C.I. Overview of health information systems with an emphasis on computer applications. Discussion of software and hardware requirements.

HSC 3000 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.

HSC 3110 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.

HSC 3531 Medical Terminology: A study of the language of medicine and allied health specialties, including work construction, definitions and application of terms.

HSC 3640 Health Law: Principles of law as applied to the health field with special reference to health practices.

HSC 4243 Analysis of Instruction in Health Professions: Development of teaching aids, audiovisuals, learning packets. Course development, questioning strategies, evaluation of didactic and clinical performance.

HSC 4550 Curriculum Planning in the Health Professions: Curriculum design and approval process for Health Science program. Curriculum design for professional, patient and consumer education.


HSC 4564 Health Care Needs of the Elderly: Overview of the physical and emotional needs of the elderly including the institutional health care available.

HUM 2211 Western Humanities I: Examples of the philosophy, religion, literature, music, and visual arts, from Ancient Greece through the Middle Ages; ideas that shaped our world.

HUM 2230 Western Humanities II: Continuation of HUM 2211, from the Renaissance through the Modern World.

HUM 3431 The Ancient World: Greece: History and culture of Greece from the Minoan-Mycenaean to the Hellenistic age, with emphasis on contribution in art, literature and philosophy.

HUM 3431 Ancient World: Rome: History and culture of Rome from the Etruscan Period to the dissolution of the empire, with emphasis on contributions in architecture, law and literature.

HUM 4301 The Classical Ideal in the Arts: PR: HUM 2211 and HUM 2230 or C.I. The search for order and form in the arts of various times and cultures. Concerns reason, structure, objectivity, harmony. Open to all upperclassmen.

HUM 4302 The Romantic Ideal in the Arts: PR: HUM 2211 and HUM 2230 or C.I. The Romantic quest for identity with nature and the sublime in the arts of various times. Concerns feeling, imagination, subjectivity, creativity. Open to all upperclassmen.

HUM 4303 The Spiritual Ideal in the Arts: PR: HUM 2211 and HUM 2230 or C.I. The search for the meaning and experience of the sublime reflected in the arts. Spiritual impulses contrasted to the pathos and ethos. Open to all upperclassmen.

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.
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 is emphasized.


Organization Psychology: PR: INP 3004. Analysis of the psychological principles underlying individual and group behavior in organizational setting. Topics include group dynamics, leadership and participation, intergroup behavior and organization development.

International Relations-Theory and Practice: Analysis of the fundamental principles and factors affecting interstate relations and their application to contemporary global developments.

International Political Economy: The international politics of regional and global economic interdependence with emphasis upon North-South relations, the New International Economic Order, OPEC and multinational corporations.

American Foreign Policy: Development of American foreign policy with emphasis on the role and policies of the United States in the contemporary world.

American Defense Policy: Study of the evolution of American defense policy since World War II including consideration of the social and political costs involved and means of control.

Strategic Weapons and Arms Control: Control of strategic weapons and their impact. Technological and policy aspects including nuclear proliferation.

Contemporary International Politics of Asia: Examinations of the foreign policies of major and secondary powers in Asia, with particular attention to China and Japan.

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 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 liberation 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 1120 or equivalent. Continuation of ITA 1120.

Elementary Italian Study Abroad: Elementary Italian language and civilization taught in the native environment.

Intermediate Italian Language and Civilization I: PR: ITA 1121 or equivalent. Designed to continue development of language skills at intermediate level, plus a review of grammar, study of syntax, idiomatic expressions, extensive readings and further study of Italian culture.

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.
The Hebrew Creative Mind: Survey of Hebrew Literature

The Hebrew Creative Mind: Survey of Hebrew Literature In Translation. A survey of the creative expressions of Hebrew civilization as found in the Hebrew Bible, Apocrypha and Pseudepigrapha, the Mishnah, and the Talmud, Medieval Hebrew Poetry and Prose.

The Jewish People I: Introduction survey of the history and culture of the Jewish people from the beginnings of Judaism in the biblical era, through the Graeco-Roman and rabbinic periods.

The Jewish People II: The life and history of the Jews in the medieval and modern worlds.

Introduction of Modernism into Judaism: The transition from traditional Judaism to modern Judaism in the 18th century as epitomized by Moses Mendelssohn and writers of the Jewish Enlightenment (in translation).

Literature of the Holocaust: A study of the traumatic experience of the Holocaust in Europe as expressed and depicted in contemporary Jewish and Hebrew Literature.

The Jewish National Movement and Roots of Zionism: Roots of Zionism and Jewish nationalism and their relationship to modern anti-Semitism, through analysis of European Jewish history and society.

Modern Hebrew Culture: The Development of the State of Israel: Political and ideological struggle for the establishment of the State of Israel, with emphasis on forces which shaped contemporary Israeli society and politics.

English Instructional Analysis: PR: EDG 4321. Course objectives for a school curriculum and methods and materials which have special application for teaching English.

Literature for Children: PR: Phase I or C.I. General survey of books and materials; criteria for analysis and evaluation; types of books available considered in terms of interests, needs, and abilities of children.
The administration of estates through the processes of the Probate Court. Tenant relationship, both commercial and residential as it applies to the practitioner.

Evidence for trial courts. Primary emphasis is on the Florida Evidence Code.

Land use, including planning, zoning, subdivision and building regulations, with emphasis on recent interpretations by judiciary for environmental protection.

Criminal Procedure: PR: LEA 4207

Estate transactions and conveyances; closing procedures and title problems.

The Law of Torts: PR: LEA 4201, 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.

Landlord and Tenant Law: PR: LEA 3201, 3202. Study of the basic law regarding landlord and tenant relationship, both commercial and residential as it applies to the practitioner.

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 4212  AS 3(3,0)
Estate Administration: PR: LEA 4211. Study of the laws and procedures applicable to administration of estates.

LEA 4301  AS 3(3,0)
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  AS 3(3,0)
Florida Partnerships and Corporations: Statutory requirements of Florida partnerships and corporations; creation and dissolution of business organizations, responsibilities of officers and basic rights of stockholders.

LEA 4402  AS 3(3,0)
Law Office Practices: PR: LEA 3001. Organization, operation and management of law office. Interviewing techniques and practical application of work that is done in a law office.

LEA 4501  AS 3(3,0)
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.

LEA 4505  AS 3(3,0)
Juvenile Law and Procedure: PR: LEA 3001 or C.I. Examines both the substantive and procedural law for juvenile delinquency and dependency. Emphasis on Florida law and comparison with other jurisdictions.

LEA 5825  AS 3(1,2)

LEA 5937  AS 3(1,2)

LEI 3140  ED 3(3,0)
Philosophy and Trends in Recreation: Provides a philosophical background to the public and private recreation movement in the U.S. Includes also an analysis of the current trends in recreation.

LEI 3310  ED 3(3,0)
Recreation Leadership: A study of the various styles of leadership as they relate to directing people and programs in public and private recreation.

LEI 3434  ED 2(1,1)
Recreation and Intramurals: Principles and techniques of general and school recreation programs.

LEI 3437  ED 3(3,0)
Administration and Supervision of Recreational Programs: Includes methods, principles and policies of administering recreational programs under varying conditions and to varying populations. Strategies for supervising personnel are included.

LEI 3601  ED 3(3,0)
Recreational Planning for Facilities and Equipment: Planning for facilities and equipment will be analyzed including site selection, construction, purchasing and maintenance. Multi-cultural considerations will be examined and the needs of special populations will be taken into account.

LEI 3700  ED 3(3,0)
Recreational Programming for Special Populations: Includes a study of recreational programming for special populations including the extreme age groups and the handicapped. Multi-cultural implications will also be considered.

LIN 1340  AS 3(3,0)
Grammar Review: A systematic review of basic English grammar to improve clarity and accuracy in writing.

LIN 2701  HLTH 3(3,0)
Psychology of Oral Communication: Psychological principles involved in the communicative process with application to individuals and groups.

LIN 3010  AS 3(3,0)

LIN 3200  AS 4(3,1)

LIN 3710  HLTH 3(3,0)
Foundations of Language: This course is designed to explore contributions to language from disciplines of Biology, Neurology, Psychology and Sociology.

LIN 3770L  HLTH 1(0,2)
Foundations of Language: Students will have practical experience in analyzing children's language samples.

LIN 4100  AS 3(3,0)

LIN 4202  AS 3(3,0)
Phonetics: PR: ENC 1102. Study of the sounds of language from an articulatory perspective.
LIN 4341
Modern English Grammar: PR: ENC 1102 and Sophomore standing. Emphasis upon the analysis and comparison of traditional, structural and transformational grammar.
LIN 4612
LIN 4660
Linguistics and Literature: PR: LIN 3010. Investigation of language study as an aid to understanding literature. Topics include analysis of figurative language, language as characterization, cohesion, sentence and discourse structure.
LIN 4712
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.
LIN 4801
Language and Meaning: PR: ENC 1102 and Sophomore standing. A linguistic study of the nature of language, meaning, and the ways in which man uses language in various social, cultural, institutional, and professional settings.
LIN 5137
Linguistics: PR: Senior or graduate standing or C.I. Modern linguistic theories and studies focusing on language acquisition and development, contemporary American English, semantics and para-linguistics.
LIN 5705
LIS 3016
Introduction to Media Services: Role and scope of media center. Major concepts, standards, trends, and media specialist functions emphasized.
LIS 3412
Media for Children and Young Adults: Survey of media center materials for children and young adults; analysis and evaluation of print and non-print materials K-12.
LIS 4310
Production of Materials for Media Center: PR: LIS 4428. Skill in producing teacher and student-made materials. Emphasizes graphic, photographic and audio techniques for schools. Lab TBA.
LIS 4422
Administration and Operation of the Media Center: Administrative principles applied to developing resources and services; including planning, decision making, personnel and financial management, evaluation, acquisition, processing, maintenance, and inventory.
LIS 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/L/V 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 5252
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 3188
Canadian and Commonwealth Literature: Fiction, poetry, and drama written in English in Canada and other Commonwealth nations including Australia and Carribean and African nations with an English-speaking tradition.

LIT 3313
Science Fiction: PR: ENC 1102. An investigation of science fiction as a literary form, together with selected readings.

LIT 3393

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.

LIT 4373
Literature of the Bible: PR: ENC 1102 or LIT 3000 or C.I. Literary forms in the Bible — narrative, poetic, and dramatic — and their reflection in modern literature.

LIT 4433
Survey of Technical and Scientific Literature: PR: ENC 4293 or C.I. An analysis of the historical development of technical and scientific writing from the Renaissance to the present.

LIT 5039
Studies in Contemporary Poetry: English language poetry from 1945 to the present. Emphasis will be on American poets, but others such as English or Australian will be included.

LIT 5097
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

LIT 5367
The Victorian Age: PR: Senior standing or C.I. Study of poets and essayists from 1837 to 1900, including Tennyson, the Brownings, Arnold, Hopkins, Carlyle, Mill; emphasizing Dickens, George Eliot, the Brontes, and Hardy.

MAA 4226

MAA 4227
Advanced Calculus II: PR: MAA 4226 or C.I. Continuation of MAA 4226.

MAA 5210
Topics in Advanced Calculus: PR: MAC 3313 or C.I. Selected topics in multivariable calculus including limits, continuity, Euler's theorem, the Jacobian, and double series; inclusion of single variable concepts including uniform convergence and improper integrals.

MAA 5405
MAC 1102: AS 3(3,0)
Basic College Algebra: Recommended background: two years of high school algebra. Techniques of algebra; linear and quadratic equations; systems of equations; inequalities; graphs and functions, including exponential and logarithmic; permutations and combinations; applications. Does not satisfy G.E.P.

MAC 1104: AS 3(3,0)
College Algebra: PR: MAC 1102 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: AS 3(3,0)
College Trigonometry: PR: MAC 1102 or 2 years of high school algebra or C.I. The circle arc length, circular functions, identities, inverse functions, applications to simple harmonic motion, function of angles, complete development of triangle solving.

MAC 3233: AS 3(3,0)
Concepts of Calculus: PR: MAC 1104 or C.I. The differential and integral calculus of rational, exponential and logarithmic functions with applications to business analysis. Not open to students with credit in MAC 3253 or MAC 3311.

MAC 3253: AS 3(3,0)
Applied Calculus I: PR: MAC 1104 and MAC 1114 or C.I. Differential and integral calculus. An introduction to differential equations and Laplace Transforms. Applications to engineering technology. Not open to students with credit in MAC 3233 or MAC 3311.

MAC 3254: AS 3(3,0)
Applied Calculus II: PR: MAC 3253 or C.I. Continuation of MAC 3253.

MAC 3311: AS 4(4,0)
Calculus with Analytic Geometry I: PR: MAC 1104 and MAC 1114 (College Algebra and Trigonometry) or equivalent or C.I. The differential and integral calculus of algebraic and elementary transcendental functions with geometric and physical applications. Topics from analytic geometry 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: AS 4(4,0)
Calculus with Analytic Geometry II: PR: MAC 3311 or C.I. Continuation of MAC 3311.

MAC 3313: AS 4(4,0)
Calculus with Analytic Geometry III: PR: MAC 3312 or C.I. Continuation of MAC 3312.

MAD 4203: AS 4(4,0)
Combinatorics and Graph Theory: PR: MAC 3312 and STA 3023. Counting principles, inclusion/exclusion principle, recurrence relations, generating functions, properties of graphs and digraphs, trees, path problems, coloring planarity, connectiveness matchings and coverings, applications.

MAD 5205: AS 3(3,0)
Combinatorics and Graph Theory II: PR: MAD 4203. Pólya’s theory of counting, Latin squares and rectangles, block designs, coding theory, networks, invariants and extremal graph theory, Ramsey theory, probabilistic methods, hypergraphs, applications.

MAE 1810: AS 3(3,1)
Mathematics for Elementary School Teachers I: PR: Two years of high school mathematics and C.I. Algorithms for arithmetic operations. Number systems. Geometry. Open only to majors in elementary education.

MAE 2811: AS 3(3,1)
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: ED 4(3,1)
Instruction of Mathematics in the Elementary School: PR: Associate of Arts degree or C.I. Concepts, learning sequences, algorithms, error pattern analysis, and problem solving techniques appropriate for the elementary school teacher.

MAE 3330: ED 4(3,2)
Mathematics Instructional Analysis: PR: EDG 4321. Study of course objectives for the high school curriculum and survey of methods and materials which have special application for teaching mathematics.

MAE 3817: ED 4(4,1)
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: ED 4(3,1)
How Children Learn Mathematics: PR: MAE 1810 and 2811, or MAE 3112; or C.I.; and admission to Phase II. Instructional strategies learning activities, the use of manipulatives, lesson planning, evaluation of mathematical learning, and diagnostic techniques.

MAE 5318: ED 3(3,0)
Current Methods in Elementary School Mathematics: PR: Regular Certificate or C.I. Strategies of instruction of computation and concepts of number, geometry, and measurement; instructional materials. (Meets Elementary Education certification requirements.)
MAE 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. Emphasize teaching and applying the metric system. (Meets certification requirements for secondary mathematics.)

MAN 3025 BA (3,0)
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 theory, human behavior and control.

MAN 3301 BA (3,0)
Personnel Management: PR: Junior standing, MAN 3025 or C.I. Systematic analysis of personnel functions in organizations.

MAN 3504 BA (3,0)
Production/Operations Management: PR: Junior standing, STA 3023. Introduction to the management of systems for the creation, distribution and maintenance of goods and services required for modern society.

MAN 3705 BA (3,0)
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 BA (3,0)
Business and Society: PR: MAR 3023, FIN 3403, MAN 3025. A study of the interrelationship between the institution of business and other institutions of our society.

MAN 4150 BA (3,0)
Human Relations in Management: PR: MAN 3025. The study of individual, interpersonal, group and intergroup problems in business organizations through the use of cases and experimental exercises.

MAN 4201 BA (3,0)
Organization Theory: PR: MAN 3025. Introduces the basic theoretical concepts of integrating both micro and macro approaches to effective management of organizations.

MAN 4310 BA (3,0)
Personnel Management Issues: PR: Junior standing, MAN 3301. An application-oriented course to give students in the area experiences generally reserved for practitioners in the field of personnel and labor relations.

MAN 4401 BA (3,0)
Labor Relations Management: PR: Junior standing, MAN 3301. The impact of employee organizations on labor relations, current problems, conflicts and trends; the development of managerial approaches to achieve labor-management cooperation.

MAN 4420 BA (3,0)

MAN 4590 BA (3,0)
Procurement Management: PR: MAN 3025 and MAN 3504. An elective course in procurement management. Designed to provide the student with fundamental concepts and processes involved in the procurement of goods and services required by modern society.

MAN 4720 BA (3,0)
Business Policies: PR: Senior standing, completion of core. The student is expected to utilize the subject matter in the business core and his major in analyzing business problems.

MAN 4722 BA (3,0)
Information Systems Analysis: PR: Junior standing, MAN 3025, CGS 3000. Introduction to the fundamentals of management information systems development, needs analysis and systems requirements.

MAN 4724 BA (3,0)
Implementing Information Systems: PR: MAN 4722 and CGS 3000. Study of organizational information needs and systems for planning and control.

MAN 4854 BA (3,0)
Management Science: PR: MAN 3025 and MAN 3504 and ECO 3411 and CGS 3000. Study of the application of quantitative models and use of simulation in organizational systems.

MAN 5051 BA (2,0)
Management Concepts: PR: Acceptance in MBA program. Theory and practice of managing organizations to include planning, organizational theory, human behavior and control.

MAN 5501 BA (2,0)
Introduction to Production/Operations Management: PR: Acceptance into the graduate program and ECO 5415 or equivalent. Introduction to the fundamental concepts, processes and institutions involved in the production of goods and services required by modern society.

MAN 5830 BA (2,0)
Introduction to Management Information Systems: PR: Acceptance into the graduate program. Designed to provide the student with the fundamentals of business data processing and management information systems used by organizations in a modern society.

MAP 3302 AS (3,0)
### Problem Analysis
- **PR:** MAC 3253 or MAC 3311 and CGS 3422 or equivalent. Applications of computational techniques to selected problems in the practice of engineering technology. Problems relating to specific option areas.

### MAP 4153
- **EN:** 3(3,0)

### Vector and Tensor Analysis
- **PR:** MAC 3313 or C.I. Vector calculus. The theorems of Green, Gauss and Stokes. Introduction to tensors. Application in engineering and physical sciences.

### MAP 4363
- **AS:** 4(4,0)

### Applied Boundary Value Problems I
- **PR:** MAP 3302 or C.I. Systems of linear equations. Fourier series. The eigenvalue problem of Sturm-Liouville. The method of Green’s functions.

### MAP 4364
- **AS:** 3(3,0)

### Applied Boundary Value Problems II
- **PR:** MAP 4363 or C.I. Legendre polynomials and Bessel functions. The theory of Sturm-Liouville. Separation of variables. Applications involving the wave equation, heat equation and equation of Laplace.

### MAP 4411
- **AS:** 3(3,0)

### Laplace Transforms
- **PR:** MAP 3302 or C.I. Laplace and Z transforms; solutions of ordinary and partial differential equations; application to circuit analysis and difference equations.

### MAP 5407
- **AS:** 3(3,0)

### Applied Mathematics I
- **PR:** MAP 3302 or C.I. Fourier series, calculus of variations, Hamilton’s principle, eigenvalues and stationary points, Rayleigh-Ritz method, partial differential equations, and approximation methods.

### MAP 5426
- **AS:** 3(3,0)

### 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
- **BA:** 3(3,0)

### MAR 3023
- **BA:** Junior standing. Study of functions, institutions and basic problems in marketing of goods and services in our domestic economy and abroad.

### Advertising Management
- **BA:** MAR 3023. Analysis of field of advertising; techniques, media, organization, and role of research; economic and social aspects of advertising.

### Sales Management
- **BA:** MAR 3023. An overview of the sales management process. Emphasis on sales program formulation and implementation.

### Consumer Behavior
- **BA:** MAR 3023. Analysis of the buying process, the psychological, social, and economic influences affecting consumer choice.

### Marketing Research
- **BA:** 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.

### Marketing Management
- **BA:** MAR 3023 and any one additional MAR course or C.I. Operational framework exploring the analysis, planning and control activities of marketing.

### Product Management
- **BA:** MAR 3023. Components of product management including analysis, strategy formulation and implementation are examined.

### Retailing Management
- **BA:** MAR 3023. Analysis of the field of retailing. Emphasis on planning for profit through management, inventory control, etc.

### Marketing Channel Systems
- **BA:** 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
- **BA:** MAR 3023, GEB 4351, or C.I. Investigates strategy, policy and the variables in international marketing decisions.

### Industrial Marketing
- **BA:** MAR 3023. Marketing of goods and services between organizations, including commercial, governmental, institutional, and not-for-profit. Emphasis on the development, pricing, promotion and distribution of industrial products.

### Contemporary Marketing Issues
- **BA:** Senior standing, marketing major, C.I. Cultural, social, political, economic, and competitive developments and their effects upon marketing activities.

### Marketing Strategy
- **BA:** Senior standing and marketing courses completed or C.I. Marketing problems are explored with emphasis on strategy formulation and integrative marketing decision making.

### Internship
- **BA:** Permission of Dept. Chair. Provide 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 chair.

Linear Algebra: PR: MHF 2300 or C.I. A study of finite dimensional vector spaces and linear transformations.

MAS 3113

MAS 3203
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.

Algebraic Structures: PR: MHF 2300 or C.I. An introduction to groups, rings and fields.

MAC 3013C
General Microbiology: PR: A college course in chemistry and in basic biological sciences. Fundamentals of microbiology, including microbial structure and function, metabolism, growth, genetics, virology, environmental control, ecology, pathogenicity; and laboratory techniques.

MAC 3203
Pathogenic Microbiology: PR: MCB 3013C or C.I. Microorganisms producing disease in man and other animals; means of transmission; protection against disease.

MAC 3203L
Pathogenic Microbiology Lab: CR: MCB 3203. Laboratory investigation of pathogenic microorganisms with emphasis on isolation and identification of pathogenic microorganisms.


Microbial Metabolism: PR: MCB 3013C and BCH 4054. Interrelationship between cellular structure and function and genetic traits in microorganisms. The interaction between microorganisms and their nutritional environment.

Environmental Microbiology: PR: PCB 3043 and MCB 3013C. Interrrelations 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.


Fundamentals of Meteorology and Climatology: PR: MAC 1102 or C.I. Studies of the physical processes that determine the climate of a region. The methods of measurement and use of meteorological parameters.

Finite Mathematics: PR: MAC 1102 or 2 years of high school algebra or C.I. Introduction to logic and sets. Elements of probability. Algebra of matrices. Applications to systems of equations and linear programming.

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.
**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.

**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.

**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.

**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.

**Leadership Responsibilities:** A description of the role and responsibility of the small unit leader. Case studies in leadership and management. Principles of military instruction.

**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.

**Advanced Military Science:** Study of the decision-making process; staff organization, estimating process, and staff studies. Analysis of administration, personnel and Army supply system.

**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.

**Hematology:** PR: Admission to the professional phase of the MLS program or C.I. Diagnostic procedures and morphologic interpretation; correlation of this data to disease.

**Hemo­stasis:** PR: Admission to the professional phase of the MLS program or C.I. Study of the hemostasis mechanisms; diagnostic procedures and correlation of data to pathological conditions.

**Clinical Pathogenic Microbiology:** PR or CR: MCB 3203 and admission to the professional phase of the MLS program. Isolation and pathogenic bacteria and serological methods; interpretation of abnormal results, with correlation to disease.

**Clinical Mycology:** PR: Admission to the professional phase of the MLS program with C.I. Instruction and laboratory practice in the isolation and identification of fungi associated with mycotic infections of man.

**Clinical Parasitology:** PR: Admission to the professional phase of the MLS program or C.I. Instruction and laboratory practice in the examination and study of clinical material for the detection and identification of animal parasites.

**Immunodiagnostics:** PR: PCB 3233. Theory and application of clinical serologic and immunologic diagnostic testing stressing the utilization of monoclonal technology.

**Clinical Immunohematology:** PR: Admission to the professional phase of the MLS program or C.I. Investigation of incompatible crossmatches; antibody identification, leukocyte antigens and identification procedures, problem solving.

**Advanced Clinical Chemistry I:** PR: Admission to the professional phase of the MLS program or C.I. Theory and practice in clinical chemistry techniques; carbohydrates, protein, electrophoresis, enzymes.

**Advanced Clinical Chemistry II:** PR: MLS 4625C. Autoanalyzer, flame photometry, blood gases, RIA.

**Clinical Practice I:** PR: Admission to the professional phase of MLS program or rotation in one or more of the following areas: Hematology, Chemistry, Microbiology, Blood Bank, Serology-Coagulation, Clinical Microscopy, Nuclear Medicine.

**Clinical Practice II:** PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4630C.

**Clinical Practice III:** PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4831C.

**Clinical Practice IV:** PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4832C.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>MLS 4834C</td>
<td>Clinical Practice V: PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4833C.</td>
</tr>
<tr>
<td>MLS 4910</td>
<td>Fundamentals of Research for Health Science Professionals: Concepts of developing a research protocol based on current theories and practices within the clinical area including literature search, cost analysis and grant preparation.</td>
</tr>
<tr>
<td>MLS 5509</td>
<td>Clinical Immunology: PR: PCB 3233, MLS 4511 or C.I. Advanced theory and application of immunologic diagnostic testing stressing the utilization of monoclonal technology.</td>
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<tr>
<td>MMC 2000</td>
<td>Introduction to the Mass Media: A description of the various media, their roles, responsibilities, and functions.</td>
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<tr>
<td>MMC 4200</td>
<td>Mass Communication Law: The legal rights and responsibilities of the mass media.</td>
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<tr>
<td>MMC 4602</td>
<td>Contemporary Media Issues: Relationships between the mass media and society; examination of social and ethical issues and responsibilities of the media, including the media's relationship with government.</td>
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<tr>
<td>MMC 4609</td>
<td>Opinion and the Mass Media: Role of the media in influencing public attitudes on both the domestic and international levels.</td>
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<tr>
<td>MMC 4700</td>
<td>Mass Media and Popular Culture: An impact of mass media upon American culture past to present.</td>
</tr>
<tr>
<td>MMC 4945</td>
<td>Communication Internship: PR: C.I. Internship in radio, television, film, journalism, public relations, advertising and speech involving practicum at selected communication organizations for one quarter.</td>
</tr>
<tr>
<td>MRE 3000</td>
<td>Introduction to Medical Records: PR: Acceptance into upper division limited access MRA program. Introduction to profession; POMR; release of information; record analysis.</td>
</tr>
<tr>
<td>MRE 3110</td>
<td>Medical Record Organization and Management: PR: MRE 3000. Nomenclature/classification systems; health/vital statistics; computer abstracting; MRAs role in hospital/medical staff organization; accrediting/approving agencies; policy/procedure manuals; job descriptions; indexing.</td>
</tr>
<tr>
<td>MRE 3600</td>
<td>Directed Practice I: PR: Acceptance into upper division limited access MRA program. Interdepartmental experience and introduction to medical record departments in selected health care facilities.</td>
</tr>
<tr>
<td>MRE 3810</td>
<td>Directed Practice II: PR: MRE 3800, HSC 3640, HSC 3531. Quantitative and qualitative analysis; MPI; release of information; filing; admission/discharge processing performed in a health care facility.</td>
</tr>
<tr>
<td>MRE 4202</td>
<td>Coding Procedures: PR: MRE 3432, HSC 3531, or C.I. Principles and mechanics of coding systems for health information retrieval. DRGs.</td>
</tr>
<tr>
<td>MRE 4304</td>
<td>Medical Record Department Management: PR: MRE 4500; MRE 4312. Analysis of management functions in health care setting; in-service education; equipment demonstrations; problem-solving techniques.</td>
</tr>
<tr>
<td>MRE 4312</td>
<td>Analysis of Medical Record Department Operations: PR: MRE 3110; MAN 3025; MAN 3301. Personnel administration; budgeting; forms analysis, design and control; work distribution and simplification; other evaluation techniques. Principles of Word Processing and Medical Transcription.</td>
</tr>
<tr>
<td>MRE 4500</td>
<td>Health Information Retrieval Systems: PR: MRE 3110. Utilization review; principles and mechanics of medical audit and quality assurance; risk management.</td>
</tr>
</tbody>
</table>

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MRE 4832  HLTH 1(0,4)
Directed Practice IV: PR: MRE 3110; MRE 4312; MRE 4500; MRE 4830. Indexing abstracting; audit; quality assurance; U.R.: transcription; budget; management of activities in DP I, II, III; computer applications. Assignment to hospital and other health care facilities.
MRE 4835  HLTH 5(0,15)
Management Affiliation: PR: All other required courses. Assignment to a selected health care facility serving in an administrative capacity under the direction of a Registered Record Administrator; lab exercises; comprehensive exam.
MRE 4850  HLTH 2(2,0)
Medical Record Research: PR: MRE 4500, ENC 3210, COM 3110. Basic research topic design; completion of research project; oral presentations, grantsmanship.
MRE 5217  HLTH 3(3,0)
System Analysis and Design: Concepts of system analysis, planning, and design; criteria for assisting health information needs; computer system selection; project management allocation and control.
MRE 5218  HLTH 3(3,0)
Management of Health Information Systems: PR: MAN 5830. Administration of computer-based information systems; security; policy formulation; health data in decision-making, interpretation of health data.
MRE 5219  HLTH 3(3,0)
MRE 5555  HLTH 3(3,0)
Research Methods: PR: HSC 6911; graduate status or C.l. Research topic design using health information; research methodologies using statistical techniques; research designs as they relate to health care organizations.
MTG 4212  AS 4(4,0)
Modern Geometries: PR: MAC 3311 or C.l. Sets of axioms and finite geometries, groups of transformations, Euclidean motions of 2-space and 3-space, convexity in 2-space and 3-space. Euclidean geometry of polygon and circle, constructible numbers, constructions and non-Euclidean geometry.
MTG 4302  AS 3(3,0)
Introduction to Topology: PR: MHF 2300 or C.l. Metric spaces, topological spaces, limit points, continuity, compactness, and connectedness.
MUC 3101  AS 1(1,1)
Composition I: Creative work in small forms. Open to qualified non-music majors with C.l. May be repeated for credit.
MUC 3202  AS 1(1,0)
Composition II: PR: C.l. or by audition. Creative work in large and small forms in the area of choral, instrumental and keyboard media. May be repeated for credit.
MUE 1440  AS 1(0,2)
String Techniques: Class instruction in beginning string playing techniques.
MUE 1450  AS 1(0,2)
Woodwind Techniques: Class instruction in beginning woodwind playing techniques. May be repeated for credit.
MUE 1460  AS 1(0,2)
Brass Techniques: Class instruction in beginning brass playing techniques. May be repeated for credit.
MUE 1470  AS 1(0,2)
Percussion Techniques: Class instruction in beginning percussion playing techniques.
MUE 3210  ED 2(2,0)
Music In the Elementary School: Fundamental procedures for teaching elementary school music, stressing appropriate music materials and activities for different age groups; selected experience in music.
MUE 4311  ED 2(2,0)
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  ED 2(2,0)
Secondary School Music Instructional Analysis: PR: MUE 4311 or C.l. 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  AS 1(1,1)
MUE 5611  ED 3(3,0)
Trends in Elementary School Music Education: PR: MUE 3210 or equivalent, or C.l. 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  AS 2(1,1)
Basic Conducting: Fundamental techniques and practice in conducting.
MUG 3202  Choral Conducting: PR: MUG 3101. Fundamental principles of choral conducting and rehearsal techniques. May be repeated for credit.

MUG 3302  Instrumental Conducting: PR: MUG 3101. Fundamental principles of instrumental conducting and rehearsal techniques. May be repeated for credit.

MUG 4103  Advanced Conducting: PR: C.I. Study of advanced vocal or instrumental conducting techniques. Rehearsal procedures, selection of materials and program-building, interpretation of scores, study and performance of selected works.

MUH 4211  History and Literature I: PR: MUT 2112. In depth study of the development of Western musical styles from antiquity to present.

MUH 4212  History and Literature II: PR: MUT 3116. Continuation of MUH 4211.

MUH 4218  Review of Music History: PR: C.I. A review of music history from Ancient Greece to the present.


MUH 4391  Seminar: Music Since Bach: PR: Satisfactory music history placement exam. Selected topics from the origins of Classicism through the 19th century. Emphasis on stylistic development and formal analysis.

MUL 2010  Enjoyment of Music: Only non-music majors. Designed to develop an understanding of musical principles and techniques for listening to music.

MUL 3400  Piano Literature I: PR: Major in Music or C.I. Survey of stringed keyboard literature from the 16th century to the present with emphasis on technical, formal and performance problems.

MUL 3401  Piano Literature II: PR: MUL 3400. Continuation of MUL 3400.

MUL 3600  Song Literature I: PR: Major in Music or C.I. Survey of the development of the art song from the Baroque to the present with emphasis on technical, formal and performance problems.

MUL 3601  Song Literature II: PR: MUL 3600. Continuation of MUL 3600.

MUN 3110  Marching Band: PR: Admission by audition. Preparation for appearance at football games and special occasions. May be repeated for credit.

MUN 3120  Concert Band: Open to all students with audition. Study and performance of music for large ensembles. May be repeated for credit.

MUN 3140  Wind Ensemble: Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3280  Community Orchestra: PR: C.I. Open to all students. Audition for wind and percussion players required. Repertoire from symphonic literature. May be repeated for credit.

MUN 3310  University Choir: Open to all students by audition. Study and performance of large ensemble music. Possible tours. May be repeated for credit.

MUN 3340  Madrigal Singers: Open to all students by audition. Extra rehearsals and Madrigal Dinners required. Tours. May be repeated for credit.

MUN 3341  Chamber Chorus: Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3380  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: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3430  Brass Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.
MUN 3440 AS 1(0,2)
Percussion Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3450 AS 1(0,3)
Orchestra: Open to Music Majors or C.I. Study and performance of music for small ensembles. May be repeated for credit.

MUN 3710 AS 1(0,4)
Jazz Lab: PR: C.I. Open to all students by audition. Study and performance of music for jazz ensembles. May be repeated for credit.

MUN 3711 AS 1(0,3)
Jazz/Pop Ensemble: PR: C.I. Open to all students. Study and performance of music for jazz ensembles. May be repeated for credit.

MUO 3501 AS 3(0,0)
Opera Workshop: PR: C.I. Study of expressive emotion in relation to musical theatre; staging and performance of prepared studies. May be repeated for credit.

MUS 1010 AS 0(3,0)
Music Forum: A series of special musical events required of music majors. Includes lectures and recitals by faculty, students, and guest artists.

MUS 4401 AS 2(1,1)
Directed Experience: PR: C.I. and Junior Standing. Special topics of study and/or research as determined by student/faculty consultation. May be repeated for credit.

MUT 1241 AS 1(0,2)
Ear Training and Sight Singing IIA: Aural and visual/oral comprehension of elements of music—rhythm, melody, harmony, form. Intended to be taken with MUT 2111.

MUT 1242 AS 1(0,2)
Ear Training and Sight Singing IIB: PR: MUT 1241. Continuation of MUT 1241. Intended to be taken with MUT 2112.

MUT 2111 AS 2(2,1)
Music Theory IA: Open to all students. Writing, performance, analysis of and music of various stylistic periods.

MUT 2112 AS 2(2,1)
Music Theory IB: PR: MUT 2111. Continuation of MUT 2111.

MUT 2246 AS 1(0,2)
Ear Training and Sight Sight IIA: PR: MUT 1242. Continuation of MUT 1242. Intended to be taken with MUT 3116.

MUT 2247 AS 1(0,2)
Ear Training and Sight Singing IIB: PR: MUT 2246. Continuation of MUT 2246. Intended to be taken with MUT 3117.

MUT 3116 AS 2(2,1)
Music Theory IIA: PR: MUT 2112. Continuation of MUT 2111-2112; writing, performance, and analysis of music of various stylistic periods.

MUT 3117 AS 2(2,1)

MUT 3248 AS 1(0,2)
Ear Training and Sight Singing III: PR: MUT 2247. Continuation of MUT 2247. Intended to be taken with MUT 4561.

MUT 3311 AS 2(1,1)

MUT 3353 AS 1(0,2)
Jazz Skills I: PR: C.I. Elements of jazz improvisation. Emphasis on listening, harmony, basic arranging and jazz forms.

MUT 3354 AS 1(0,2)
Jazz Skills II: PR: MUT 3353 or C.I. Continuation of Jazz Skills I.

MUT 4031 AS 1(1,0)
Review of Music Theory: PR: C.I. A comprehensive review of harmonic and analytic skills. May be repeated for credit.

MUT 4249 AS 2(2,0)
Review of Sight-Singing and Ear Training: An intensive review of aural skills. May be repeated for credit.

MUT 4344 AS 1(1,0)

MUT 4561 AS 3(3,0)
Music Theory III: PR: MUT 3117. Continuation of MUT 3116-3117; writing, performance, and analysis of music of various stylistic periods.

MUT 5325 AS 2(2,0)
MVB 1110  AS 1(0,2)
Class Brass: Class instruction in beginning brass playing. May be repeated for credit.

MVB 1211  AS 1(0,1)

MVB 1212  AS 1(0,1)
Secondary French Horn: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in French Horn. Intended for non-music majors. May be repeated for credit.

MVB 1213  AS 1(0,1)

MVB 1214  AS 1(0,1)

MVB 1215  AS 1(0,1)
Secondary Tuba: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in tuba. Intended for non-music majors. May be repeated for credit.

MVB 2411  AS 2(1,1)
Trumpet I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 2412  AS 2(1,1)
French Horn I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 2413  AS 2(1,1)
Trombone I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 2414  AS 2(1,1)
Baritone I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 2415  AS 2(1,1)
Tuba I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVB 3421  AS 2(1,1)
Trumpet II: PR: MVB 2411 and competence determined by faculty jury. Continuation of MVB 2411. May be repeated for credit.

MVB 3422  AS 2(1,1)
French Horn II: PR: MVB 2412 and competence determined by faculty jury. Continuation of MVB 2412. May be repeated for credit.

MVB 3423  AS 2(1,1)
Trombone II: PR: MVB 2413 and competence determined by faculty jury. Continuation of MVB 2413. May be repeated for credit.

MVB 3424  AS 2(1,1)
Baritone II: PR: MVB 2414 and competence determined by faculty jury. Continuation of MVB 2414. May be repeated for credit.

MVB 3425  AS 2(1,1)
Tuba II: PR: MVB 2415 and competence determined by faculty jury. Continuation of MVB 2415. May be repeated for credit.

MVB 4431  AS 2(1,1)
Trumpet III: PR: MVB 3421 and competence determined by faculty jury. Continuation of MVB 3421. May be repeated for credit.

MVB 4432  AS 2(1,1)
French Horn III: PR: MVB 3422 and competence determined by faculty jury. Continuation of MVB 3422. May be repeated for credit.

MVB 4433  AS 2(1,1)
Trombone III: PR: MVB 3423 and competence determined by faculty jury. Continuation of MVB 3423. May be repeated for credit.

MVB 4434  AS 2(1,1)
Baritone III: PR: MVB 3424 and competence determined by faculty jury. Continuation of MVB 3424. May be repeated for credit.

MVB 4435  AS 2(1,1)
Tuba III: PR: MVB 3425 and competence determined by faculty jury. Continuation of MVB 3425. May be repeated for credit.

MVB 4441  AS 2(1,1)
Trumpet IV: PR: MVB 4431 and competence determined by faculty jury. Continuation of MVB 4431. May be repeated for credit.

MVB 4442  AS 2(1,1)
French Horn IV: PR: MVB 4432 and competence determined by faculty jury. Continuation of MVB 4432. May be repeated for credit.

MVB 4443  AS 2(1,1)
Trombone IV: PR: MVB 4433 and competence determined by faculty jury. Continuation of MVB 4433. May be repeated for credit.

MVB 4444  AS 2(1,1)
Baritone IV: PR: MVB 4434 and competence determined by faculty jury. Continuation of MVB 4434. May be repeated for credit.
MVB 4445
Tuba IV: PR: MVB 4435 and competence determined by faculty jury. Continuation of MVB 4435. May be repeated for credit.
MVB 5451
Trumpet V: PR: C.I.
MVB 5452
French Horn V: PR: C.I.
MVB 5453
Trombone V: PR: C.I.
MVB 5454
Baritone V: PR: C.I.
MVB 5455
Tuba V: PR: C.I.
MVK 1111
Class Piano I: Class instruction for beginning piano students. Not open to music majors whose major performing medium is piano.
MVK 1121
Class Piano II: PR: MVK 1111 or C.I. Continuation of MVK 1111. Not open to music majors whose major performing medium is piano.
MVK 1131
Class Piano III: PR: MVK 1121 or C.I. Continuation of MVK 1121.
MVK 1141
Class Piano IV: PR: MVK 1131 or C.I. Continuation of MVK 1131.
MVK 1213
MVK 1873
MVK 2411
Plano I: PR: Major in music or consent of chairperson; audition. May be repeated for credit.
MVK 2413
Organ I: PR: Major in music or consent of chairperson; audition. May be repeated for credit.
MVK 3421
Plano II: PR: MVK 2411 and competence determined by faculty jury. Continuation of MVK 2411. May be repeated for credit.
MVK 3423
Organ II: PR: MVK 2413 and competence determined by faculty jury. Continuation of MVK 2413. May be repeated for credit.
MVK 4431
Plano III: PR: MVK 3421 and competence determined by faculty jury. Continuation of MVK 3421. May be repeated for credit.
MVK 4433
Organ III: PR: MVK 3423 and competence determined by faculty jury. Continuation of MVK 3423. May be repeated for credit.
MVK 4441
Plano IV: PR: MVK 4431 and competence determined by faculty jury. Continuation of MVK 4431. May be repeated for credit.
MVK 4443
Organ IV: PR: MVK 4433 and competence determined by faculty jury. Continuation of MVK 4433. 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 5451
Plano V: PR: C.I.
MVK 5453
Organ V: PR: C.I.
MVO 1214
MVO 3114
Recorder I: Open to non-music majors. Class instruction in beginning recorder playing.
MVO 3124
Recorder II: PR: C.I. Class instruction in advanced recorder solo and ensemble playing. Open to music students and non-music students who have taken MVO 3114.
MVO 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 1110
Class Percussion: Class instruction in beginning percussion playing.

MVP 1211

MVP 2411
Percussion I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVP 3421
Percussion II: PR: MVP 2411 and competence determined by faculty jury. Continuation of MVP 2411. May be repeated for credit.

MVP 4431
Percussion III: PR: MVP 3421 and competence determined by faculty jury. Continuation of MVP 3421. May be repeated for credit.

MVP 5451
Percussion V: PR: C.I.

MVS 1110
Class Strings: Class instruction in beginning string playing.

MVS 1211

MVS 1212

MVS 1213

MVS 1214

MVS 1215
Secondary Harp: Instruction in beginning harp playing.

MVS 1216

MVS 1876
Class Guitar I: Open only to non-music majors. Class instruction in beginning guitar playing.

MVS 2411
Violin I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 2412
Viola I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 2413
Cello I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 2414
Bass I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVS 2415
Harp I: Major in music or consent of chair; audition. May be repeated for credit.

MVS 2416
Guitar I: PR: Major in music or consent of chair; audition. 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 3421
Violin II: PR: MVS 2411 and competence determined by faculty jury. Continuation of MVS 2411. May be repeated for credit.

MVS 3422
Viola II: PR: MVS 2412 and competence determined by faculty jury. Continuation of MVS 2412. May be repeated for credit.

MVS 3423
Cello II: PR: MVS 2413 and competence determined by faculty jury. Continuation of MVS 2413. May be repeated for credit.

MVS 3424
Bass II: PR: MVS 2414 and competence determined by faculty jury. Continuation of MVS 2414. May be repeated for credit.
MVS 3425
Harp II: PR: MVS 2415 and competence determined by faculty jury. Continuation of MVS 2415. May be repeated for credit.

MVS 3426
Guitar II: PR: MVS 2416 and competence determined by faculty jury. Continuation of MVS 2416. May be repeated for credit.

MVS 4431
Violin III: PR: MVS 3421 and competence determined by faculty jury. Continuation of MVS 3421. May be repeated for credit.

MVS 4432
Viola III: PR: MVS 3422 and competence determined by faculty jury. Continuation of MVS 3422. May be repeated for credit.

MVS 4433
Cello III: PR: MVS 3423 and competence determined by faculty jury. Continuation of MVS 3423. May be repeated for credit.

MVS 4434
Bass III: PR: MVS 3424 and competence determined by faculty jury. Continuation of MVS 3424. May be repeated for credit.

MVS 4435
Harp III: PR: MVS 3425 and competence determined by faculty jury. Continuation of MVS 3425. May be repeated for credit.

MVS 4436
Guitar III: PR: MVS 3426 and competence determined by faculty jury. Continuation of MVS 3426. May be repeated for credit.

MVS 4441
Violin IV: PR: MVS 4431 and competence determined by faculty jury. Continuation of MVS 4431. May be repeated for credit.

MVS 4442
Viola IV: PR: MVS 4432 and competence determined by faculty jury. Continuation of MVS 4432. May be repeated for credit.

MVS 4443
Cello IV: PR: MVS 4433 and competence determined by faculty jury. Continuation of MVS 4433. May be repeated for credit.

MVS 4444
Bass IV: PR: MVS 4434 and competence determined by faculty jury. Continuation of MVS 4434. May be repeated for credit.

MVS 4445
Harp IV: PR: MVS 4435 and competence determined by faculty jury. Continuation of MVS 4435. May be repeated for credit.

MVS 4446
Guitar IV: PR: MVS 4436 and competence determined by faculty jury. Continuation of MVS 4436. May be repeated for credit.

MVS 5451
Violin V: PR: C.I.

MVS 5452
Viola V: PR: C.I.

MVS 5453
Cello V: PR: C.I.

MVS 5454
Bass V: PR: C.I.

MVS 5455
Harp V: PR: C.I.

MVS 5456
Guitar V: PR: C.I.

MVS 1111
Class Voice: Class instruction in beginning voice. May be repeated for credit.

MVV 1873

MVV 2411
Voice I: PR: Major in music or consent of chair; audition. May be repeated for credit.

MVV 3421
Voice II: PR: MVV 2411 and competence determined by faculty jury. Continuation of MVV 2411. Major in music or consent of chair; audition. Private and class lessons. May be repeated for credit.

MVV 4431
Voice III: PR: MVV 3421 and competence determined by faculty jury. Continuation of MVV 3421. May be repeated for credit.

MVV 4441
Voice IV: PR: MVV 4431 and competence determined by faculty jury. Continuation of MVV 4431. May be repeated for credit.
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.

Voice Pedagogy II: PR: C.I. Continuation of MVV 4640. Intermediate to advanced levels. May be repeated for credit.

Voice V: PR: C.I.

Class Woodwinds: Class instruction in beginning woodwind playing. May be repeated for credit.


Flute I: PR: Major in music or consent of chair; audition. May be repeated for credit.

Oboe I: PR: Major in music or consent of chair; audition. May be repeated for credit.

Clarinet I: PR: Major in music or consent of chair; audition. May be repeated for credit.

Bassoon I: PR: Major in music or consent of chair; audition. May be repeated for credit.

Saxophone I: PR: Major in music or consent of chair; audition. May be repeated for credit.

Flute II: PR: MVV 2411 and competence determined by faculty jury. Continuation of MVV 2411. May be repeated for credit.

Bassoon II: PR: MVV 2414 and competence determined by faculty jury. Continuation of MVV 2414. May be repeated for credit.

Saxophone II: PR: MVV 2415 and competence determined by faculty jury. Continuation of MVV 2415. May be repeated for credit.

Flute III: PR: MVV 3421 and competence determined by faculty jury. Continuation of MVV 3421. May be repeated for credit.

Oboe III: PR: MVV 3422 and competence determined by faculty jury. Continuation of MVV 3422. May be repeated for credit.

Clarinet III: PR: MVV 3423 and competence determined by faculty jury. Continuation of MVV 3423. May be repeated for credit.

Bassoon III: PR: MVV 3424 and competence determined by faculty jury. Continuation of MVV 3424. May be repeated for credit.

Saxophone III: PR: MVV 3425 and competence determined by faculty jury. Continuation of MVV 3425. May be repeated for credit.
MVW 4443
Clarinet IV: PR: MVW 4433 and competence determined by faculty jury. Continuation of MVW 4433. May be repeated for credit.
MVW 4444
Bassoon IV: PR: MVW 4434 and competence determined by faculty jury. Continuation of MVW 4434. May be repeated for credit.
MVW 4445
Saxophone IV: PR: MVW 4435 and competence determined by faculty jury. Continuation of MVW 4435. May be repeated for credit.
MVW 5451
Flute V: PR: C.I.
MVW 5452
Oboe V: PR: C.I.
MVW 5453
Clarinet V: PR: C.I.
MVW 5454
Bassoon V: PR: C.I.
MVW 5455
Saxophone V: PR: C.I.
NUR 3006
Health Assessment: Theory and skills of physical/mental assessment of clients.
NUR 3119
Introduction to Baccalaureate Nursing: Overview of baccalaureate nursing philosophy, objectives, conceptual framework, scope of practice, history, legal and ethical issues.
NUR 3166
Critical Inquiry: A study of approaches to problematic situations in nursing. Selected experiences in investigating, analyzing, and interpreting nursing research.
NUR 3709
NUR 3748C
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 3749C
Scientific Theories of Nursing I: PR: NUR 3748C. Theories/nurses role in health maintenance, preventive, acute and rehabilitative care with individuals of all ages in varied clinical settings.
NUR 3755C
Scientific Theories of Nursing II: PR: NUR 3749C. Principles of maternal and infant health with application in selected clinical settings. The family approach to the birthing process is emphasized.
NUR 3795
Nursing Seminar I: CR: NUR 3749C. Discussion of current issues related to nursing practice. Exploration of specific problems associated with NUR 3207C.
NUR 3796
Nursing Seminar II: CR: NUR 3755C. An opportunity to explore maternal/infant, fathering, sibling and family relationships.
NUR 4297
Cardiac Nursing. PR: NUR 4660C. Nursing management of cardiac disorders as they affect the physiological, psychological, sociocultural, and spiritual adaptation of the individual and family.
NUR 4660C
Complex Nursing Problems: PR: NUR 3755C. Comprehensive nursing care to individuals with complex and critical health problems in acute care (intensive or critical).
NUR 4756C
NUR 4757C
Scientific Theories of Nursing V: PR: NUR 4756C. Scientific Theories and principles of leadership and management of patient care. Application of the decision-making process in selected clinical experiences.
NUR 4758C
Scientific Theories of Nursing IV: Theories, principles and interventions in public health nursing. Group discussion and clinical practice in selected settings.
NUR 4797
Nursing Seminar III: CR: NUR 4756C. Discussion of nursing in today’s society.
NUR 4905C
Nursing Independent Study: PR: NUR 4756C. An opportunity for in-depth study in an area of special interest to the student.
OCE 1012
Oceanography and Space: Fundamentals of oceanography and space with emphasis on the engineering aspects and uses.
Strategic ethical graphic design.

Introduction to urban planning: The study of substantive planning issues such as urbanization, regional development, land use and comprehensive planning, environmental planning and social planning.

Urban Design: The study of planning techniques such as planned unit developments, capital improvements planning, and growth management, and planning methods including needs assessment and graphic design.

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.

Local Government Operations: Operational Functions of municipal and county governments and the role of the chief executive officer.
PAD 5807

Administrative Practice in the Public Sector: The application of various theoretical concepts to the "real world" of public administration. Policy formulation and execution are examined through the case study mode.

PCB 3023

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 contractility.

PCB 3043

Principles of Ecology: 8 hours in biological sciences. Elements of ecosystems, biogeochemical cycling, environmental factor interactions, population dynamics and community development.

PCB 3043L


PCB 3063

Genetics: PR: BSC 2010C. Basic principles of heredity as applied to prokaryotes and eukaryotes.

PCB 3063L

Genetlos Laboratory: CR: PCB 3063. Introduction to laboratory techniques of genetics.

PCB 3233

Immunology: PR: BSC 2010C. Basic principles of immune reactions, antigen antibody interactions, cell mediated immunity, tumor immunology and immuno therapy.

PCB 3233L

Immunology Laboratory: CR: PCB 3233. Introduction to laboratory techniques in immunology.

PCB 3301C


PCB 3703C

Human Physiology: PR: BSC 2010C or equivalent. The physiology and interrelationships of organ systems of the human body.

PCB 4302C

Limnology I: PR: PCB 3043 or C.I. Introduction to limnology and methods for freshwater ecology with respect to physical, chemical and biological parameters.

PCB 4303C

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.

PCB 4723

Animal Physiology: PR: PCB 3023 or C.I. Functions of body processes occurring in animals with emphasis on vertebrate physiology.

PCB 5045

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.

PCB 5046C


PCB 5675C

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.

PCB 5806

Endocrinology: PR: PCB 4723 and BCH 4053 or C.I. Mechanisms of action of hormones; interrelationship between the nervous and endocrine systems.

PCO 4203

Interviewing and Counseling: PR: PSY 2013, PPE 3003. A review of various interviewing and counseling theories and techniques as well as practical experience in interviewing and counseling procedures.

PEL 2021

Racket Sports: Study of performance and application of advanced skills, rules and etiquette of the sports of racketball and badminton. Physiological and social values accruing from this lifetime sport.

PEL 2121

Beginning Golf: Performance and application of basic skills, rules and etiquette. Physiological and social values accruing from this lifetime sport.

PEL 2320

Basic Volleyball and Softball: The analysis of offensive and defensive alignment, techniques and strategies.

PEL 2341

Beginning Tennis: Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.

PEL 2640

Basic Football and Basketball: The analysis of offensive and defensive alignment, techniques and strategies.

PEL 3122

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL 3342</td>
<td>Advanced Tennis</td>
<td>PR: PEL 2341 or equivalent competency. A study of performance and application of advanced skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport.</td>
</tr>
<tr>
<td>PEM 2104</td>
<td>Personal Fitness</td>
<td>Study of personal fitness concepts, with opportunities to develop individual optimal level of fitness and an improved lifestyle through high-level wellness.</td>
</tr>
<tr>
<td>PEM 2131</td>
<td>Strength Resistance Training</td>
<td>Study of fitness and strength development through resistance exercise.</td>
</tr>
<tr>
<td>PEM 2171</td>
<td>Aerobic Dancing</td>
<td>Appropriate rhythmical muscle toning movements that develop aerobic fitness; concepts taught include warm-up, flexibility, stretching, cool down and heart rate.</td>
</tr>
<tr>
<td>PEM 2351</td>
<td>Cycling</td>
<td>Study of the techniques and physiological benefits of the lifetime sport of cycling. This course is activity oriented and requires access to any model bicycle.</td>
</tr>
<tr>
<td>PEM 3101</td>
<td>Body Development</td>
<td>An in-depth study of individual physical (musculo-skeletal, neuromuscular, cardio-respiratory) fitness. Emphasis on individual diagnosis, principles, procedures, and conduct of related exercise programs.</td>
</tr>
<tr>
<td>PEN 1121</td>
<td>Elementary Swimming</td>
<td>For non-swimmers and beginning swimmers. Development and study of techniques in the basic skills of water safety and swimming.</td>
</tr>
<tr>
<td>PEN 2122</td>
<td>Advanced Swimming</td>
<td>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.</td>
</tr>
<tr>
<td>PEN 3101</td>
<td>Aquatics</td>
<td>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.</td>
</tr>
<tr>
<td>PEN 3113</td>
<td>Life Saving</td>
<td>Instruction, training and certification in basic life saving swimming skills.</td>
</tr>
<tr>
<td>PEN 3115</td>
<td>Water Safety Instruction</td>
<td>PR: PEN 3113 or equivalent competency. Methods of teaching water safety. Includes practical application and certification.</td>
</tr>
<tr>
<td>PET 3031</td>
<td>Instructional Sports Activities</td>
<td>Analysis of individual sports for purposes of teaching and coaching. Includes techniques, conditioning, and strategy.</td>
</tr>
<tr>
<td>PET 3012</td>
<td>Physical Education Professional Development</td>
<td>Unsatisfactory/Satisfactory grading. The development in the profession of physical education, and action participation in current activities.</td>
</tr>
<tr>
<td>PET 3041</td>
<td>Games for the Elementary School Physical Education Program</td>
<td>The understanding, designing and teaching the low-organizational game-activities for the elementary school child.</td>
</tr>
<tr>
<td>PET 3210</td>
<td>Sports Psychology</td>
<td>A review of principles of psychology related to the enhancement of satisfaction and performance in sports.</td>
</tr>
<tr>
<td>PET 3453</td>
<td>Coaching and Officiating</td>
<td>Theory and methods of coaching and officiating techniques.</td>
</tr>
<tr>
<td>PET 3461C</td>
<td>Teaching Physical Education in the Elementary School</td>
<td>PR: Admission to Junior Block or C.I. Organization, practice and conduct of elementary school physical education with emphasis on teaching methods.</td>
</tr>
<tr>
<td>PET 3463C</td>
<td>Physical Education in Secondary School</td>
<td>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.</td>
</tr>
<tr>
<td>PET 4035C</td>
<td>Motor Development and Learning</td>
<td>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.</td>
</tr>
</tbody>
</table>
Anatomic and Mechanical Kinesiology: Anatomic and mechanical principles involved in producing skilled human movement; with applications.

Biomechanics: Anatomic and mechanical principles involved in producing skilled human movement with applications.

Physiology and Human Performance: Physiological factors that contribute to performance, with emphasis on energetics, gas transport, pulmonary mechanisms, nutrition assessment, training and performance strategies.

Fitness Assessment and Exercise Intervention: Aerobic function and coronary risk factors—testing, interpretations and exercise strategies.

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.


Introduction to Sports Medicine: A comprehensive study of care of sports injuries including instruction in attitudes, health and conditioning in sports participants.

Human Injuries: The recognition and rehabilitation of human injuries.

Adapted Physical Education: Principles and methods of adapting physical education activities and programs for atypical participants, mainstreaming rationale and methods analyzed.

Photography: PR: ART 2201C. Consideration of basic technical and aesthetic factors in using still photography as a vehicle for visual expression.

Photojournalism I: Photography as a communication device; use of still camera; basic photographic technique. Open to all majors.

Photojournalism II: PR: PGY 3610. Learning darkroom procedures in 35 mm black-and-white photography.

Color Photography for the Mass Media: PR: PGY 3610. Taking pictures, photo essays in color; developing and printing via the Cibachrome process.

Advanced Photography: PR: PGY 3401C. May be repeated for credit.

Special Problems in Photography: PR: PGY 3401C or C.I. A series of directed photographic problems of a research nature. May be repeated for credit.

Special Problems in Film Design: A series of exercises in craft, techniques, and design for film production, including animation.

Ancient Philosophy: PR: PHI 2010 or C.I. Foundations of Western philosophy in ancient Greek thinking about man and nature, including the pre-Socratics, Socrates, Plato, Aristotle.

Modern Philosophy: PR: PHI 2010 or C.I. Challenges of science and religion to philosophy. Responses of faith, reason, relativism, and atheism.


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.

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.

Formal Logic I: Analysis of logical form and of procedures used in deductive inference, of the kind underlying mathematical reasoning.
PHI 3600
Ethics: An examination of the nature of moral problems, judgements and principles with an emphasis on recent formulations in ethical theory.

PHI 3630
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
Philosophy of Religion: An examination of basic ideas, beliefs, attitudes and functions of religion, with emphasis upon questions of conceptual meaning and cognitive justification.

PHI 3800
Aesthetics: An investigation into the nature of human artistic experience with special reference to questions of form, perception and style.

PHI 3803
Philosophy and Creativity: A companion course to PHI 3800, Aesthetics. Examines the empirical and metaphysical claims made for creativity; attempts to account for intuition, genius and intelligence.

PHI 4220
Philosophy of Language: PR: PHI 2010 and 2130. Develops philosophically illuminating descriptions of certain general features of language, such as reference, truth meaning, and necessity.

PHI 4360
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
Philosophy of Science: An examination of the conceptual foundations and methodology of modern science.

PHI 4770
Atheism: A study of the principal theoretical and practical objections to theism.

PHM 3100
Contemporary Marxism: An examination of some major issues and perspectives in current Marxist philosophy and social theory.

PHY 2053C
College Physics I: PR: MAC 1104 or MGF 1203. Kinematics, Newton's Law, circular motion, torque, center of gravity, work, energy, power, machines, waves, sound, heat, thermodynamics, latent heat, conduction, convection, radiation.

PHY 2054C
College Physics II: PR: PHY 2053C or one year of high school physics. Fluids, Bernoulli, viscosity, kinetic theory, electricity, magnetism, induction, generators, motors, DC-AC circuits, instrumentation, semiconductors, geometrical and physical optics, X-rays, radioactivity, dosimetry.

PHY 3014C
Physics for Teachers I: PR: C.I. "Hands-on" lecture-laboratory course. Statics, simple machines, density, solar energy, heat, weather, waves, optical reflections, naked eye astronomy.

PHY 3048
Physics for Engineers and Scientists I: PR: MAC 3311, PHY 2053C or high school physics. Mechanics, properties of matter, fluids, thermodynamics.

PHY 3048L
Physics Laboratory for Engineers and Scientists I: CR: PHY 3048. Laboratory experiments covering selected topics in physics related to PHY 3048.

PHY 3049
Physics for Engineers and Scientists II: PR: PHY 3048, MAC 3312. Optics, light, sound, electricity, magnetism, alternating current.

PHY 3049L
Physics Laboratory for Engineers and Scientists II: CR: PHY 3049. Laboratory experiments covering selected topics in physics related to PHY 3049.

PHY 3101
Modern Physics: PR: PHY 3049 or C.I. Thermal radiation, quanta, photoelectric effect, Compton effect, Bohr theory, de Broglie, Schrodinger equation, barrier and square well potentials, applications to atomic, molecular, solid state and nuclear physics.

PHY 3320
PHY 3464
Physical Basis of Music: PR: MUT 2112 or C.I. Lectures, demonstrations, and student practicum; covers topics in wave motion, acoustics of musical instruments, musical scales, timbre, architectural acoustics, human ear; sound reproduction.

PHY 3503
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.

PHY 3722C

PHY 3752C

PHY 3802L
Intermediate Physics Laboratory: PR: PHY 3101 or C.I. Laboratory work in basic measurements of physical constants; experiments in electronics, modern physics, nuclear physics, optics and solid state physics. May be repeated for credit.

PHY 4220

PHY 4424
Optics: PR: PHY 3101 and PHY 3320. Wave optics, absorption, stimulated emission, lasers, transforms, coherence, holography.

PHY 4604
Wave Mechanics: PR: MAP 3302 and PHY 3101. Basic concepts of Schrodinger wave mechanics, the quantum theory. Forms of wave function under boundary conditions. Application to the one electron atom and many particle systems.

PHY 4803L

PHY 4942C
Practicum in Physics: PR: C.I. Physics laboratories and demonstrations, and the study of recent research on the learning of physics.

PHY 5015C

PHY 5100
Topics in Contemporary Physics for Teachers: PR: C.I. The study of recent findings in a selected area such as: Particle Physics; Surface Physics; Planetary Atmospheres; Lasers; Geophysics; etc.

PHY 5200C
Newtonian Mechanics for Teachers: PR: C.I. A lab, lecture, demonstration course studying selected topics in classical mechanics.

PHY 5240

PHY 5300C
Electricity for Teachers: PR: C.I. Circuits, Multimeters, Oscilloscopes, Circuit elements.

PHY 5302C

PHY 5346
Electrodynamics I: PR: PHY 3320, MAP 3302, or C.I. Boundary value problems in electrostatics and magnetostatics. Maxwell equations. EM fields in matter, wave generation and propagation; wave guides, resonant cavities.

PHY 5401C
Optics for Teachers: PR: C.I. Geometrical and physical optics, spectrometers and lasers.

PHY 5446

PHY 5500C

PHY 5624
PHY 5606 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.

PHZ 3151 Computer Methods in Physics: PR: PHY 3046 and COP 1200 or C.I. Nonanalytical problems in physics and astronomy solved by approximation with computer assistance.

PHZ 3271 Geophysics: PR: PHY 3049 and MAP 3302. Introduction to the methods and techniques used in applied geophysics. Seismic wave propagation, flow through porous media, electromagnetic remote sensing, gravitation.

PHZ 5105C Computer Methods in Physics for Teachers: PR: C.I. Trajectories with air resistance, trajectories in rotating space colonies, refraction of waves in continuous media, luminosity patterns, temperature profiles.

Nuclear Physics for Teachers: PR: C.I. The interaction of ionizing radiation with matter, alpha, beta, gamma decay, fission, fusion, neutron activation, half lives and equilibrium.

Nuclear Physics: PR: PHY 4604. Nuclear forces, structure, models, reactions, radioactivity, fusion, strange particles.


Plasma Physics: PR: PHY 4220, PHY 3320, or C.I. Introduction to theory and experimental basis of both weakly and highly ionized plasmas. Instabilities, plasma waves, nonlinear effects, controlled thermonuclear fusion.


Wave Motion for Teachers: PR: C.I. Water Waves, Waves on Strings, Sound and Vibrations.


Southern Politics: PR: POS 2041 or C.I. Study of southern politics past and present. Emphasis on factors effecting changes in the region and the states. Southern and national relationship examined.

Public Opinion: A substantive and theoretical study of public opinion with emphasis on opinion formation, opinion measurement, policy linkages. May include field experiences in polling.

Mass Media and Politics: PR: POS 2041 or C.I. Influence of media on campaigns, public officials, public opinion, the definition of political news, and selected public policies.

Contemporary Revolution and Political Violence: Theories and cases of revolutionary change and political violence in the contemporary world.

Voting and Elections: Theoretical and substantive inquiry into U.S. electoral system; includes focus on voter behavior as well as national and state electoral systems.

The American Presidency: PR: POS 2041 or C.I. Examination of historical and contemporary role of the presidency, including presidential selection process and the office’s evolution in status, powers, administrative responsibilities, leadership, and decision-making.

Congress & the Legislative Process: PR: POS 2041 or C.I. Examination of the Congress as an institution undergoing dynamic change; emphasis upon recruitment of legislators, institutional and informal rules, the committee system, legislative procedures.

Political Parties & Processes: PR: POS 2041 or C.I. In depth study of the American political party system in the context of changing American politics; topics include: development, organization, reforms, legislative and executive roles.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Units</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POS 3703</td>
<td>AS 3(3,0)</td>
<td><strong>Scope and Methods of Political Science:</strong> Introduction to the scope and methodology of political analysis. Extensive examination of the discipline, research design and methodology.</td>
</tr>
<tr>
<td>POS 4142</td>
<td>AS 3(3,0)</td>
<td><strong>Metropolitan Politics:</strong> Analysis of political patterns, processes, and issues in American communities. Intergovernmental relations and structural and political arrangements in the existing and emerging metropolitan areas.</td>
</tr>
<tr>
<td>POS 4206</td>
<td>AS 3(3,0)</td>
<td><strong>Political Psychology:</strong> 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.</td>
</tr>
<tr>
<td>POS 4246</td>
<td>AS 3(3,0)</td>
<td><strong>Political Socialization:</strong> 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.</td>
</tr>
<tr>
<td>POS 4252</td>
<td>AS 3(3,0)</td>
<td><strong>Politics of the Future:</strong> 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.</td>
</tr>
<tr>
<td>POS 4255</td>
<td>AS 3(3,0)</td>
<td><strong>Power and Policy in the U.S.:</strong> 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.</td>
</tr>
<tr>
<td>POS 4284</td>
<td>AS 3(3,0)</td>
<td><strong>Judicial Process &amp; Policies:</strong> Study of the formal and informal judicial process. Legal culture, bureaucratic model, judicial recruitment and outputs, comparative judicial behavior.</td>
</tr>
<tr>
<td>POS 4412</td>
<td>AS 3(3,0)</td>
<td><strong>Presidential Campaigning:</strong> PR: C.I. Introduces the process of candidate selection, convention behavior, actual campaign process and the transition of power.</td>
</tr>
<tr>
<td>POS 4445</td>
<td>AS 3(3,0)</td>
<td><strong>Comparative Political Parties:</strong> The study of political party systems and processes. The course may include U.S., Canada and other political systems.</td>
</tr>
<tr>
<td>POS 4603</td>
<td>AS 3(3,0)</td>
<td><strong>American Constitutional Law:</strong> PR: POS 2041 or C.I. Development of American federalism and national power, commerce clause and nationalization of the economy.</td>
</tr>
<tr>
<td>POS 4604</td>
<td>AS 3(3,0)</td>
<td><strong>American Constitutional Law II:</strong> PR: POS 2041 or C.I. Development of civil liberties and civil rights in the American federal system.</td>
</tr>
<tr>
<td>POS 4622</td>
<td>AS 3(3,0)</td>
<td><strong>Politics and Civil Rights:</strong> Examination of development and issues of civil rights in the second reconstruction. Course emphasis process and analysis of policy.</td>
</tr>
<tr>
<td>POS 4941</td>
<td>AS 3-9(0,3-9)</td>
<td><strong>Political Science Internship:</strong> PR: C.I. Internship working with the national, state, county or municipal government. Assignments with selected civic organization, elected or appointed official.</td>
</tr>
<tr>
<td>POT 3204</td>
<td>AS 3(3,0)</td>
<td><strong>American Political Thought:</strong> From its sources to the 20th century, including liberalism, puritanism, the Federalist, the rise of industrialism, resulting social movements, modern variations.</td>
</tr>
<tr>
<td>POT 3302</td>
<td>AS 3(3,0)</td>
<td><strong>Modem Political Ideologies:</strong> A study of modern ideologies since the French Revolution including liberalism, conservatism, capitalism, nationalism, Fascism and anarchism.</td>
</tr>
<tr>
<td>POT 4003</td>
<td>AS 3(3,0)</td>
<td><strong>Political Theory:</strong> PR: POS 2041 or C.I. Examination of various normative approaches to the study of political science, stressing contemporary developments in the field.</td>
</tr>
<tr>
<td>POT 4045</td>
<td>AS 3(3,0)</td>
<td><strong>Ancient, Medieval and Early Modern Political Philosophy:</strong> Study of the development of political and social ideas in western thought from early Greece through the 17th century.</td>
</tr>
<tr>
<td>POT 4054</td>
<td>AS 3(3,0)</td>
<td><strong>Modern Political Philosophy:</strong> Study of the development of political and social ideas from the 18th century to the present. May be taken independently of POT 4045 (Ancient, Medieval and Early Modern Political Philosophy).</td>
</tr>
<tr>
<td>POT 4314</td>
<td>AS 3(3,0)</td>
<td><strong>Contemporary Democratic Theory:</strong> PR: POS 2041 or C.I. Study of democratic theories emphasizing liberal democracy and its critics, elitist theories, participatory democracy, citizen participation and relevance of empirical research to democratic theory.</td>
</tr>
<tr>
<td>PPE 3003</td>
<td>AS 3(3,0)</td>
<td><strong>Personality Theory:</strong> PR: PSY 2013. A survey of theory and research on the development of personality characteristics.</td>
</tr>
<tr>
<td>PSB 3002</td>
<td>AS 4(4,0)</td>
<td><strong>Physiological Psychology:</strong> PR: PSY 2013. A survey of the physiological basis of behavior emphasizing the relationship between the nervous system and behavior. Lecture and demonstration/lab.</td>
</tr>
<tr>
<td>PSB 3442</td>
<td>AS 3(3,0)</td>
<td><strong>Drugs and Behavior:</strong> PR: PSY 2013. Effects of certain drugs upon the nervous system, behavior, and society. Causes of drug abuse and impact on mental health.</td>
</tr>
</tbody>
</table>
PSB 4013C

PSB 4103C

PSC 1512
Physical Science: PR: MAC 1104 or MGF 1203. Fundamental laws of mechanics, heat, waves, electricity, magnetism; chemical processes and equations, properties of gases, liquids, solids, solutions. Mathematical analysis and logic applied to conclusions, inferences.

PSC 1512L
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
General Psychology: An introductory survey of the basic principles, theories, and methods of contemporary psychology.

PSY 2023
Careers in Psychology: PR: PSY 2013. An examination of various career opportunities in Psychology including educational entry requirements, and related professional issues.

PSY 3204
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

PSY 3302

PSY 3303

PSY 3624
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
Undergraduate Field Work: PR: C.I. Placement in a community agency for supervised experience in applications of psychology to community problems.

PSY 4604
History and Systems of Psychology: PR: EXP 3404 and PPE 3003. Historical development of psychology with emphasis on classical theoretical positions.

PUP 3204
Environmental Politics: An examination of politics and policymaking concerning issues of conservation, pollution and development of land, air and water resources.

PUP 3314
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
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
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
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.

PUP 4503
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.

PUP 4602
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.
PUR 4000
Public Relations: Principles and practice of Public Relations including: techniques, research, tools, publicity and management.

PUR 4800
Public Relations Campaigns: PR: PUR 4000. Planning and execution of public relations campaigns for profit and non-profit organizations.

RAT 4027
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.

RAT 4028
Radiation Oncology II: Continuation of Radiation Oncology I.

RED 3012
Basic Foundations of Reading: PR: Junior Standing or C.I. Introduction to reading: principles, procedures, and current practices. Study of specific techniques and materials for word attack and comprehension.

RED 4519
Diagnostic and Corrective Reading Strategies: PR: RED 3012 or C.I. and admission to Phase II. An investigation of the needs of individual learners in reading instruction. Organization and techniques for promoting optimum reading growth. Concurrent school experiences required.

RED 5147
Developmental Reading: Principles, procedures, organization, and current practices in the elementary reading program. Materials and methods of instruction.

RED 5337
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.

RED 5514
Classroom Diagnosis and Treatment of Reading Difficulties: PR: RED 5147 or equivalent. Classroom diagnosis and corrective teaching in reading; instructional materials. Case Study required.

REE 3043
Fundamentals of Real Estate: PR: Junior Standing. Emphasis placed upon the application of basic tools of economics, finance and marketing to solve private and public sector real estate problems.

REE 4303
Real Estate Investment Analysis: PR: FIN 3403. Focus on real estate decision making in the private sector utilizing tools of financial and economic analysis.

REL 2302
World Religions: Basic features and historical background on Confucianism, Taoism, Hinduism, Buddhism, Judaism, Christianity and Islam.

REL 3186
Classical Mythology: Myths of the Greeks & Romans studied through excerpts from ancient sources and experienced through works of art, literature and music.

REL 3203
The Hebrew and Christian Heritage: The Old and New Testaments as religious documents; their socio-political context in the Ancient Near East.

REL 3314
Religions of China and Japan: A study of basic concepts in Shinto, Taoism, Confucianism, Buddhism, and Zen.

REL 3342
Hinduism: A study of Hindu religious ideas and scriptures; the Vedas, the Upanishads, the Bhagavad Gita, and later works.

REL 3353
Islam: An inquiry into the foundations and development of Islamic thought from earliest times to modern in various parts of the world.

REL 3432
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
Studia in Christianity: An inquiry into the foundations and development of Christian thought in various parts of the world.

REL 3690
Seminar in Jewish Studies: 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 revolution in religious thought prompted by Kierkegaard, Tillich, Barth, Niebuhr, and Bonhoeffer, and the secular trends suggested by Nietzsche, Altizer, Cox, and Hamilton.
Introduction to Respiratory Therapy: PR: Admission to the professional upper division Respiratory Therapy Program. Fundamental respiratory principles and practices will be studied. Introduction to the profession and basic methods are covered. Lecture and lab.

Mechanical Ventilation: PR: RET 3026C. Function and use of mechanical ventilators, patient evaluation methods. All forms of ventilatory support will be studied. Lecture - Laboratory.

Respiratory Disease Assessment: PR: RET 3026C. Physical examination of the chest, demonstrating equipment use, methods and theory. Chest radiography will be extensively covered. Lecture - demonstration.


Clinical Practice II: PR: C.I. Patient care with advanced respiratory equipment. Tracheostomy care. Introduction to cardiopulmonary resuscitation. Introduction to critical care units. Advanced life support techniques and equipment.


Cardiopulmonary Diagnostics I: PR: RET 4244C. Non-invasive cardiac diagnostics including echocardiography, nuclear cardiology and stress testing.

Cardiopulmonary Diagnostics II: PR: RET 4244C and RET 4284C. Invasive cardiac diagnostic and therapeutic measures including cardiac catheterization, PTCA, streptokinase use and heart surgery.

Pulmonary Function Studies: PR: RET 3026C. Detailed procedures and tests to provide information for diagnosis of pulmonary disease. Lecture-laboratory.

Chest Medicine: PR: APB 3263C. Disease states treated medically in conjunction with one or more modalities of respiratory therapy.


Pediatric Respiratory Care: PR: C.I. Lung development, prenatal physiology, gas transport in the fetus and newborn. IRDS, congenital anomalies, infections, resuscitation of the neonate, childhood respiratory disease. Mechanical ventilators and their use in neonatal respiratory care.


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.

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.
RTE 3341
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.

RTE 3365
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.

RTE 3387C
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.

RTE 3388
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.

RTE 3412C
Principles of Radiographic Exposure I: An introduction to properties of electromagnetic radiation, X-ray production, exposure factors, X-ray equipment and accessory devices.

RTE 3457C
Principles of Radiographic Exposure II: PR: RTE 3412C or C.I. Continuation of RTE 3412C with emphasis on exposure technique, evaluation and use of imaging accessories, processing techniques.

RTE 3528C
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 assessment of radiographic studies of the appendicular skeleton, chest, and abdomen.

RTE 3549
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.

RTE 3564
Radiologic Sciences Seminar: PR: RTE 3549 or C.I. An introduction to Special Imaging Techniques in Radiology including vascular and nonvascular procedures.

RTE 3566
Advanced Imaging Modalities: PR: RTE 3564 or C.I. A study of the physical principles and applications of Computed Tomography, Digital Imaging, Ultrasound, Magnetic Resonance Imaging and other specialized modalities.

RTE 3684C
Physics of Image Production: PR: College Physics II. Physics III: Physical principles and applications of diagnostic imaging, including radiation production, physical principles of generator operation and characteristics of electromagnetic radiation.

RTE 3720
Anatomy for the Medical Imager: A study of the normal anatomical structures and interrelationships of structures as demonstrated in a radiographic and cross-sectional imaging reference.

RTE 3806
Clinical Education II: PR: RTE 3832L or C.I. Supervised clinical practice in radiographic procedures, radiation protection, patient care, equipment.

RTE 3816
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.

RTE 3826
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.

RTE 3832L
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.

RTE 3841
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 4256L HLTH 1(0,10)
Directed Study in Clinical Education: PR: HSC 4243 or C.I. Directed activity in classroom instruction in radiologic technology.

RTE 4362 HLTH 1(1,0)
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 HLTH 2(1,3)
Quality Assurance: PR: RTE 3387C or C.I. Quality assurance programs with evaluation of radiographic imaging modalities and information retrieval systems. Tube output evaluation, sensitometry, and flow studies.

RTE 4843 HLTH 5(0,25)
Clinical Education VI: PR: ATE 4876 or C.I. Advanced clinical practice in diagnostic radiography, radiation therapy, nuclear medicine, special procedures, and other diagnostic imaging.

RTE 4865L HLTH 3(0,15)
Clinical Education VII: PR: RTE 4843 or C.I. Supervised clinical experience in all categories of clinical competency evaluation.

RTE 4876 HLTH 5(0,25)
Clinical Education V: PR: C.I. Supervised clinical practice; emphasis on competency evaluation of routine radiographic examinations.

RTV 3000 AS 3(3,0)
Foundations of Broadcasting: Nature of the media, the mechanics of operation, history, economics, programming, and internal and external control.

RTV 3200 AS 4(1,3)
Broadcast Techniques: PR: RTV 3000. Introduction to audio and video production. Instruction and practice in audio and television studio production including studio equipment, crew duties, etc.

RTV 3210 AS 4(1,3)
Radio Production: PR: RTV 3200 or C.I. The production of music (live and recorded), talk, interview, discussion, sports, and documentary, and performance of flow and voiceover.

RTV 3220 AS 4(1,3)
Television Production: PR: RTV 3200 and RTV 3260. Production of various video formats, field and studio production. Knowledge of both portable and studio production equipment, including video tape editing, required.

RTV 3231 AS 4(1,3)
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 3260 AS 4(1,3)

RTV 3300 AS 4(1,3)
Broadcast Newswriting: PR: Ability to type 30 wpm; Grammar Proficiency Examination. The study and practice of writing news for radio and television.

RTV 3301 AS 4(1,3)
Advanced Broadcast Newswriting: PR: RTV 3300. The writing of indepth news items including documentaries, features, and investigative materials.

RTV 3501 AS 4(1,3)
Broadcast Copywriting: PR: Ability to type 30 wpm; Grammar Proficiency Examination. Preparation of written commercial copy for radio and television and public service.

RTV 4206 AS 4(1,3)
Television Directing: PR: RTV 3220. Preparation and direction of programs with emphasis on dramatic values of composition. Typing skills required.

RTV 4402 AS 3(3,0)
Broadcast Criticism: PR: RTV 3000 for RTV majors; English Grammar 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 AS 3(3,0)
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
Broadcast Management: PR: RTV 4700. Consideration of broadcast management problems in station operations at the local, regional, and national levels.
RUS 1120
Elementary Russian Language and Civilization I: Designed to initiate the student to the major language skills: listening, speaking, reading, and writing.
RUS 1121
Elementary Russian Language and Civilization II: PR: RUS 1120 or equivalent. Continuation of RUS 1120.
RUS 2210
Intensive Russian Conversation: PR: One year of Russian or equivalent. Practical use of the language leading toward fluency and correctness in speaking.
RUS 2230
Intermediate Russian Language and Civilization I: PR: RUS 1121 or equivalent. 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
Intermediate Russian Language and Civilization II: PR: RUS 2230 or equivalent. Continuation of RUS 2230 with emphasis on Russian civilization.
RUS 3240
Russian Conversation: PR: RUS 2231 or equivalent. Development of skills in conversation and comprehension through practice. This course may be repeated for credit. When repeated, credit will apply to general electives only.
RUS 3420
Russian Composition: PR: RUS 2231 or equivalent. Development of skills in composition. This course may be repeated for credit. When repeated, credit will apply to general electives only.
SCE 3310
Teaching Science in Elementary School: PR: Junior standing or C.I. Selected concepts; organizing for instruction; techniques; evaluation procedures.
SCE 3330
Science Instructional Analysis: PR: EDG 4321 or C.I. Course objectives for a school curriculum and methods and materials.
SCE 5238
Inquiry in the Sciences: PR: Graduate standing or science certification. Teaching science by inquiry in the secondary school and development of inquiry lessons.
SED 3335
Speech Instruction Analysis: PR: EDG 4321 or C.I. Study of instructional programs in speech; objectives, materials, techniques, organization for instruction, evaluation procedures, current research.
SLS 2311
Overview of Selected Medical Careers: Introduction to medical careers in medicine, dentistry, veterinary medicine, osteopathic medicine, optometry, chiropractic medicine, podiatry, and pharmacy.
SOP 3004
SOP 3724
The Psychology of Racial Prejudice: PR: PSY 2013. Examination of literature relating to prejudice toward ethnic groups; effects of racism on individuals, development and maintenance of prejudice, and possible ways to reduce prejudice.
SOP 3742
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.
SOP 3772
SOW 3104
SOW 3110
Assessing Individual Behavior: The development of social work skills in assessing individuals functioning at various life stages from major theoretical perspectives.
SOW 3191
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.
SOW 3203
Social Welfare and Community Resources: Study of social welfare, programs and services, including socio-cultural, political, economic and historical forces affecting changes in societal responses to human needs.
SOW 3232


SOW 3300

Generalist Practice in Social Work: Study of social work functions, knowledge, values and skills. Development of ability to use a generalist model of practice.

SOW 3352

Interpersonal Skills in Social Work Practice: Simulated practice of interviewing, group leadership, written communication, and oral presentations, in consensual as well as conflictual contexts of social work.

SOW 3403

Social Work Research: Study of quantitative and qualitative methods of building knowledge for social work and the ethical use of research in professional practice.

SOW 4341

Micro-Level Roles and Interventions in Social Work: PR: SOW 3300, SOW 3352. Study and simulated practice of roles and tasks in systemic problem solving with individuals, families, and supportive and remedial groups.

SOW 4343

Macro-Level Roles and Interventions in Social Work: PR: SOW 3300, SOW 3352. Study and simulated practice of roles and tasks in systemic problem solving to obtain and improve social welfare resources within organizations and communities.

SOW 4381

Agency Management: Basic administrative practice including planning, staffing, delegating, managing and developing personnel, monitoring services, budgeting and fund raising.

SOW 4431

Evaluating Social Work Practice and Service Programs: PR: 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.

SOW 4510

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.

SOW 4522

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.

SOW 4602

Social Work in Health Settings: Study of social work roles, interventions, and issues related to helping patients in health settings.

SOW 4620

Social Work with Minorities: PR: SOW 4341, SOW 4343, or C.I. Study of oppressed groups and relevant social work interventions; skill development in work with, and in behalf of, people of minority groups.

SOW 4644

Social Services for the Elderly: Development of interventive skills for obtaining, providing, and improving social services in behalf of elderly persons and their families.

SOW 4654

Children's Services: Study of societal responses to children's needs. Development of skills for preventing family breakdown, placing children in alternative care, and reuniting children with their families.

SPA 3001

Introduction to Communicative Disorders: Etiology, symptoms, and methods of diagnosing and treating communicative disorders. For beginning and prospective majors in communicative disorders.

SPA 3003


SPA 3052

Clinical Observation and Practice: PR: SPA 3550, C.I. Observation and supervised participation in speech pathology and audiology in the university clinic and local clinics.

SPA 3101

Physiological Bases of Speech and Hearing: PR: SPA 3001. An introduction to the anatomical, physiological, and physical elements underlying the communication process.

SPA 3112

Basic Phonetics: Physiological descriptions and visual notation of speech patterns and regional dialects.

SPA 3112L

Basic Phonetics Laboratory: Students will have practical experiences in transcription of normal and deviant speech.

SPA 3550

SPA 3550L Clinical Methods in Communicative Disorders Laboratory: Students will have practical experience in analysis of live and videotaped diagnosis and therapy sessions.

SPA 4011 Fundamentals of Speech and Hearing Science: Lectures and demonstrations in basic acoustics and speech acoustics.

SPA 4030 Audiology I: Introduction to physics of sound, anatomy of hearing mechanism, pure tone audiometry, hearing aids, problems of the hearing handicapped. Clinical skills development will be required.

SPA 4033 Audiology II: PR: SPA 4030. An overview of medical aspects of hearing loss, electrophysiological audiometry and other differential diagnostic testing.


SPA 4201L Communicative Disorders: Articulation Laboratory: Students will have practical experience in diagnosis and treatment in articulation disorders.


SPA 4222 Nonorganic Speech Disorders: PR: SPA 3550, 4201. Survey of nonorganic aspects of stuttering and voice disorders and their management.

SPA 4222L Nonorganic Speech Disorders Laboratory: Students will have practical experience in diagnosis and treatment in nonorganic speech disorders.


SPA 4250L Organic Speech Disorders Laboratory: Students will have practical experience in observations of organic speech disorders.


SPA 4336 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.


SPA 4402L Communicative Disorders: Language Laboratory: Students will have practical experience in diagnosis and treatment in language disorders.

SPA 4941 Practicum in Communicative Disorders.

SPA 5005 Survey of Communicative Disorders: A survey of speech, language, and hearing disorders for habilitative personnel and other interested professionals.

SPA 5132 Physiological Acoustics: PR: SPA 4030; Graduate status or C.I. Lectures, readings and experiments pertaining to the subjective reception of sound.

SPA 5225 Fluency Disorders: PR: Graduate status or C.I. Identification and evaluation of disorders of rhythm. Emphasis will be on methods of intervention in disorders of fluency.

SPA 5225L Fluency Disorders Laboratory: PR: Graduate status or C.I. Practical application of clinical skills in fluency disorders.

SPA 5307 Differential Diagnosis of Auditory Disorders: PR: SPA 4030; Graduate status or C.I. Clinical techniques in pure tone speech, acoustic impedance and electrophysiologic response audiometry.

SPA 5358 Aural Habilitation/Rehabilitation: PR: Graduate Status or C.I. Principles and procedures involved in speech and language acquisition management, utilization of residual hearing, speech reading and the use of hearing aids.

SPA 5458 Therapeutic Communication: PR: Graduate status or C.I. Practical interviewing and counseling in the area of communicative disorders.
SPA 5553  
**Differential Diagnostic in Speech and Language**: PR: SPA 6204, 6403, 6211, 5805. Administration and interpretation of evaluation techniques, including standardized tests, will be presented. Emphasis on techniques allowing for differential diagnosis of speech and language disorders.

SPA 5553L  
**Differential Diagnosis in Speech and Language Laboratory**: PR: SPA 6204, 6403, 6211, 5805. Assignment to diagnostic teams to apply the diagnostic techniques presented in SPA 5553. Experiences include test administration, interviewing, writing diagnostic reports, oral presentations.

SPA 5800  
**Administration and Management of Communicative Disorders Programs**: PR: SPA 3001. Methods and techniques for organization and administration of speech-language and hearing disorders in public school, hospital, rehabilitation center and private practice facilities.

SPA 5805  
**Research in Communicative Disorders**: PR: STA 4163, graduate status or C.I. Introduces the student to empirical research in the area of communicative disorders. Emphasis is on hypothesis testing, methodology, analysis and interpretation of results.

SPC 1005  
**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.

SPC 1014  
**Fundamentals of Oral Communication**: Use of the body and voice; participation in various speaking situations; planning, organizing, and delivering public speeches.

SPC 3250  
**Speech and Human Relations**: Introduction to semantics; symbols and meaning and the relationship with human behavior.

SPC 3301  
**Interpersonal Communication**: Nature of the communication process; variables affecting the process and the individuals involved. Analysis of communication models, interactant behavior, situational cues, verbal and non-verbal messages.

SPC 3410  
**Parliamentary Procedures**: Principles and rules governing participation and leadership in the conduct of formal business meetings.

SPC 3425  
**Group Interaction and Decision Making**: A study of small group processes. Attention is given to problem solving, leadership emergence, conformity behavior, and group member role responsibilities.

SPC 3445  
**Leadership Through Oral Communication**: A theoretical and practical investigation of leadership in oral communication situations, principles of parliamentary law, and approaches to problem solving.

SPC 3511  
**Argumentation and Debate**: PR: SPC 1014 or C.I. Study and practice in the preparation and delivery of argumentative speeches emphasizing argument, evidence and organization.

SPC 3542  
**Persuasion: Motivation**: PR: SPC 1014 or C.I. A study of motivational factors involved in persuasive speaking to secure belief and action.

SPC 3601  
**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  
**Nonverbal Communication**: Review of current behavioral research in such areas as proxemics, kinesics, physical characteristics, tactile communication and paralanguage. Lectures are supplemented by frequent nonverbal exercises.

SPC 4350  
**Studies in Listening**: Analysis of current trends, professional literature, and resource materials bearing upon the teaching of listening. Practice in listening; preparing listening experiences; oral and written reports.

SPC 4440  
**Group Dynamics**: A study of human behavior in group situations.

SPC 4540  
**Attitudes and Communication**: PR: Grammar proficiency examination. A survey of the immediate and direct ways in which persuasive communications and social groups come to influence attitudes.

SPC 4633  
**Rhetoric of Social and Political Action**: PR: Junior standing. A critical investigation of social and political speaking within contemporary American society including agitative rhetoric of political dissent.

SPC 5200  
**Evolution of Communication Theory: General Survey**: Major communication trends from classical era to the present. Comparison of Aristotelian and non-Aristotelian rhetorics. Contributions of principal figures will be discussed.

SPN 1120  
**Elementary Spanish Language and Civilization I**: Designed to initiate the student to the major language skills: listening, speaking, reading, and writing.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN 1121</td>
<td>Elementary Spanish Language and Civilization II</td>
<td>PR: SPN 1120 or equivalent. Continuation of SPN 1120.</td>
<td>Continuation of SPN 1120.</td>
</tr>
<tr>
<td>SPN 1170</td>
<td>Elementary Spanish Study Abroad</td>
<td></td>
<td>Elementary Spanish language and civilization taught in native environment.</td>
</tr>
<tr>
<td>SPN 2230</td>
<td>Intermediate Spanish Language and Civilization I</td>
<td>PR: SPN 1121 or equivalent.</td>
<td>Designed to continue development of language skills at the intermediate level.</td>
</tr>
<tr>
<td>SPN 2231</td>
<td>Intermediate Spanish Language and Civilization II</td>
<td>PR: SPN 2230 or equivalent.</td>
<td>Continuation of SPN 2230 with emphasis on Spanish civilization.</td>
</tr>
<tr>
<td>SPN 2240</td>
<td>Intensive Spanish Conversation</td>
<td>PR: One year of Spanish or equivalent. Practical use of language leading toward fluency and correctness in speaking.</td>
<td></td>
</tr>
<tr>
<td>SPN 3241</td>
<td>Spanish Conversation</td>
<td>PR: SPN 2231 or equivalent.</td>
<td>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.</td>
</tr>
<tr>
<td>SPN 3420</td>
<td>Spanish Composition</td>
<td>PR: SPN 2231 or equivalent.</td>
<td>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>SPN 4410</td>
<td>Advanced Spanish Conversation</td>
<td>PR: SPN 3241.</td>
<td>Advanced conversation on directed topics from various disciplines: Literature, art, psychology, philosophy, music, business and the sciences.</td>
</tr>
<tr>
<td>SPN 4420</td>
<td>Advanced Spanish Composition</td>
<td>PR: SPN 3420.</td>
<td>Readings and written imitations of modern literary styles in the form of themes, sketches, poems and original stories.</td>
</tr>
<tr>
<td>SPN 4450</td>
<td>Stylistics</td>
<td>PR: SPN 3420 or equivalent.</td>
<td>An intense study of textual criticism. An examination of the relationship between language and literature, explications and linguistic analysis of literary texts.</td>
</tr>
<tr>
<td>SPN 4510</td>
<td>Spanish Civilization and Culture</td>
<td>PR: SPN 3241 or SPN 3420.</td>
<td>A study of Spanish civilization and culture from Pre-Roman times to the present. Conducted in Spanish.</td>
</tr>
<tr>
<td>SPN 4520</td>
<td>Latin American Civilization and Culture</td>
<td>PR: SPN 3241 or SPN 3420.</td>
<td>An overview of the currents in Latin American culture and civilization from the Pre-Columbian period to the present. Conducted in Spanish.</td>
</tr>
<tr>
<td>SPW 3100</td>
<td>Survey of Spanish Literature I</td>
<td>PR: SPN 2231 or equivalent.</td>
<td>Main literary currents and works from the Middle Ages through the Eighteenth Century.</td>
</tr>
<tr>
<td>SPW 3101</td>
<td>Survey of Spanish Literature II</td>
<td>PR: SPN 2231 or equivalent.</td>
<td>Main literary currents and works of the Nineteenth Century to the present.</td>
</tr>
<tr>
<td>SPW 3130</td>
<td>Survey of Latin-American Literature I</td>
<td>PR: SPN 2231 or equivalent.</td>
<td>Main literary currents and works from the colonial period to the Nineteenth Century Romanticism.</td>
</tr>
<tr>
<td>SPW 3131</td>
<td>Survey of Latin-American Literature II</td>
<td>PR: SPN 2231 or equivalent.</td>
<td>Main literary currents and works of the Nineteenth Century from the Realism to the present.</td>
</tr>
<tr>
<td>SPW 3370</td>
<td>Spanish Short Story</td>
<td>PR: SPN 2231 or equivalent.</td>
<td>A study of representative 19th and 20th Century Spanish short stories and their authors.</td>
</tr>
<tr>
<td>SPW 4460</td>
<td>Nineteenth Century Spanish Literature</td>
<td>PR: SPW 3101.</td>
<td>A study of the representative authors and works in Spanish Romanticism, Realism and Naturalism.</td>
</tr>
<tr>
<td>SPW 4480</td>
<td>Twentieth Century Spanish Literature</td>
<td>PR: SPW 3101.</td>
<td>A study of the representative authors and works in drama and the novel.</td>
</tr>
<tr>
<td>SPW 4600</td>
<td>Cervantes I</td>
<td>PR: SPW 3100.</td>
<td>Don Quixote (Part I).</td>
</tr>
</tbody>
</table>
SPW 4601 Cervantes II: PR: SPW 3100, Don Quixote (Part II).


SPW 4770 Caribbean Spanish Literature: An overview of the literature of the Spanish-speaking Caribbean countries from colonial time to the present.

SSE 3312 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.

SSE 3333 Social Science Instructional Analysis: PR: EDG 4321 or C.I. Study of instructional programs in Social Sciences; objectives; materials; techniques; organization of instruction; evaluation procedures; current research.

SSE 5334 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.

SSI 4155 Science Fiction and the Social Sciences: A multi-media examination of note-worthy science fiction from the Social Science perspective.


STA 3023 Statistical Methods I: PR: MAC 1104 or MGF 1203. First methods course introducing probability and statistical inference including estimation, hypothesis testing, binomial and normal distributions, sample size.

STA 3032 Probability and Statistics for Engineers: PR: MAC 3312 and CGS 3422. Axioms of probability; combinatorial and geometrical probability; probability distributions; measures of location and dispersion; sampling and sampling distributions; estimation and tests of hypotheses; engineering applications.

STA 4095 Statistical Problem Solving: PR: STA 4164. Course presents approaches to solving a wide variety of statistics problems. Emphasizes assumptions, parametric and nonparametric approaches to problems in all areas of statistics.

STA 4102 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 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 4173 Biostatistical Methods: CR: STA 4163. Introduction to the application of statistical principles and methods to problems in medical, biological and health sciences.


STA 4321 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 4502 Nonparametric Statistical Methods: PR: STA 3023 or STA 3032. Distribution-free tests on location and dispersion, goodness of fit tests, tests of independence, measures of association, nonparametric analysis of variance.

STA 4664 Statistical Quality Control: PR: STA 3023 or STA 3032. Statistical concepts and methods applied to the control of quality of manufactured products.
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.


Statistical Analysis: PR: STA 3023; not open to students who have completed STA 4164. Data analysis; statistical models; estimation; tests of hypotheses; analysis of variance, covariance and multiple comparisons; regression and nonparametric methods.

Categorical Data Methods: PR: STA 4163 or STA 5206. Considers discrete probability distributions, contingency tables, measures of association and advanced methods including loglinear modeling, logistic regression, McNemar's Test, Mantel-Haenszel test.


Surveying: PR: MAC 3311 and Junior standing. Theory and field practice in surveying measurements, and the reduction and adjustment of field data.

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.

Modern Sociological Thought: PR SYG 2000. A study of major European and American contributors to modern sociology since World War II.


Research Methods and Statistics: PR: SYG 2000 and one other sociology course.

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.

Data analysis: PR SYA 3300 and STA 2014. Advanced social research design and analytical skills. Emphasis on social data management, various modes of social data analysis, interpretation, integration, presentation and report writing.


Race and Ethnic Minorities in the United States: Theoretical analysis of the emergence, maintenance and disruption of patterns of racial and ethnic stratification.

Sex Roles in Modern Society: The traditional and changing roles of women and men viewed in a sociological perspective.

Population: Concerned with the study of human population, its distribution, composition and change.

Soviet Sociology: Analysis of relations of various Soviet institutions such as education, religion, and the Communist party to society; class structure and social problems.

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.

Social Problems: Analysis of major social problems such as mental disorders, sexual deviance, racial discrimination, poverty, community disorganization, and violence.
SYO 3000  
**Modern Sociology:** PR: SYG 2000. An in-depth exploration of contemporary sociology. Introduction to conceptual analysis and methodological techniques, presentation and utilization of sociological literature on major social institutions.  
AS 3(3,0)

**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.  
AS 3(3,0)

**Sociology of Mental Illness:** A sociological examination of mental illness as a social problem; legal aspects of mental illness, and the mental health professions.  
AS 3(3,0)

**Social Stratification:** PR: SYG 2000. Study of class, status and power, cultural variations in stratification systems; patterns of mobility and change.  
AS 3(3,0)

**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.  
AS 3(3,0)

**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.  
AS 3(3,0)

**Political Sociology:** Sociological analysis of political and parapolitical groups; socioeconomic variable of voting behavior, power elites; societies and systems of government.  
AS 3(3,0)

**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.  
AS 3(3,0)

**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.  
AS 3(3,0)

**Social Change:** PR: SOC 2000. Concerned with the context and essential sources of social development and change.  
AS 3(3,0)

**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.  
AS 3(3,0)

**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.  
AS 3(3,0)

**Juvenile Delinquency:** Types of delinquency behavior found among juveniles; possible causes and ways society attempts to treat the various forms of delinquency.  
AS 3(3,0)

**Sociology of Alcoholism:** Introduction to the nature of alcoholism and review of its impact on society.  
AS 3(3,0)

**Sociological Social Psychology:** PR: SYG 2000. Study of human socialization processes as well as organizational influences and interpersonal behavior on attitude formation and change, self-concept, decision-making and vice versa.  
AS 3(3,0)

**Sociology of Drug Abuse:** Analysis of the socio-culture elements of the drug culture.  
AS 3(3,0)

**Sociology of Aging:** Sociological aspects of aging in America.  
AS 3(3,0)

**TAX 3000:**  
**Personal Income Tax:** A study of federal income tax designated to convey basic tax concepts and skills related to the individual taxpayer. Not open to accounting majors.  
BA 3(3,0)

**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.  
BA 3(3,0)

**Federal Income Tax II:** PR: ACG 4123, TAX 4001 and meet school admission requirements. Concepts and methods of determining taxable income for partnerships and corporations; and selected topics.  
BA 3(3,0)

**THE 1020:**  
**Theatre Survey:** PR: None. An overview of the theatre arts.  
AS 3(2,1)

**THE 2071:**  
**Cinema Survey:** A broad cultural approach to the study of cinema.  
AS 3(2,1)

**THE 2925:**  
**Theatre Practicum I:** Open to all students interested in participating in productions of University Theatre. May be repeated for credit. Primarily an activity course.  
AS 2(0,10)
THE 3112
Theatre History I: Development of theatre art from the earliest times through the seventeenth century. AS 3(3,0)
THE 3113
Theatre History II: Development of theatre art from the seventeenth century to the twentieth century. AS 3(3,0)
THE 3251
History of the Motion Picture: Development of the film industry; its social and economic impact. Major films and trends in context. AS 3(3,0)
Theatrical Costume History and Design: PR: TPA 2211: History and theory of theatrical costumes. AS 3(2,2)
Drama Analysis: A study of a method of analysis for dramatic scripts and an intensive examination of selected modern and period play scripts. AS 3(3,0)
Modern Drama: Drama from Ibsen to Theatre of the Absurd, with reference to developing production styles and dramatic movements. AS 3(3,0)
Stage Diction: The role of the voice in the art of acting through practice in vocal characterization. AS 3(2,2)
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. AS 2(0,10)
Principles of Motion Picture Art: PR: THE 3251 or C.I. Aesthetic consideration of the motion picture as art. May be repeated for credit. AS 3(3,0)
Film Production: PR: C.I. Professional 16mm film production, scripting, production, sound, and editing of theatre department ensemble films. May be repeated twice. 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. AS 3(2,2)
TPA 2210
Technical Theatre Production I: History, theory, and practice of technical theatre production. AS 3(2,2)
TPA 2211
Technical Theatre Production II: A continuation of TPA 2210 (Service on crew as required). 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). AS 3(2,2)
Scene Painting: PR: THE 1020, TPA 3060, or C.I. Study of the art and craft of painting for the theatre. Research into period designs and execution of examples of a variety of styles. AS 3(3,0)
Stage Lighting: PR: THE 1020 and TPA 2210 or C.I. Study of stage lighting techniques, practices, and equipment. (Service on light crew as required). AS 3(2,2)
Lighting Design: PR: TPA 3220. Continuation of Stage Lighting with emphasis on theory, style and individual lighting design projects. 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. (Service on crew as required.) AS 3(2,2)
Make-up Technique: Analysis and design of stage make-up. AS 3(3,0)
Theatre Management: Study of the development, organization, management, funding, and promotion of Theatre programs. AS 3(3,0)
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. AS 3(2,2)
Acting I: Emphasis on movement, motivation, voice, characterization, and makeup, and other basic requirements for acting. AS 3(2,2)
Acting II: PR: TPP 2110 or C.I. Continuation of TPP 2110. May be repeated for credit. 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. AS 3(2,2)
Directing I: PR: TPP 2110 or C.I. Fundamental principles of theatrical directing. Each student to direct short scenes and one-act play for laboratory presentation and critique. AS 3(2,2)
Stage Diction: The role of the voice in the art of acting through practice in vocal characterization. AS 3(2,2)
Scene Study and Character Development: PR: C.I. The study, development and training of performance skills with an emphasis on scene study and character development. AS 3(2,2)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPP 4220</td>
<td>Audition Techniques: Preparation of audition material for musical, dinner, outdoor and repertory theatres, as well as graduate schools. Emphasis on resumes and unions.</td>
<td>AS 3(2,2)</td>
</tr>
<tr>
<td>TPP 4260</td>
<td>Acting II: PR: C.I. Entry by audition. Advanced study of the problems and techniques of auditioning, creating and developing subtext, and acting in specialized forms.</td>
<td>AS 3(2,2)</td>
</tr>
<tr>
<td>TPP 4311</td>
<td>Directing II: PR: C.I. Techniques of period styles directing. Cuttings from Greek theatre, Shakespeare, Restoration, Experimental and Musical theatre will be presented and criticized in a laboratory format.</td>
<td>AS 3(2,2)</td>
</tr>
<tr>
<td>TTE 4004</td>
<td>Transportation Engineering: PR: EGN 3613 and STA 3032. Investigation of all forms of transportation-highway, rail, water, air. Systems approach to planning, design, construction, operation, and administration of transportation networks.</td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>TTE 4501</td>
<td>Urban Systems Design. PR: TTE 4004. Project course on design of transportation and urban systems using engineering design methodologies.</td>
<td>EN 2(1,2)</td>
</tr>
<tr>
<td>TTE 5204</td>
<td>Traffic Engineering: PR: STA 3032. Study of operator and vehicle characteristics, and design for street capacity, signals, signs and markings.</td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>TTE 5720</td>
<td>Geometric Designs of Transportation Systems: PR: TTE 4004. Study of geometric and construction design elements in the engineering of transportation systems.</td>
<td>EN 3(3,0)</td>
</tr>
<tr>
<td>URP 4028</td>
<td>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.</td>
<td>AS 4(4,0)</td>
</tr>
<tr>
<td>VIC 3000</td>
<td>Visual Communication: A study of the visual system of man, and the influences of the visual media on modern society.</td>
<td>AS 3(3,0)</td>
</tr>
<tr>
<td>ZOO 1020</td>
<td>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.</td>
<td>AS 2(2,0)</td>
</tr>
<tr>
<td>ZOO 2010C</td>
<td>General Zoology: PR: High school biology or C.I. Introduction to zoology; structure, function and representative groups; current concepts in zoological sciences.</td>
<td>AS 4(2,4)</td>
</tr>
<tr>
<td>ZOO 3303C</td>
<td>Vertebrate Zoology: PR: 6 hours of zoology or C.I. Evolution and classification followed by an introduction to vertebrate ecology, natural history and behavior.</td>
<td>AS 4(2,6)</td>
</tr>
<tr>
<td>ZOO 3713C</td>
<td>Comparative Vertebrate Anatomy: PR: ZOO 2010C. The vertebrate animals; relationship of organs and systems; and their phylogenetic significance.</td>
<td>AS 5(3,6)</td>
</tr>
<tr>
<td>ZOO 3733C</td>
<td>Human Anatomy: PR: BSC 2010C or equivalent. Structure of the human body. Not open to students in ZOO 3713C or equivalent.</td>
<td>AS 4(3,3)</td>
</tr>
<tr>
<td>ZOO 4203C</td>
<td>Invertebrate Zoology: PR: 8 hours of biology or C.I. Taxonomy, anatomy and ecology of the invertebrate animals.</td>
<td>AS 4(3,3)</td>
</tr>
<tr>
<td>ZOO 4501C</td>
<td>Embryology/Development: PR: 8 hours of biology or C.I. Concepts of developmental processes. Emphasis on embryology of vertebrates.</td>
<td>AS 5(3,4)</td>
</tr>
<tr>
<td>ZOO 4753C</td>
<td>Vertebrate Histology: PR: BSC 2010C and ZOO 2010C. Microanatomical detail plus appropriate developmental and functional considerations of major cell types, primary tissues, organs and organ systems. Survey of modern animal-tissue microtechnique.</td>
<td>AS 5(4,4)</td>
</tr>
<tr>
<td>ZOO 4880C</td>
<td>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.</td>
<td>AS 4(2,6)</td>
</tr>
<tr>
<td>ZOO 5456C</td>
<td>Ichthyology: PR: ZOO 3303C or C.I. Introduction to the biology of the fishes, their classification, evolution and life histories.</td>
<td>AS 4(2,6)</td>
</tr>
<tr>
<td>ZOO 5463C</td>
<td>Herpetology: PR: 6 hours of zoology or C.I. Introduction to the biology of the amphibians and reptiles, their classification, evolution and life histories.</td>
<td>AS 4(2,6)</td>
</tr>
<tr>
<td>ZOO 5475C</td>
<td>Ornithology: PR: 6 hours of zoology or C.I. Introduction to the biology of birds, their classification, evolution and life histories.</td>
<td>AS 4(2,6)</td>
</tr>
<tr>
<td>ZOO 5483C</td>
<td>Mammalogy: PR: 6 hours of zoology or C.I. Introduction to the biology of mammals, their classification, evolution and life histories.</td>
<td>AS 4(2,6)</td>
</tr>
</tbody>
</table>

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ZOO 5745C
Essentials of Neuroanatomy: PR: Human/Comparative Anatomy, or Human/Animal Physiology or C.I.
Fundamental concepts of both morphological and functional organization of the nervous system. Primary emphasis on human structure.

ZOO 5815
Zoogeography: PR: 8 hours of zoology or C.I. Principles and concepts concerning regional patterns of animal distributions of the world, both past and present.
The date indicates the first year of employment at the University of Central Florida.

ABBOTT, DAVID W., Professor of Psychology  
(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., Professor of Cardiopulmonary Sciences  
(1981), B.S., M.D. (Georgetown University)

ADAMS, LASCELLES, Visiting Instructor of Computer Science  
(1985), B.S., M.B.A., M.S. (University of Central Florida)

ADICKS, RICHARD R., Professor of English  
(1958), B.A.E., M.A., Ph.D. (Tulane University)

ALIDINA, MOHAMED, Assistant Professor of Accounting  
(1983), B.S., M.B.A., M.A., Ph.D. (Temple University), C.P.A.

ALLEN, WILLIAM D., Professor of Sociology  
(1969), B.S., M.S.W., Ph.D. (Ohio State University)

ANDERSON, B. BETTY, Professor of Education  
(1968), B.A., M.A., Ed.D. (University of Maryland)

ANDERSON, HENRY R., Director, School of Accounting and Professor of Accounting  

ANDERSON, LOREN A., Associate Professor of Engineering  
(1982), B.S., M.S., Ph.D. (University of Dayton), P.E. (Florida and Ohio)

ANDREWS, LARRY C., Professor of Mathematics  
(1972), B.S., M.S., Ph.D. (Michigan State University)

ANTHONY, JOBY M., Associate Professor of Mathematics  
(1970), B.S., M.A.M., Ph.D. (North Carolina State University)

ARMSTRONG, JAMES R., Assistant Professor of Military Science  
(1985), B.S. (Indiana State University)

ARMSTRONG, JOHN H., Director of Student Internships and Associate Professor of Education  
(1970), B.S., M.S., Ed.D. (Oklahoma State University)

ARMSTRONG, LEE H., Assistant Dean of College of Arts and Sciences and Associate Professor of Mathematics  
(1968), B.A., M.S., Ph.D. (Florida State University)

ARNOLD, ROBERT L., Director of Instructional Resources and Professor of Communication  
(1968), B.A., M.A., Ph.D. (Ohio University)

ASHLEY, ROBERT A., Instructor of Hospitality Management  
(1984), B.S., M.S. (Florida International University)

ATKINSON, STANLEY M., Associate Professor of Finance  

ASTRO, RICHARD, Provost and Vice President of Academic Affairs and Professor of English  
(1986), B.A., M.A., Ph.D., (University of Washington)

AVERY, CLARENCE G., Professor of Accounting  

AZIMI, CYRUS, Visiting Instructor of Psychology  
(1985), B.S., M.A., Ph.D. (Michigan State)

BAKER, GRAEML L., Professor of Chemistry  
(1968), B.S., M.S., Ph.D. (Montana State University)

BANDY, DALTON D., Professor of Accounting  
(1985), B.S., M.B.A., Ph.D. (The University of Texas at Austin), C.P.A.
BARR, CAROL J., Assistant Professor of Medical Record Administration (1986), B.S., M.A. (University of Central Florida)

BARR, MURRAY P., Assistant Professor of Mathematics (1968), B.S., M.S. (Adelphi University)

BARSCH, KARL-HEINRICH, Associate 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., Chair, Department of Computer Engineering and Professor of Engineering (1970), B.S.I.E., M.S.E., Ph.D. (University of Florida), P.E. (Florida)

BAUMBACH, DONNA J., Associate Professor of Education (1978), B.S., M.S., Ed.D. (Indiana University)

BEARD, 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)

BECKER, STEPHEN, Distinguished Lecturer in English (1986), B.A. (Harvard College)

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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
December, 1979    Joseph D. Duffey, Doctor of Humane Letters
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
July, 1983  J. W. Hubler, Doctor of Engineering Science
December, 1984  Allan E. Gotlieb, Doctor of Laws
June, 1985  D. Robert Graham, Doctor of Public Service
June, 1985  Jerry Collins, Doctor of Public Service
June, 1985  George J. Becker, Jr., Doctor of Public Service
June, 1985  Walter O. Lowrie, Doctor of Engineering Science
June, 1985  William C. Schwartz, Doctor of Engineering Science

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