



# UNIVERSITY OF CENTRAL FLORIDA CATALOG 82 / 83





**UNIVERSITY OF CENTRAL FLORIDA**  
A Member Institution  
of the  
State University System of Florida  
Orlando, Florida 32816



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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This public document was promulgated at an annual cost of \$1.10 per copy to acquaint the student with the program of study and the cost of attending the university.

## STATE OF FLORIDA BOARD OF EDUCATION

D. Robert Graham ..... Governor  
Ralph Turlington ..... Commissioner of Education  
James C. Smith ..... Attorney General  
Bill Gunter ..... State Treasurer  
George Firestone ..... Secretary of State  
Gerald Lewis ..... Comptroller  
Doyle Conner ..... Commissioner of Agriculture

## STATE OF FLORIDA BOARD OF REGENTS

DuBose Ausley, Chairman ..... Tallahassee  
Betty Anne Staton, Vice Chairman ..... Orlando  
James E. Blount ..... Student  
J. Hyatt Brown ..... Daytona Beach  
J. J. Daniel ..... Jacksonville  
Murray H. Dubbin ..... Miami  
Robin Gibson ..... Lake Wales  
Raleigh Greene ..... St. Petersburg  
William F. Leonard ..... Fort Lauderdale  
William L. Maloy ..... Pensacola  
Frank P. Scruggs, II ..... Miami  
T. Terrell Sessums ..... Tampa  
Ralph D. Turlington, Commissioner of Education ..... Tallahassee  
Barbara W. Newell, Chancellor ..... Tallahassee

## PRINCIPAL OFFICERS OF ADMINISTRATION

President .....	Trevor Colbourn
Provost and Vice President for Academic Affairs .....	Leslie L. Ellis
Vice President for Business Affairs .....	John P. Goree
Vice President for Research .....	Louis Trefonas

## ADMINISTRATION

### Office of the President

Executive Assistant to the President for Employee Relations .....	Frank E. Juge
Legal Counsel .....	Ashmun Brown
Director of Affirmative Action .....	Carol Surles
Director of Athletics .....	To be announced

### Office of the Provost and Vice President for Academic Affairs

Associate Vice President for Academic Affairs .....	John R. Bolte
Director, Institutional Research .....	Daniel R. Coleman
Director, Instructional Resources .....	Robert L. Arnold
Director, Brevard Campus .....	Robert W. Westrick
Director, Daytona Beach Campus .....	Harold E. Green
Director, South Orlando Campus .....	Richard C. Harden
Assistant Director of Instruction & Research Budgeting .....	L. Ann Clark
University Registrar .....	Wm. Dan Chapman
Director of Admissions .....	Ralph Boston
Director of Records & Registration .....	Ed. Knight
Associate Vice President for Academic Affairs .....	Frank E. Juge
Director, Libraries .....	Lynn W. Walker

Vice President for Student Affairs .....	LeVester Tubbs
Assistant to Vice President .....	Kenneth Lawson
Dean of Students .....	C. W. Brown
Associate Dean, Student Services .....	Carol P. Wilson
Director, Creative School for Children .....	Dolores Burghard
Director, Counseling and Testing .....	Kenneth Fisher
Director, Evening Services .....	Anne Broughton-Kerr
Director, Housing .....	Christopher McCray
Director, International Student Services .....	N. D. Hoan
Director, Recreational Services .....	Loren Knutson
Director, Special Services .....	Napolean Ford
Director, Student Center/Student Organizations .....	Jimmie Ferrell
Director, Student Financial Aid .....	Donald Baldwin
Director, Student Health Services .....	Edward Stoner
Director, Cooperative Education and Placement .....	James Gracey
Director, Counseling Coordinator, Veteran's Affairs .....	Nancie Wilson

## Office of the Vice President for Business Affairs

University Business Manager .....	Joyce A. Clampitt
Director, Auxiliary/Administrative Services .....	Richard M. Scott
Director, Physical Plant .....	Donald C. Lee
Director, Budget Office .....	James G. Smith, Jr.
Director, Computer Center .....	William H. Branch
Director, Personnel Services .....	Robert T. Schaal
Director, Operations Analysis .....	Bill D. Morris
Director, Police Department .....	John F. Smith
Director, Purchasing .....	Gladys C. Horton
University Controller .....	Joseph Gomez
University Safety Officer .....	James K. Eller
Director, Facilities Planning .....	Robert F. Webb

## Office of the Vice President for Research and Dean of Graduate Studies

Acting Director for Research .....	Joan Burr
Manager, DOD Programs .....	Gene W. Blount
NTEC Contract Coordinator .....	Mary Ann Johnston
Grant Development Coordinator .....	Nancy B. Morgan
Grant Management Coordinator .....	Rusty Okoniewski
Dean of Graduate Studies .....	Louis M. Trefonas
Associate Dean of Graduate Studies .....	Roger Handberg

## Office of Undergraduate Studies

Dean .....	Charles N. Micarelli
Associate Dean .....	Paul R. McQuilkin
Assistant Dean .....	Carol C. Bledsoe
Acting Assistant Dean .....	Beth Barnes
Counseling Coordinator, School & Community College Relations .....	Edith Napper
Director, Minority Student Services .....	Robert Belle
Asst. Director of Testing & Evaluation .....	Mary Hartman

## Office of Community Relations

Director, Development & Alumni Services .....	James A. Donovan
Coordinator of Alumni Services .....	Mark W. Glickman
Director, Informational Services .....	Kenneth J. Sheinkopf
Director, Public Affairs .....	C. Barth Engert

## COLLEGES, DEPARTMENTS AND PROGRAMS

### College of Arts and Sciences

Dean	Ralph A. Llewellyn
Associate Dean	Jack B. Rollins, Jr.
Associate Dean	John P. Idoux
Assistant to the Dean	Lawrence A. Tanzi
Director, OASIS	David R. Dees
Coordinator, Preprofessional Programs	Orville Berringer
Art	Charles W. Wellman
Biological Sciences	Franklin Snelson
Chemistry	Guy C. Mattson
Communication	Raymond W. Buchanan, Jr.
Computer Science	Terry J. Frederick
English	Stuart Omans
Foreign Languages	Armando Payas
History	Jerrell H. Shofner
Humanities, Philosophy and Religion	Paul E. Riley
Mathematics and Statistics	Joby M. Anthony
Music	J. Gary Wolf
Physics	Jack H. Noon
Political Science	Stuart A. Lillie
Psychology	Richard D. Tucker
Public Service Administration	N. Gary Holten
Sociology	William R. Brown
Theatre	Harry W. Smith, Jr.

### College of Business Administration

Dean	Clifford L. Eubanks
Associate Dean	L. P. Jarvis
Assistant Dean	Wade R. Kilbride
Accountancy	Clarence G. Avery
Economics	Brian Rungeling
Finance	Edward A. Moses
Management	Richard C. Reidenbach
Marketing	Gordon W. Paul

### College of Education

Dean	C. C. Miller
Associate Dean	Robert G. Cowgill
Assistant Dean	J. Nannette McLain
Instructional Programs	Robert D. Martin
Educational Services	John W. Powell
Educational Foundations	W. K. Esler



## College of Engineering

Dean .....	Robert D. Kersten
Associate Dean .....	George F. Schrader
Assistant Dean .....	Bruce E. Mathews
Assistant Dean .....	J. Paul Hartman
Civil Engineering and Environmental Sciences .....	Martin P. Wanielista
Electrical Engineering and Communication Sciences .....	B. E. Petrasko
Engineering Mathematics and Computer Systems .....	Gary E. Whitehouse
Industrial Engineering and Management Systems .....	Gary E. Whitehouse
Mechanical Engineering and Aerospace Sciences (Acting) .....	David R. Jenkins
Engineering Technology .....	Richard G. Denning

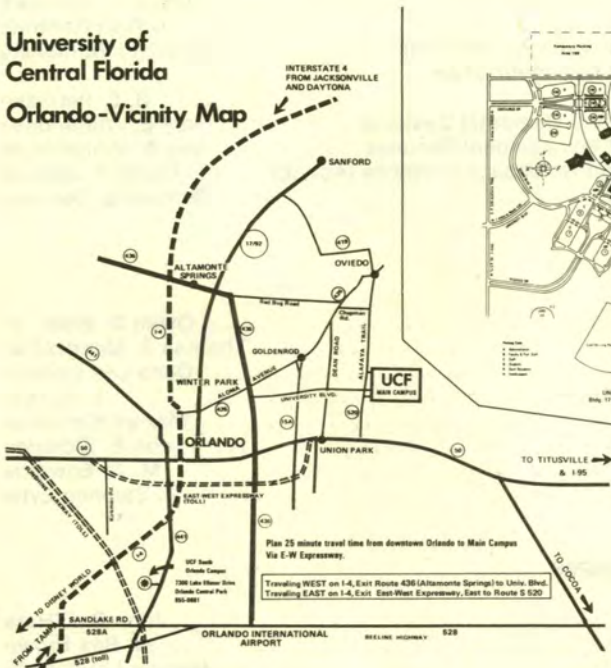
## College of Health

Dean .....	Owen C. Elder, Jr.
Assistant Dean .....	Thomas S. Mendenhall
Communicative Disorders .....	Dona Lea Hedrick
Medical Record Administration .....	L. Kuyper
Medical Technology .....	Marilyn Kangelos
Nursing .....	Leon E. Eldredge
Radiologic Sciences .....	M. Jo Edwards
Respiratory Therapy .....	J. Stephen Lytle

## College of Extended Studies

Dean .....	John B. O'Hara
Associate Dean .....	W. Rex Brown
Director .....	Jeannie Loudermilk
Visiting Coordinator, Project Diversion .....	Cyndee Hutchinson
Coordinator .....	Patricia Corcoran
Coordinator .....	John Larson
Real Estate Institute .....	Lee Constantine

# University of Central Florida Orlando-Vicinity Map



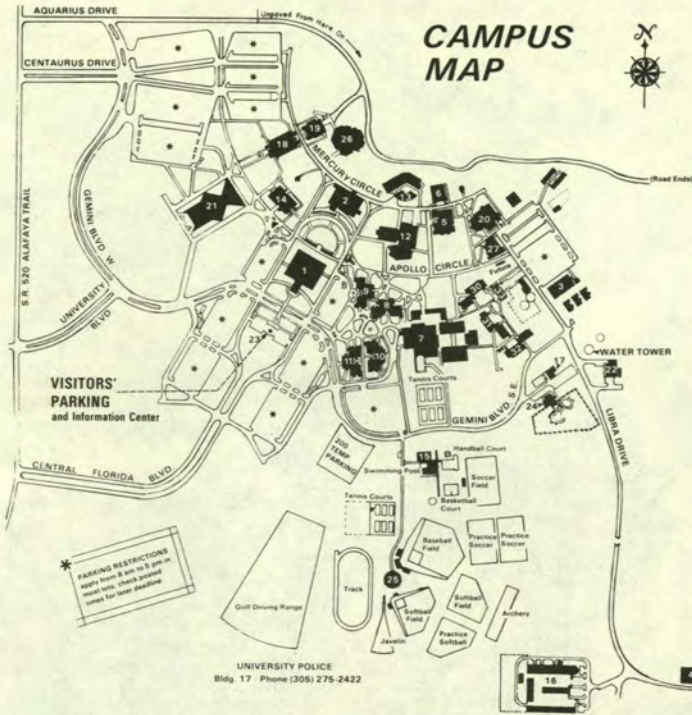
phone: 305-275-9101

CAMPUS POLICE - 275-2421  
PAD 1/81



# University of Central Florida

## CAMPUS MAP



\* PARKING RESTRICTIONS apply from 8 am to 5 pm on most lots. Check posted signs for later details.

UNIVERSITY POLICE  
Bldg. 17 Phone (305) 275-2422

- |                        |                                   |                                     |
|------------------------|-----------------------------------|-------------------------------------|
| 1 ADMINISTRATION BLDG  | 12 ENGINEERING BLDG               | 23 VISITORS INFORMATION CENTER      |
| 2 LIBRARY BLDG         | 13 COMPUTER CENTER                | 24 CREATIVE SCHOOL FOR CHILDREN     |
| 3 UTILITY PLANT / HVAC | 14 HOWARD PHILLIPS HALL           | 25 PHYSICAL EDUCATION SUPPORT BLDG. |
| 4 SEWAGE PLANT         | 15 RECREATIONAL SERVICES BLDG.    | 26 STUDENT SERVICES BLDG.           |
| 5 CHEMISTRY BLDG       | 16 PHYSICAL PLANT COMPLEX         | 27 STUDENT HEALTH CENTER            |
| 6 SCIENCE AUDITORIUM   | 17 CAMPUS POLICE BLDG.            | 28 FUTURE NEWSPAPER                 |
| 7 STUDENT CENTER       | 18 HUMANITIES & FINE ARTS BLDG.   | 29 RESIDENCE E                      |
| 8 RESIDENCE A          | 19 REHEARSAL HALL                 | 30 RESIDENCE F                      |
| 9 RESIDENCE B          | 20 BIOLOGICAL SCIENCES BLDG.      | 31 RESIDENCE G                      |
| 10 RESIDENCE C         | 21 EDUCATION COMPLEX & GYMNASIUM  | 32 COMMONS BUILDING                 |
| 11 RESIDENCE D         | 22 CENTRAL RECEIVING / PRINT SHOP |                                     |

PAD  
Rev. 1/82





## SUMMER SEMESTER 1982

<b>FEBRUARY 8</b>	Last day for receipt of applications and required supporting documents from International Students
<b>APRIL 5</b>	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
<b>APRIL 26</b>	Last day for receipt of readmission applications
<b>MAY 3-5</b>	Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised
<b>MAY 4</b>	Advisement of current and former students not pre-advised
<b>MAY 6-7</b>	*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments
<b>MAY 10</b>	Classes begin for Summer Semester
<b>MAY 14</b>	Last day to adjust class schedule (end of Add/Drop). Last day for refund.
<b>MAY 14</b>	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
<b>MAY 14</b>	Last day to apply for graduation for those completing requirements end of Summer Semester
<b>MAY 14</b>	Last day to change from credit to audit
<b>MAY 14</b>	Last day to submit Grade Forgiveness Request.
<b>MAY 31</b>	Memorial Day Holiday (University-wide)
<b>JUNE 1</b>	Classes resume
<b>JUNE 7</b>	Last day for removing temporary student status
<b>JUNE 18</b>	Deadline for withdrawal. Last day to withdraw from a course or the University
<b>JULY 5</b>	Independence Day Holiday (University-wide)
<b>JULY 6</b>	Classes resume
<b>JULY 16</b>	Last day to remove an "I" earned last semester
<b>JULY 30</b>	Classes end for Summer Semester. Final exam given at discretion of instructor
<b>AUGUST 2 (NOON)</b>	Final corrected dissertation copies due in Library. Grades due in Registrar's Office

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

<b>MAY</b>	1
2 3 4 5 6 7 8	
9 10 11 12 13 14 15	
16 17 18 19 20 21 22	
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<b>JUNE</b>	1 2 3 4 5
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<b>JULY</b>	1 2 3
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## SUMMER "A" TERM 1982

<b>FEBRUARY 8</b>	Last day for receipt of applications and required supporting documents from International Students
<b>APRIL 5</b>	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
<b>APRIL 26</b>	Last day for receipt of readmission applications
<b>MAY 3-5</b>	Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised
<b>MAY 4</b>	Advisement for current and former students not pre-advised
<b>MAY 6-7</b>	*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments
<b>MAY 10</b>	Classes begin for Summer "A" Term
<b>MAY 14</b>	Last day to adjust class schedule (end of Add/Drop). Last day for refund
<b>MAY 14</b>	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
<b>MAY 14</b>	Last day to apply for graduation for those completing requirements end of Summer Semester
<b>MAY 14</b>	Last day to change from credit to audit
<b>MAY 14</b>	Last day to submit Grade Forgiveness Request.
<b>MAY 28</b>	Deadline for withdrawal. Last day to withdraw from a course or the University
<b>MAY 31</b>	Memorial Day Holiday (University-wide)
<b>JUNE 1</b>	Classes resume
<b>JUNE 1</b>	Last day for removing temporary student status
<b>JUNE 16</b>	Last day to remove an "I" earned last semester
<b>JUNE 18</b>	End of Summer "A" Term, classes and exams
<b>JUNE 21 (NOON)</b>	Grades due in Registrar's Office

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

### APRIL

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### JUNE

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## SUMMER "B" TERM 1982

<b>MARCH 26</b>	Last day for receipt of applications and required supporting documents from International Students
<b>MAY 18</b>	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
<b>MAY 28</b>	Last day for receipt of readmission applications
<b>JUNE 15-16</b>	Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised
<b>JUNE 16</b>	Advisement of current and former students not pre-advised
<b>JUNE 17</b>	*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment.
<b>JUNE 21</b>	Classes begin for Summer "B" Term
<b>JUNE 23</b>	Last day to adjust class schedule (end of Add/Drop). Last day for refund.
<b>JUNE 23</b>	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
<b>JUNE 23</b>	Last day to apply for graduation for those completing requirements end of Summer "B" Term
<b>JUNE 23</b>	Last day to change from credit to audit
<b>JUNE 23</b>	Last day to submit Grade Forgiveness Request.
<b>JULY 5</b>	Independence Day Holiday (University-wide)
<b>JULY 6</b>	Classes resume
<b>JULY 9</b>	Last day to remove an "I" earned last semester
<b>JULY 9</b>	Deadline for withdrawal for Summer "B" Term students only. Last day to withdraw from a course or the University
<b>JULY 19</b>	Last day for removing temporary student status
<b>JULY 30</b>	End of Summer "B" Term, classes and exams
<b>AUGUST 2 (NOON)</b>	Grades due in Registrar's Office

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

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<b>JULY</b>										
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## FALL SEMESTER 1982

MAY 17	Last day for receipt of applications and required supporting documents from International Students
JUNE 14	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
JULY 19	Last day for receipt of readmission applications
AUGUST 16	Academic year begins
AUGUST 16-18	Orientation and advisement for new freshmen and transfer students not pre-advised
AUGUST 16-18	Advisement of current and former students not pre-advised
AUGUST 16-19	*Registration by appointment for the following student classifications: Graduate, current undergraduate, readmitted undergraduate, new undergraduate and post-baccalaureate. Faculty and staff will register following the above appointments. Registration will close after the last appointment
AUGUST 23	Classes begin for Fall Semester
AUGUST 27	Last day to adjust class schedule (end of Add/Drop)
AUGUST 27	Last day to submit Grade Forgiveness Request
AUGUST 27	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
AUGUST 27	Last day for refund
AUGUST 27	Last day to apply for graduation for those completing requirements end of Fall Semester
AUGUST 27	Last day to change from credit to audit
SEPTEMBER 6	Labor Day Holiday (University-wide)
SEPTEMBER 7	Classes resume
SEPTEMBER 21	Last day for removing temporary student status
OCTOBER 15	Deadline for withdrawal. Last day to withdraw from a course or the University
	Graduate record exam (at designated examination centers). Registration for examination must be made 4 weeks prior to this date
OCTOBER 29	Homecoming Celebration. Classes dismissed 12:noon to 1:00 p.m.
NOVEMBER 11-12	Veterans' Day Holiday (University-wide)
NOVEMBER 15	Classes resume
	Graduate record exam (at designated examination centers). Registration for examination must be made 4 weeks prior to this date

### JUNE

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### JULY

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### AUGUST

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### SEPTEMBER

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### OCTOBER

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31						



**NOVEMBER 19**  
**NOVEMBER 25-26**  
**NOVEMBER 29**  
**DECEMBER 10**  
**DECEMBER 13-16**  
**DECEMBER 17**  
**DECEMBER 20 (NOON)**  
**DECEMBER 20**

Last day to remove an "I" earned last semester  
 Thanksgiving Holidays (University-wide)  
 Classes Resume  
 Classes end for Fall Semester  
 Final Examination period  
 Commencement  
 Grades due in Registrar's Office  
 Christmas Holidays begin (students)

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

**NOVEMBER**

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**DECEMBER**

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30	31			

## SPRING SEMESTER 1983

<b>SEPTEMBER 30</b>	Last day for receipt of applications and required supporting documents from International Students
<b>NOVEMBER 8</b>	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
<b>DECEMBER 6</b>	Last day for receipt of readmission applications
<b>JANUARY 3-4</b>	Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised
<b>JANUARY 3-4</b>	*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments
<b>JANUARY 6</b>	Classes begin for Spring Semester
<b>JANUARY 13</b>	Last day to adjust class schedule (end of Add/Drop)
<b>JANUARY 13</b>	Last day to submit Grade Forgiveness Request
<b>JANUARY 13</b>	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
<b>JANUARY 13</b>	Last day for refund
<b>JANUARY 13</b>	Last day to apply for graduation for those completing requirements end of Spring Semester
<b>JANUARY 13</b>	Last day to change from credit to audit
<b>JANUARY 14</b>	Martin Luther King Day. Classes dismissed 11 a.m. to 1 p.m.
<b>FEBRUARY 4</b>	Last day for removing temporary student status
	Graduate record exam (at designated examination centers). Registration for examination must be made 4 weeks prior to this date
<b>MARCH 2</b>	Deadline for withdrawal. Last day to withdraw from a course or the University.
<b>MARCH 3-4</b>	Spring Holidays
<b>MARCH 7</b>	Classes resume
<b>APRIL 6</b>	Last day for removing an "I" earned last semester
<b>APRIL 22</b>	Classes end for Spring Semester
<b>APRIL 25-28</b>	Final Examination period
<b>APRIL 29</b>	Commencement
	Academic year ends
<b>MAY 2 (NOON)</b>	Grades due in Registrar's Office

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

**JANUARY**            1  
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 30 31

**FEBRUARY**  
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 27 28

**MARCH**  
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## SUMMER SEMESTER 1983

<b>JANUARY 31</b>	Last day for receipt of applications and required supporting documents from International Students
<b>MARCH 28</b>	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
<b>APRIL 11</b>	Last day for receipt of readmissions applications
<b>MAY 3-5</b>	Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised
<b>MAY 4</b>	Advisement for current and former students not pre-advised
<b>MAY 5-6</b>	*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.
<b>MAY 9</b>	Classes begin for Summer Semester.
<b>MAY 13</b>	Last day to adjust class schedule (end of Add/Drop)
<b>MAY 13</b>	Last day to submit Grade Forgiveness Request
<b>MAY 13</b>	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
<b>MAY 13</b>	Last day for refund
<b>MAY 13</b>	Last day to apply for graduation for those completing requirements end of Summer Semester
<b>MAY 13</b>	Last day to change from credit to audit
<b>MAY 30</b>	Memorial Day Holiday (University-wide)
<b>MAY 31</b>	Classes resume
<b>JUNE 6</b>	Last day for removing temporary student status
	Graduate record exam (at designated examination centers). Registration for examination must be made 4 weeks prior to this date.
<b>JUNE 17</b>	Deadline for withdrawal. Last day to withdraw from a course or the University
<b>JULY 4</b>	Independence Day Holiday (University-wide)
<b>JULY 5</b>	Classes resume
<b>JULY 8</b>	Last day to remove an "I" earned last semester
<b>JULY 29</b>	Classes end for Summer Semester. Final exam given at discretion of instructor
<b>AUGUST 1 (NOON)</b>	Grades due in Registrar's Office

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

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## SUMMER "A" TERM 1983

<b>JANUARY 31</b>	Last day for receipt of applications and required supporting documents from International Students
<b>MARCH 28</b>	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
<b>APRIL 11</b>	Last day for receipt of readmissions applications
<b>MAY 3-5</b>	Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised
<b>MAY 4</b>	Advisement for current and former students not pre-advised
<b>MAY 5-6</b>	*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment. Faculty and staff will register following the above appointments.
<b>MAY 9</b>	Classes begin for Summer "A" Term
<b>MAY 13</b>	Last day to adjust class schedule (end of Add/Drop)
<b>MAY 13</b>	Last day to submit Grade Forgiveness Request
<b>MAY 13</b>	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
<b>MAY 13</b>	Last day for refund
<b>MAY 13</b>	Last day to apply for graduation for those completing requirements end of Summer Semester
<b>MAY 13</b>	Last day to change from credit to audit
<b>MAY 27</b>	Deadline for withdrawal. Last day to withdraw from a course or the University.
<b>MAY 30</b>	Memorial Day Holiday (University-wide)
<b>MAY 31</b>	Classes resume
<b>MAY 31</b>	Last day for removing temporary student status
<b>JUNE 15</b>	Last day to remove an "I" earned last semester
<b>JUNE 17</b>	End of Summer "A" Term, Classes and exams
<b>JUNE 20 (NOON)</b>	Grades due in Registrar's Office

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

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## SUMMER "B" TERM 1983

<b>MARCH 14</b>	Last day for receipt of applications and required supporting documents from International Students
<b>MAY 3</b>	Last day for receipt of regular undergraduate and graduate applications and required supporting materials
<b>MAY 24</b>	Last day for receipt of readmission applications
<b>JUNE 14-15</b>	Orientation and advisement for new freshmen and transfer students, and advisement for readmitted students not pre-advised
<b>JUNE 15</b>	Advisement for current and former students not pre-advised
<b>JUNE 16</b>	*Registration by appointment for new and readmitted graduate, post-baccalaureate, undergraduate students. Student registration will close following the last appointment
<b>JUNE 20</b>	Classes begin for Summer "B" Term
<b>JUNE 22</b>	Last day to adjust class schedule (end of Add/Drop)
<b>JUNE 22</b>	Last day to submit Grade Forgiveness Request
<b>JUNE 22</b>	Last day for late registration (late registration runs concurrently with Add/Drop). A \$25 late fee will be assessed
<b>JUNE 22</b>	Last day for refund
<b>JUNE 22</b>	Last day to apply for graduation for those completing requirements end of Summer "B" Term
<b>JUNE 22</b>	Last day to change from credit to audit
<b>JULY 4</b>	Independence Day Holiday (University-wide)
<b>JULY 5</b>	Classes resume
<b>JULY 8</b>	Last day to remove an "I" earned last semester
<b>JULY 8</b>	Deadline for withdrawal for Summer "B" Term students only. Last day to withdraw from a course or the University
<b>JULY 18</b>	Last day for removing temporary student status
<b>JULY 29</b>	End of Summer "B" Term, classes and exams
<b>AUGUST 1 (NOON)</b>	Grades due in Registrar's Office

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

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# 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 serves the people of Florida by providing undergraduate and graduate education in most general areas of study and in specifically selected technological and professional disciplines.

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

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

## INSTITUTIONAL PHILOSOPHY

The University of Central Florida philosophy is based upon two tenets: ACCENT ON THE INDIVIDUAL and ACCENT ON EXCELLENCE. The University believes in the individual worth of each person and especially encourages the RESPONSIBLE INDIVIDUAL who strives for EXCELLENCE in every activity.

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

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

## EAST CENTRAL FLORIDA AREA

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

## THE CAMPUS

The campus of UCF, located 13 miles east of downtown Orlando, consists of 1227 acres of land; much of which is covered with pine, palm, cypress, cedar, and oak trees. Lake Claire, covering 40 acres and Lake Lee, covering 14 acres, contribute to the natural beauty of the campus. Since campus construction began in 1966, approximately \$50 million has been invested in facilities and equipment including the library, classroom buildings, laboratories, residence halls, and student facilities. The childcare center was built with funds contributed through the Edyth Bush Charitable Foundation of Winter Park and UCF Student Government. Recreational facilities include

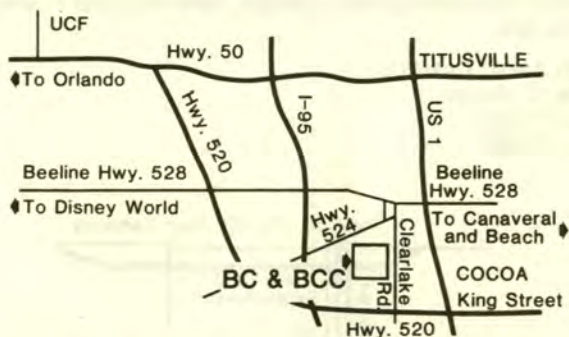
lighted tennis and handball courts, a flag football-soccer field, a swimming pool, a golf driving range with putting greens, volleyball courts, and a baseball field. The campus currently serves approximately 13,000 students.

UCF's four two-story residence halls accommodate 414 students—198 men and 216 women. Two of the residence halls are for women and two are for men. Each suite consists of double bedrooms (a limited number of singles), common living room and bath. Each suite is equipped with functional furnishings, in keeping with the living-study area design, central heat, air-conditioning and maid service. Each hall has laundry facilities, a vending machine room and a common social/study lounge for residents' use. For more detailed information on campus housing please write to Director of Housing, University of Central Florida, P.O. Box 25000, Orlando, Florida 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. These are the same programs and courses offered at the main (Orlando) campus and yield the same credit. Instructors for the courses offered at these locations are assigned and approved by the various departments on the main campus. Each Area Campus is staffed with a director, counselors, and support personnel.

**UCF BREVARD CAMPUS**  
Director: Robert W. Westrick  
1519 Clearlake Road  
Cocoa, Florida 32922  
(305) 632-4127



The Brevard Campus of the University of Central Florida is located on the Cocoa Campus of Brevard Community College. New facilities are currently under construction which will provide for expansion of program offerings. Projected completion date is scheduled for the Fall of 1983.

Undergraduate courses leading to degrees in Allied Legal Services, Business Administration, Criminal Justice, Elementary Education, Engineering Technology, Liberal Studies, and Social Work are offered at the Brevard Campus. Graduate courses in Engineering are provided via a video tape recorded system of learning. Additional courses are presented through the Department of Education to serve those students who are in need of certification or re-certification for teaching.

In keeping with the basic tenet of the University of Central Florida - "Accent on the Individual," the staff of the Brevard Campus endeavors to provide the services necessary for a positive learning environment. Through a cooperative arrangement with Brevard Community College, library resources and services of both the community college and the university are made available to the students. Assistance is also provided through the State University Extension Library in St. Petersburg.

Student services such as Financial Aid, Veterans' Affairs, and Student Government are available to students attending the campus.

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



The University of Central Florida, to better serve the Volusia and Flagler County areas, operates an area campus in Daytona Beach. The Daytona Beach Campus offers a number of baccalaureate degree programs for area students who have completed two years of college and graduate courses for students who have completed baccalaureate degrees in Education or Engineering. Baccalaureate degree programs presently available are Criminal Justice, General Business Administration, Elementary Education, Vocational/Technical Education, and Liberal Studies plus partial degree programs in Business Accountancy, Management, Marketing and Finance and Nursing for Registered Nurses.

**UCF SOUTH ORLANDO CAMPUS**  
 Director: Richard C. Harden  
 7300 Lake Ellenor Drive  
 Orlando, Florida 32809  
 (305) 855-0881



The growth of the student population at South Orlando campus is a reflection of the increased number of upper and lower division required courses in all programs of study offered at this location. SOC is also available to those students who live or work in the area. For many who drive, it may take less time to reach SOC than the main campus. The UCF student newspaper, the FUTURE, regularly publishes the schedule of classes offered at SOC where it is possible for students to enroll in a sufficient number of courses to qualify as full-time students. Students may register by telephone several weeks in advance of each semester. SOC offers additional courses in Vocational Education and in all fields of Graduate Engineering.



## ACCREDITATION

The graduate and undergraduate programs of the University are accredited by the Southern Association of Colleges and Schools, the official regional accrediting agency for educational institutions in the South.

In addition to the regional accreditation agencies, there are a number of scientific, professional, and academic bodies conferring accreditation in specific disciplines and groups of disciplines. Currently, the following areas have been approved by the agencies indicated. The College of Business Administration is accredited at the graduate and undergraduate level by the American Assembly of Collegiate Schools of Business (AACSB); Engineering Mathematics and Computer Systems, Environmental, Electrical, Industrial, and Mechanical Engineering options and Design, Electronics, Environmental Control, and Operations Technology options in the College of Engineering by the Accreditation Board for Engineering and Technology (ABET); within the College of Health: Medical Record Administration by the Council on Allied Health Education Accreditation, 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. The Social Work Program is accredited by the Council of Social Work Education.

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

## 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. Its primary function is that of assisting the University financially in the student financial aid program, scholarships, and in institutional development.

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

The Foundation promotes and supports education by providing funds which are not received from public sources.

Contributions are deductible by donors as provided in Section 170 of the Internal Revenue Code.

## UNIVERSITY PRESSES OF FLORIDA

The University of Florida is host to the state university system's scholarly publishing facility, *University Presses of Florida*. The goals of the systemwide publishing program implemented by University Presses of Florida are expressed in Board of Regents' policy:

"... to publish books, monographs, journals, and other types of scholarly or creative works. The Press shall give special attention to works of distinguished scholarship in academic areas of particular interests and publish original works by state university faculty members, but it may also publish meritorious works originating elsewhere and may republish out-of-print works."

The purpose of the University Presses of Florida is to encourage, seek out, and publish original and scholarly manuscripts which will aid in developing the Universities as a recognized center of research and scholarship.

University Presses of Florida is a member of the Association of American University Presses and of the Association of American Publishers, Inc.

Students and members of the faculty and staff are cordially invited to visit the Press offices at 15 N.W. 15th Street, Gainesville, Florida.

## UNIVERSITY LIBRARIES

**Director:** Lynn W. Walker, LR 427, Phone 275-2564

**Associate Director:** Orlyn B. LaBrake, LR 427, Phone 275-2564

**Professional Staff:** Elaine T. Bazzo, Leonie Y. Black, Karen A. Hitchcock-Mort, Margaret A. Hogue, Mary Helen Howard, Phyllis J. Hudson, Judy C. Kipp, Laurie S. Linsley, Elizabeth W. Lloyd, Cheryl G. Mahan, Theodore R. Pfarrer, Peter C. Rossi, Norbert St. Clair, June S. Stillman, Judith E. Young.

The University Libraries provide materials and services to support the instructional and research needs of the university. The collection now numbers some 400,000 volumes and about 5,000 periodical, newspaper and serial publications placed on open shelves to encourage browsing. The library is a depository for U.S. and Florida state documents.

The circulation desk and reserve materials are located on the first floor. The reference collection, state and federal documents and interlibrary loan are on the second floor. On the third floor are periodicals, microforms, and music listening facilities. The fourth floor contains the general book collection and special collections. Study areas and photocopying machines for student and faculty use are located on all floors.

During the school term the library operates on a full schedule of hours, including evenings and weekends. During vacation periods, a shortened schedule is maintained. Librarians are available for assistance and advice in the use of the library, its materials and services throughout library hours. Arrangements may be made for class or small group instruction. Interlibrary loan service is available to faculty, staff and students to supply 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 these students may check out microfiche readers for home use. Using the microfiche catalog, students can determine the books they need, and a call to the library will bring books to them at a convenient location on campus. The Florida Bureau of Blind Services has deposited talking book machines and cassette tape players, a talking calculator, and other similar equipment, in the library for the use of blind or partially-sighted students, and the library staff assists these students in reference and research projects.

In an effort to have library services within reach of all its students, the UCF library maintains small collections of about 2,000 books at the university's campuses in Daytona Beach and South Orlando. Subjects of the collections vary depending on the courses offered at each center. Copies of the Main Library's Card Catalog on microfiche are provided at each of the campuses. These catalogs and a courier service give the campuses access to the collections of the main library. Students at the Brevard campus receive a full range of library services from the Brevard Community College library.

## INSTRUCTIONAL RESOURCES

**Director:** Robert L. Arnold, LR 142, Phone 275-2571.

**Assistant Director:** David W. Retherford

The primary purpose of Instructional Resources is to improve instruction. To meet both the academic and administrative needs of the University, Instructional Resources provides the faculty with graphic, photographic, radio and television production, a full range of audio visual support services; and a wide range of instructional development assistance and consultation. Instructional Resources also administers the Language Lab and University Learning Center where several audio and video playback devices are available to students and faculty.

## INTERCOLLEGIATE ATHLETICS

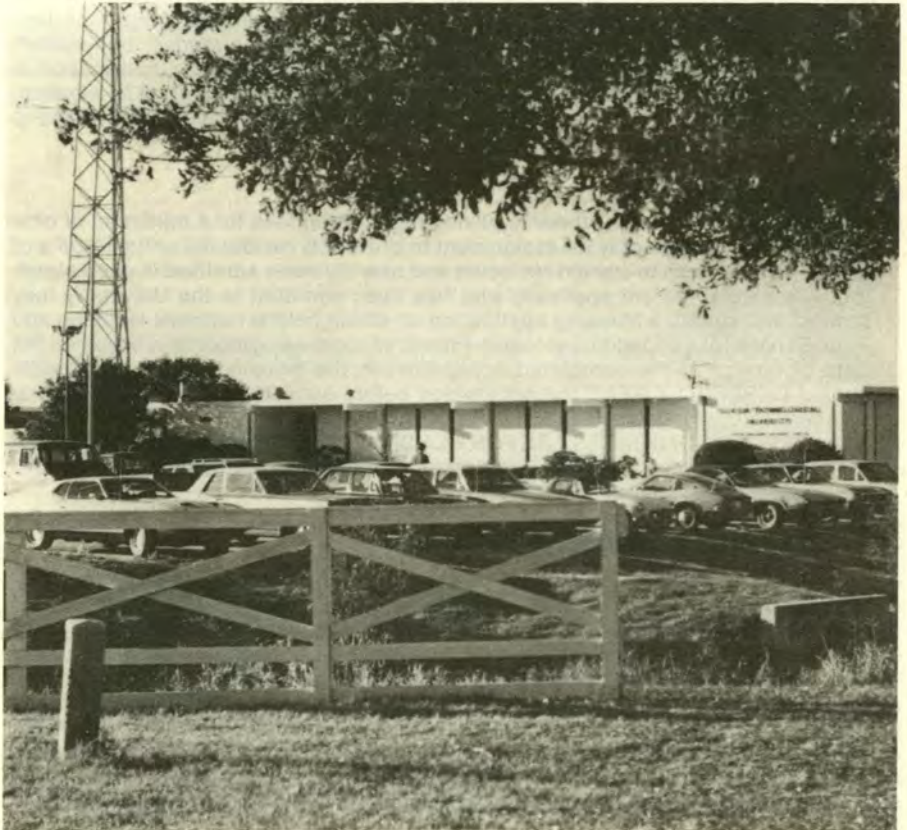
Programs in Intercollegiate Athletics are coordinated by varsity coaches and staff under the general supervision of the Director of Athletics.

The University of Central Florida is a member of the National Collegiate Athletic Association (NCAA), Division II, Region 3 (except football, which is Division III) and participates in the Sunshine State Conference. The women athletes participate, observing the policies and rules of the Association for Intercollegiate Athletics for Women (IAAW), Division II, Region 3. Varsity athletic contests at the University of Central Florida are governed by the rules of play published by NCAA and IAAW, and all established eligibility standards are observed.

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

### **UNIVERSITY BOOKSTORE**

The University Bookstore, located in the Student Services Building, carries required textbooks, supplemental books, and associated supplies for all UCF courses. In addition, a complete line of school and art supplies, sundries, paperbacks, gifts, and other items of interest are available. A Customer Service Desk is provided for special orders such as class rings. The Bookstore buys "used" textbooks at the end of each semester. Student I.D. cards are required for identification.



OFFICE OF THE CHIEF CAMPUS SERVICES, EASTERN STUDENT SERVICES

# STUDENT AFFAIRS

## INTRODUCTION

We use the term "student affairs" collectively to refer to the Division and its many functional departments responsible for the administration and management of programs, services, facilities, and activities design to support the educational mission of the university. The Division of Student Affairs exists primarily to enhance the teaching-learning process through its programs and services. The Division headed by a Vice President for Student Affairs administers programs involving orientation, personal counseling, testing, housing, financial aid, health services, cooperative education, placement, student organizations, veteran's affairs and other special activities. Students are invited to consult the staff of Student Affairs concerning any aspect of campus life.

## ORIENTATION

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

## HOUSING POLICY

- I. Regularly enrolled single students paying registration fees for a minimum of nine semester hours may apply for assignment to University residential units. Priority of assignment is given to current residents and new students admitted in good standing. Any single student applicant who has been admitted to the University may request and submit a Housing application on which he/she requests Housing and Food Service for a sepecific semester. Priority of room assignments is based on the date of receipt of the completed application in the Housing Office. Applicants should CAREFULLY READ the application before submitting it with the \$50 prepayment to the Housing Office.
- II. ALL HOUSING CONTRACTS ARE FOR HOUSING AND FOOD SERVICE, combining room and board, and requiring each resident student to participate in one (1) of several available meal plans.

## INTERNATIONAL STUDENT SERVICES

The International Student Office serves as a clearing-house for international student affairs, and as a focal point for international student concerns. Its central role is to assist students from other lands in adjusting to the changing lifestyle and study habits in a new and strange environment so as to assure a genuine achievement of their educational goals and meaningful living experience in the United States. A wide range of special services are, therefore, provided to newly arrived students: assistance in locating off-campus apartments and in banking, counseling on personal, financial, academic and cross-cultural communication matters, liaison with the Immigration and Naturalization Service, social activities and community visits. Further information may be obtained from the International Student Office, Administration Building, Room 225.

## OFFICE OF AREA CAMPUSES SERVICES, EVENING STUDENT SERVICES

The Office of Area Campus Services maintains contact with the directors of the area campuses in Brevard, Daytona Beach, and South Orlando as the official liaison

between Student Affairs and the area campuses. The office ensures student services are provided and that communication between the main campus and area campuses is maintained.

The Evening Student Services Office is open Monday-Thursday evenings in Administration Building 282 from 5 p.m.-9 p.m. All students are encouraged to either visit the office or call 275-2751. Problems are resolved in the office or referred to the appropriate campus office for action.



## **STUDENTS HEALTH SERVICE**

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

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

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

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

## **STUDENT FINANCIAL AID**

### **GENERAL INFORMATION**

Student Financial Aid programs at the University of Central Florida are designed to provide assistance to students in the form of loans (long and short-term), grants, scholarships and part-time on-campus student employment. The philosophy of the University is to assist students who, for the lack of financial assistance, would be unable to attend the University.

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

#### **I. PROGRAMS BASED ON FINANCIAL NEED**

Programs which DO HAVE FINANCIAL NEED as their prerequisite are:

**NATIONAL DIRECT STUDENT LOAN**

**STUDENT REGENT FEE LOAN**

**PELL (BASIC) GRANT (FORMERLY BASIC EDUCATIONAL OPPORTUNITY GRANT)**

**FLORIDA STUDENT ASSISTANCE GRANT**

**SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT**

**COLLEGE WORK-STUDY PROGRAM**

**INSTITUTIONAL WORK-STUDY PROGRAM**

**GUARANTEED STUDENT LOAN**

**FLORIDA GUARANTEED STUDENT LOAN PROGRAM**

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

#### **II. PROGRAMS NOT EXCLUSIVELY BASED ON NEED**

**OTHER PERSONAL SERVICES**

**SHORT-TERM LOAN**

**NON-FLORIDA TUITION WAIVERS**

#### **III. SCHOLARSHIPS**

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

**INSTITUTIONAL SCHOLARSHIPS**

**COLLEGE SCHOLARSHIPS**

**AGENCY SCHOLARSHIPS**

**NATIONAL AND STATE SCHOLARSHIPS**

**FLORIDA ACADEMIC SCHOLARS**

#### **IV. GRADUATE AID**

Aid for graduate students through the Office of Student Financial Aid is limited to part-time employment and selected loan programs. Application for other

aid should be made to the head of the department of the student's major or the Dean of Graduate Studies.

#### **V. AWARD NOTICE PROCEDURE**

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

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

#### **VI. FUND DISBURSEMENT**

Funds are disbursed by the Cashier's Office, Administration Building, Room 110, on a semester basis upon presentation of a valid Registration/Fee Statement, current term student ID and yellow copy of the official award notice.

#### **VII. ACADEMIC PROGRESS**

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

- A. Must maintain a 2.0 (of 4.0) GPA.
- B. Complete the minimum number of semester hours as required by each aid program.
- C. Complete the requirements of the degree program within ten semesters for a full-time student and 18 semesters for a part-time student in order to continue receiving financial assistance.

## **COOPERATIVE EDUCATION AND PLACEMENT**

### **CAREER PLANNING AND PLACEMENT**

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

All students are invited to take advantage of the career counseling services offered by the Center, and to avail themselves of off-campus, part-time, and summer employment opportunities.

### **COOPERATIVE EDUCATION**

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

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

For further information write to Cooperative Education Program, University of Central Florida, Orlando, Florida 32816; or visit Suite 124, Administration Building. Telephone (305) 275-2361 or (305) 275-2314.

## **UNIVERSITY COUNSELING AND TESTING CENTER**

### **COUNSELING AND TESTING CENTER**

The University Counseling and Testing Center offers a professional staff of counselors to aid students in selecting vocational-educational objectives, overcoming learning difficulties, solving problems of personal-social adjustment, and dealing with marital or other relationship problems. A full range of tests is available along with an occupational library.

Any student may request the assistance of the Center whenever the need occurs. Students may, for example, desire increased understanding of themselves, their relationships with others, or seek to gain additional satisfaction from their learning experiences. Tests are often used to help the individual student evaluate personal interests, aptitudes, and abilities. All aspects of counseling and testing are confidential.

## **ACADEMIC PEER ADVISEMENT**

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

## **STUDENT ACTIVITIES**

Personal development may, in part, be enhanced through informed, experienced, dedicated participation in the University and community. Frequently, activities are referred to as "extracurricular," but at the University of Central Florida student activities are regarded as a part of the total educational program, a supplement to the individual student's academic program. The University, through student cooperation and with the assistance of student organizations, sponsors a variety of cultural and entertainment programs which will contribute to the student's social, cultural, recreational, and academic development. Additionally, ample opportunity to become a member of occupational, professional, social, and honorary organizations is provided. It is the desire of the University to appeal to the interests of students and to provide opportunities for students to become acquainted with fellow students and faculty members through participation in student activities.

## **STUDENT GOVERNMENT**

The purpose of the Student Government is to represent student opinion; advance the cause of students both socially and academically; promote communication, cooperation and understanding among students and to administer Activity and Service fees.

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

## **STUDENT CENTER/STUDENT SERVICES**

Student life at the University of Central Florida emanates from the Student Center and Student Services building. These facilities serve students, faculty, staff, University patrons, alumni, and guests with their many programs, services and gathering places. The Student Center is funded by activity and service fees.

The Student Center contains food service facilities, an auditorium, conference and meeting rooms, art gallery, game room, arts and crafts center and lounge areas. Offices for Student Government, Student Organizations, Student Center, Housing and Veteran's staff are housed in the Student Center, which is located southeast of the residence halls.

The new Student Services/Bookstore is located northeast of the Library and contains the University bookstore, food service facilities, and lounge/meeting rooms.

## **OFFICES OF DEAN AND ASSOCIATE 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 Dean of Students and



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

## **HANDICAPPED STUDENT SERVICES**

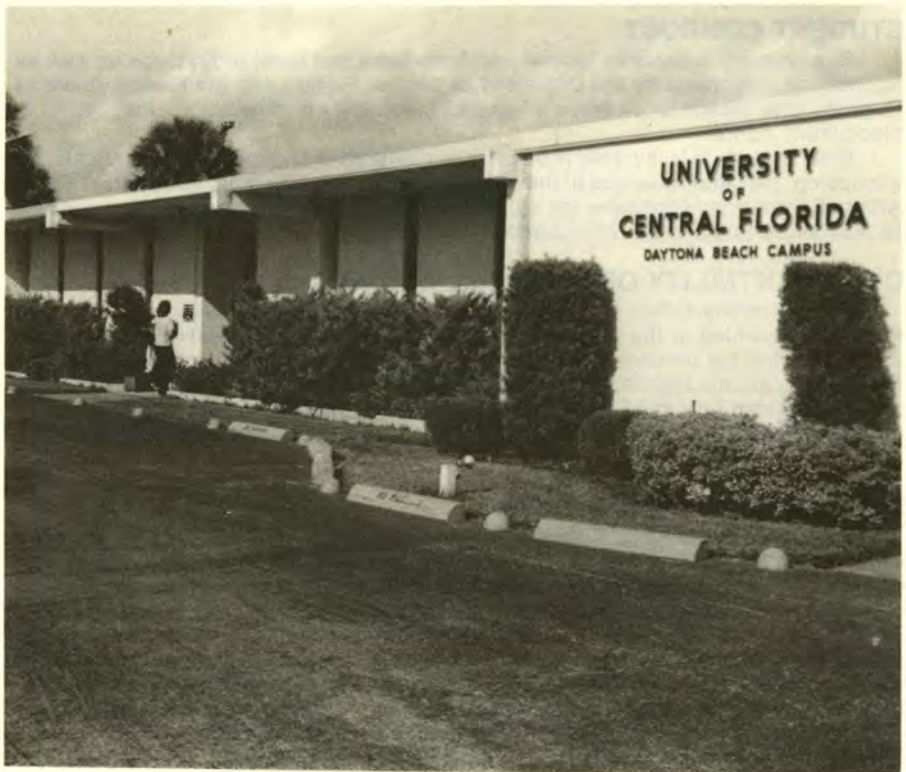
The Office of Handicapped Student Services provides information and orientation to campus facilities and services, assistance with handicapped parking permits, counseling, referral to campus services, and assistance with registration for students who are handicapped.

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

Students who have a disability or handicap which may or may not require special assistance are requested to voluntarily contact the Office of Handicapped Student Services. All information is confidential and will be used only to assist the student. This information will in no way be used to deny any rights to that student at the University of Central Florida.

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

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



## **SPECIAL SERVICES**

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

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

The school provides an educational program, including kindergarten, for children 2 through 5 years old. The daily program is planned and executed by Florida certified teachers. The program provides a wide variety of experiences in art, music, language, motor skills, science, math, social studies, perceptual development, socialization and self discovery. Planned and spontaneous field trips and special family programs are a part of the yearly schedule. Experiences in observation and training in academic areas are also made available to University students.

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

## **CLASSROOM RESPONSIBILITY**

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

## **STUDENT CONDUCT**

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

When a student is involved in an offense resulting in criminal charges, prior to his admission, the circumstances of the case may be reviewed by the appropriate Student Affairs Committee to consider the student's eligibility for admission to the university as well as participation in extracurricular activities.

## **CONFIDENTIALITY OF STUDENT RECORDS**

The University policy which governs the confidentiality and access of student records is provided in the student handbook, **A Guide to Knight Life**. The policy explains in detail the procedures to be used by the institution for compliance with the Family Educational Rights and Privacy Act of 1974 as amended. Copies of the policy may be obtained from the Office of Student Affairs. The Office of Student Affairs also maintains a directory of records which lists all educational records maintained on students by the University.

## **OFFICE OF VETERANS' AFFAIRS**

The Office of Veterans' Affairs is a "one stop" center for students who are utilizing veterans' educational benefits in order to further their education. The Office has a professional staff augmented by student veterans to assist in providing information concerning entitlements, filing claims to the Veterans Administration, and certifying enrollment at the University. The office also provides counseling for personal and academic problems as well as referral to various agencies in the community. Veterans must be certified through the office of Veterans' Affairs to receive VA educational benefits. The Office monitors veterans' academic progress on a continuous basis.

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

## VETERANS' BENEFITS

Veteran-students eligible to receive VA educational benefits must make initial contact with the Office of Veteran's Affairs.

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

Veterans intending to enroll in a dual program may have the option to receive VA benefits. You must contact the Veterans' Affairs Office if you choose this option.

Veterans on co-op status may choose to draw VA benefits for their period of eligibility as follows. There are two programs: the "Institutional" and the "Cooperative."

### 1. The Institutional

Veterans who select educational assistance in this program receive their monthly VA benefit payments during on-campus enrollment semesters the same as eligible veterans not on co-op status. However, VA benefit eligibility ceases during off-campus co-op semesters unless concurrent credit hour enrollment is maintained.

### 2. The Cooperative

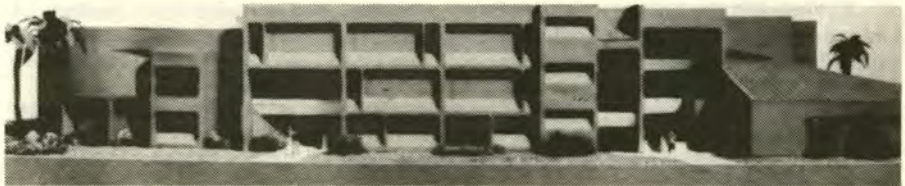
Veterans who choose this program receive educational assistance at the co-op rate. While this rate does not extend eligibility time, it does pay approximately 80 percent of their entitled monthly VA benefits during both on-campus enrollment semesters and off-campus co-op semesters without concurrent credit hour enrollment. In this program, however, veterans must enroll for at least 12 credit hours during on-campus semesters.

## RECREATIONAL SERVICES

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

The sports activities range from the traditional flag football, basketball, soccer, golf and bowling to Ultimate (Frisbee Football), innertube waterpolo, floor hockey and a Turkey Trot. For the fitness minded we have a physical fitness class, a Rec Milers Club and ample equipment which may be checked out and used on the University recreational facilities.

A handbook which provides full information, rules and regulations on all activities is available from the Office of Recreational Services.



# ADMISSION PROCEDURES

## APPLICATION DEADLINE

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

## FLORIDA RESIDENCE

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

(a) A "Florida student" is a person who has domicile in and who shall have resided in the state of Florida for at least twelve (12) consecutive months immediately preceding the first day of classes of the academic term in which the student enrolls. In determining residency, the university may require evidence such as voter registration, driver's license, automobile registration, location of bank account, rent receipts or any other relevant materials as evidence that the applicant has maintained continuous residency. Physical presence for the entire twelve-month period of a student with a long history or family history of Florida residence need not be required so long as the conduct of the student, taken in total, manifests an intention to make Florida his or her permanent dwelling place. If such student is a minor, it shall mean that the parent or parents, or legal guardian of the student shall have domicile in and have resided in the state of Florida for the period stated above. "Florida student" classification shall also be construed to include students who hold an immigration and Naturalization Form 1-151, Resident Alien Registration Receipt Card, or Cuban Nationals or Vietnamese Refugees who are considered as Resident Aliens, provided such students meet the residency requirement stated above and comply with subsection (2) below. The burden of establishing facts which justify classification of a student as a resident and domiciliary entitled to "Florida student" registration rates is on the applicant for such classification.

(b) In applying this policy:

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

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

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

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

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

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

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

(3) A "non-Florida student" or, if a minor, his parent or guardian, after having been a resident and domiciliary of Florida for twelve (12) consecutive months, may apply for and be granted reclassification prior to the first day of classes of any subsequent term; provided, however, that those students who are non-resident aliens or who are in the United States on a non-immigration visa will not be entitled to reclassification. An applicant for reclassification as a "Florida student" shall comply with provisions of subsection (2) above. An applicant who has been classified as a "non-Florida student" at time of original enrollment shall furnish evidence as stated in 6C7.05(1) to the satisfaction of the registering authority that the applicant has maintained continuous residency in the state for the twelve months required to establish residence for tuition purposes. In the absence of such evidence, the applicant shall not be reclassified as a "Florida student." In addition, the application for reclassification must be accompanied by a certified copy of a declaration of intent to establish legal domicile in the state, which intent must have been filed with the Clerk of the Circuit Court, as provided by Section 222.17, Florida Statutes. If the request for reclassification and the necessary documentation is not received by the registrar prior to the last day of registration for the term in which the student intends to be reclassified, the student will not be reclassified for that term.

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

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

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

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

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

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

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

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

(a) A member of the Armed Services of the United States who is stationed in Florida on active duty pursuant to military orders, the spouse and the dependent students.

(b) A veteran of the Armed Forces of the United States of America with twenty (20) or more years of active military service, including the spouse and dependent students of such veteran's immediate family, provided that the veteran is in Florida at time of retirement or moves to Florida within one year following retirement and files a declaration of Florida domicile.

(c) Full-time elementary, secondary, and community college faculty members under current teaching contracts in the state of Florida, and their spouses and dependent students.

(d) Full-time faculty, administrative and professional and career service employees of the University System and their spouses and dependent students.

(e) A student certified by his respective state for participation in the Academic Common Market Program of the Southern Regional Education Board who is enrolled in a program approved by the Florida Board of Regents.

(f) Florida domiciliaries living in the Panama Canal Zone who have not established domicile elsewhere, including the spouse and dependent students.

(g) Florida residents who had their residency in Florida interrupted by service in the U.S. armed forces, the Peace Corps or other similar volunteer organizations fostered by the United States government shall be deemed to have had residency in Florida during time of service in the aforementioned organizations.

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



## **RECORDS DEADLINE—Supporting Documents**

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

## **RECORDS—Validity of Documents**

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

## **MEDICAL HISTORY REPORT**

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

## **ADMISSION REQUIREMENTS**

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

Undergraduate applicants whose native language is not English must submit a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Graduate applicants must score a minimum of 500 on the TOEFL.

Certain undergraduate programs at UCF are limited access and, therefore, have additional requirements listed in appropriate college sections.

## **FRESHMAN APPLICANTS (First College Attended)**

Eligibility is subject to satisfactory receipt and review of all items requested in the admissions process. All applicants must have earned a minimum of 12 high school academic units (i.e., from the areas of English, foreign language, mathematics, science, social studies, or history.)

Students eligible to apply for admission to the University are:

1. *Graduates of regionally accredited high schools* who have a "2.5" average or above (as computed by the University) for all academic subjects taken in ninth through twelfth grades *and* a minimum test score of 850 on the SAT or 19 on the ACT. Students with a "B" average will normally be admitted even if the test score falls below the above minimums.
2. *Graduates Possessing State High School Equivalency Diplomas* based upon General Education Development testing and who have acceptable high school records for the portion attended and have a minimum score of 850 on the SAT or 19 on the ACT.

*Graduates Who Do Not Meet Requirements in the two categories Above, But Who Were Graduated from a Regionally Unaccredited High School* will be considered on an

individual basis and may be admitted on a "provisional" basis. By obtaining a 2.0 GPA (C average) or better at the end of the first term of attendance, the provisional status will be removed. Earning less than a "C" average for the first term would result in disqualification.

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

## ACCREDITATION

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

New England Association of Schools and Colleges

Middle States Association of Colleges and Secondary Schools, Commission on Institutions of Higher Education

North Central Association of Colleges and Schools, Commission on Colleges and Universities

Northwest Association of Secondary and Higher Schools, Commission on Higher Schools

Southern Association of Colleges and Schools

Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities and Accrediting Commission for Junior Colleges.

Foreign institutions are evaluated by UCF.

## COLLEGE TRANSFER APPLICANTS

An undergraduate student transferring from another college or university must (1) have a minimum GPA of 2.0 ("C" average) in all college work previously attempted, (2) be in good standing at the last institution attended, and (3) have a minimum GPA of 2.0 at the last institution attended. Refer to page 50. Re: Repeat Policy, Transfer Courses.

Should applicants have less than 2 years (90 quarter hours or 60 semester hours) of transferable college credit, they must meet the University's freshman entrance requirements and, therefore, furnish high school records and satisfactory test scores.

Credits in which an applicant has achieved a grade of "D" or better are transferable. Refer to page 40 for "D" grade transfer policy. All grades are included in transfer GPA.

No credit will be awarded for college-level GED tests, for courses given without a grade, nor for courses carrying grades but not credit hours.

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

Graduates from other accredited four-year U.S. institutions who apply for admission to work toward a second undergraduate degree must meet the regular requirements of the University (See Undergraduate Degree Requirements, page 43 and Second Baccalaureate Degree, page 46). A baccalaureate degree or higher from another accredited four-year U.S. institution satisfies the Basic and Advanced General Education Program requirements.

Transfer students from Florida State Community Colleges or Universities may satisfy the Basic General Education Program requirements by completing prior to transfer, the general education program prescribed by the community college or university. Transfer applicants with incomplete General Education Programs from state institutions will have their credits evaluated on a course by course basis. In Florida public community colleges, the Associate of Arts Degree (AA) is the university transfer degree that normally guarantees the admission of new students. The Associate of Science Degree is a two-year terminal degree which does not assure admission except for the AS in Engineering Technology which leads into our special upper division BET Degree Program.



1. *Florida State Community College Transfers.* Admission to the University is normally granted to any graduate of a Florida community college who has completed the Associate of Arts program and graduated with a 2.0 GPA ("C" average). UCF honors forgiveness if part of an AA degree.
2. *Private Colleges and Out-of-State Institutions.* The general education program credits of transfer applicants from private junior and senior colleges and out-of-state institutions will be evaluated on a course by course basis.
3. *Unaccredited Colleges or Universities.* Transfer applicants who otherwise meet all requirements, but who enter from a "regionally" unaccredited college or university, will be considered on an individual basis. Admission may be granted on a provisional, probationary and/or non-degree basis depending upon the applicant's record. "Validating" credit may be required before transfer of credit is considered.

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

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

*The Admissions and Standards Committee* membership is composed of representatives from all colleges of the university, the Faculty Senate, Minority Student Services, Student Affairs, undergraduate Studies, the study body, and the Admissions Office. This committee normally meets weekly to review marginal cases and to consider the appeals of applicants. A letter of explanation is recommended establishing the basis for an appeal.



## **TRANSFER OF "D" GRADES**

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

## **SUBSTITUTION OF COURSES—General Education Program**

A student who wishes to substitute a course taken elsewhere for a course required in the UCF General Education Program must complete a "Petition to Substitute Courses for the General Education Program" form. Forms may be obtained in college and departmental offices, or from the College of Undergraduate Studies. Completed petitions must be submitted to and approved by the College of Undergraduate Studies. The following procedure should be followed:

1. A single petition should be prepared for all courses not taken at UCF, and for any UCF courses which are being requested to substitute for stated requirements of the General Education Program and which are not on the list of approved substitutions.
2. Transcripts or UCF Transfer Summary Reports should accompany all petitions.
3. Course descriptions should accompany all petitioned courses unless the petitioned course has the same prefix and number as the UCF equivalent and was taken at a State of Florida Community College or University in the SUS of Florida.
4. All petitions for substitution of credit for both Lower and Upper Division General Education requirements should be sent to the Dean of Undergraduate Studies.
5. Students transferring from one UCF college to another are not required to re-petition for general education requirements.
6. Appeals of decisions should be directed to the Vice President for Academic Affairs.

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

## **READMISSION**

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

Readmission of a suspended (disqualified or excluded) student is never automatic. If a student has been disqualified or excluded, he/she must be readmitted by action of the University Admissions and Standards Committee after review of the student's total record. A letter of appeal/explanation is recommended.

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

## **REACTIVATION**

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

# TYPES OF STUDENTS

## TEMPORARY STUDENTS

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

## TRANSIENT STUDENTS—CONCURRENT ENROLLMENT

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

*Students from Other Colleges or Universities.* Students in good standing with a 2.0 overall academic average in any accredited college or university and wishing to enroll for one term at UCF may be considered for admission as a transient. Such enrollment terminates at the end of one term and does not presuppose regular acceptance by any college or department of the University. A transient form indicating the parent institution's willingness to accept the credits and that the student is in good standing is required to support the application for admission. This statement protects the student and serves as a basis for admission in lieu of transcripts. Transient forms are available in the Admission Office.

## AUDIT STUDENTS

In order to audit any course, permission of the instructor is required. A new applicant desiring only to audit a course must complete an application and be accepted as a non-degree or regular student. All students register to audit a course at the end of Late Registration only. A student may change from credit to audit only during the Add/Drop period.

## NON-DEGREE STUDENTS

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

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

## INTERNATIONAL STUDENTS

The University of Central Florida is authorized under Federal law to enroll non-immigrant alien students. Undergraduate applicants should refer to the Admission Requirements Section of this Bulletin and graduate applicants to the Graduate Studies Section. 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 superior academic records (i.e. upper 20th percentile or U.S. "B" average equivalent) will be considered for admission. Normally an exception to the above will be made for those students who will receive the

Associate of Arts (AA) Degree or the Associate of Science (A.S.) Degree for Engineering Technology majors from a Florida community college or state university.

3. Undergraduate applicants whose native language is not English must submit a minimum score of 550 on the Test of English as a Foreign Language (TOEFL). Graduate applicants may score a minimum of 500 in some programs.
4. Certified English translation of official records showing grades or marks of courses taken, range of passing and maximum marks, and noting successful completion of schooling must be submitted.
5. Applicants must file a financial statement confirming availability of finances for each year of study.

Any additional information or records requested must be furnished before admissions can be final.



# DEGREE REQUIREMENTS

## GENERAL EDUCATION PROGRAM

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

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

Students graduating under the 1982-83 catalog who have not satisfied the general education requirements in English and mathematics must take the placement examinations in both areas at the earliest opportunity. Failure to take the examinations disqualifies students from registering in the required English and mathematics general education courses.

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

Students entering in the Spring of 1983 and thereafter must satisfy a new Board of Education rule which specifies course work in English composition and mathematics. Section 2 of this rule is reproduced below.

Prior to receipt of an Associate of Arts degree from a public community college or university or prior to entry into the upper division of a public university, a student shall complete the following:

(a) Twelve (12) semester hours of English coursework in which the student is required to demonstrate writing skills. For the purposes of this rule, an English course is defined as any semester-length course within the general study area of the humanities in which the student is required to produce written work of at least six thousand (6,000) words.

(b) Six (6) semester hours of mathematics coursework at the level of college algebra or higher. For the purposes of this rule, applied logic, statistics, and other such computation coursework which may not be placed within a mathematics department may be used to fulfill three (3) hours of the six (6) hours required by this section.

For the purposes of this rule, a grade of C or higher shall be considered successful completion.

The General Education Program at UCF meets these requirements in the following manner: A.1. under Communication Foundations and B.1. under Cultural and Historical Foundations of the General Education Program fulfill the requirement of 2 (a) in the state rule, while the Mathematical Foundations and F.1. of the Restrictive Electives requirements of the General Education Program fulfill the requirement of 2 (b) in the state rule.

An undergraduate student who has not completed requirements for the Associate of Arts degree and who wishes to transfer to another Florida state university can have his transcript stamped GENERAL EDUCATION REQUIREMENTS MET if he has completed UCF's Basic General Education Program of 43 semester hours with a GPA of 2.0 or better. UCF will accept a similar statement on transcripts received from Florida community colleges or other institutions in the State University System in lieu of completion of the University's Basic General Education Program.

## GENERAL EDUCATION PROGRAM

(49 semester hours required)

- I. Lower Division (43 semester hours required)
- |  |        |
|--|--------|
| A. Communication Foundations.....  | 9      |
| 1. ENC 1101 English Composition I  | 3(3,0) |
| ENC 1102 English Composition II  | 3(3,0) |
| 2. Speech and Composition: SPC 1014  | 3(3,0) |
| B. Cultural and Historical Foundations.....  | 9      |
| 1. Western Civilization, or Humanities, or U.S. History .....  | 6      |
| One of the following 2 semester sequences required:  |        |
| EUH 2000 Western Civilization I  | 3(3,0) |
| EUH 2001 Western Civilization II   | 3(3,0) |
| HUM 2211 Western Humanities I  | 3(3,0) |
| HUM 2230 Western Humanities II   | 3(3,0) |
| AMH 2010 U.S. History: 1492-1877   | 3(3,0) |
| AMH 2020 U.S. History: 1865-present  | 3(3,0) |
| 2. One course from the following, all of which have a<br>prerequisite of one sequence in 1 above ..... | 3      |
| ARH 2050 The History of Art I  | 3(3,0) |
| ARH 2051 The History of Art II   | 3(3,0) |
| MUL 2011 Enjoyment of Music  | 3(2,1) |
| THE 1020 Theatre Survey  | 3(2,1) |
| THE 2071 Cinema Survey   | 3(2,2) |
| REL 2302 World Religion  | 3(3,0) |
| PHI 2010 Introduction to Philosophy  | 3(3,0) |
| LIT 2110 World Literature I PR: ENC 1102   | 3(3,0) |
| AML 2011 American Literature I PR: ENC 1102  | 3(3,0) |
| ENL 2010 English Literature I PR: ENC 1102   | 3(3,0) |
| C. Mathematical Foundations .....  | 3      |
| 1. MAC 1104 College Algebra  | 3(3,0) |
| MGF 1202 Finite Mathematics  | 3(3,0) |
| D. Social Foundations .....  | 9      |
| (Must include one course from each group)  |        |
| 1. PSY 2013 General Psychology   | 3(3,0) |
| SOC 2000 General Sociology   | 3(3,0) |
| ANT 2003 General Anthropology  | 3(3,0) |
| 2. ECO 2013 Principles of Macroeconomics   | 3(3,0) |
| 3. POS 2041 American National Government   | 3(3,0) |
| E. Science Foundations .....   | 7      |
| (Must include one laboratory and must include a minimum of<br>one course from each group)              |        |
| 1. PSC 1512 Physical Science PR: MAC 1104  | 3(3,0) |
| PHY 2050C College Physics PR: MAC 1104   | 4(3,3) |
| CHM 1034 General Chemistry PR: MAC 1104  | 3(3,0) |
| 2. BSC 1020C Biological Principles   | 4(3,2) |
| BSC 1030C Biology and Environment  | 4(3,2) |
| GLY 1000 Geology & Its Applications  | 3(3,0) |
| GEO 1200 Physical Geography  | 3(3,0) |
| F. Restricted Electives.....   | 6      |
| 1. COC 1100 Introduction to Computer Science   | 3(3,0) |
| STA 2014 Principles of Statistics  | 3(3,0) |
| 2. Any two sequential lower division foreign<br>language courses                                       | 3(3,0) |
| (in one language)  | 3(3,0) |
| II. Upper Division .....   | 6      |
- Six semester hours chosen from a limited list of 3000 and 4000 level courses selected specifically for the General Education Program. Courses must be selected from an area outside the major. A list of approved courses will be printed in the semester class schedule. This requirement may be satisfied by completion of a minor in an area approved by the student's department or college.

## DEGREE REQUIREMENTS

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

### UNDERGRADUATE

The requirements for a major, including the University graduation requirements, must be met by each student who receives a degree from the University of Central Florida. The minimum bachelor degree requirements for all students are as follows:

A minimum of 120 academic semester hours credit with at least a "C" average (2.0 GPA) for all course work attempted (both UCF and overall).

A minimum of 60 semester hours of work taken for the bachelor's degree must be earned in a senior institution.

A minimum of 48 semester hours of work taken for the bachelor's degree must be taken in 3000-level courses or above.

A minimum of (and the last) 30 semester hours must be earned in residence at UCF. Credit by examination may not be used to satisfy this requirement.

A maximum of 45 semester hours in any combination of extension, correspondence, CLEP, Time Shortened Degree and Armed Forces credits accepted by the University may be applied toward an undergraduate degree. The acceptance of credit for degree purposes is subject to review by the college standards committee and may differ from college to college. Additional semester hour credit may be granted by examination given at UCF.

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

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

### GRADUATE

The following University-wide graduate degree requirements must be met by each student who receives a master's degree from the University of Central Florida. The minimum master's degree requirements are: at least 30 semester credit hours of graduate work, with a minimum average of "B" for all courses attempted and at least one half of the minimum required course work must be numbered 6000 or higher.

See the University of Central Florida Graduate Catalog.

### DOUBLE MAJORS

Any UCF student working toward a single baccalaureate degree and who satisfies all requirements for two majors leading to that degree will have one diploma awarded, and both majors will be indicated on his permanent record. Majors under each degree are listed on page 58. For example, a student who satisfies all requirements for a major in Political Science and for a major in History would be awarded a single Bachelor of Arts degree with the two majors indicated on his permanent record. Similarly, if a student wishes to pursue two majors leading to different baccalaureate degrees (e.g., Psychology which leads to a Bachelor of Arts degree and Biology which leads to a

Bachelor of Science degree), he must satisfy the requirements of both majors. Although both majors will be indicated on his permanent record, only one diploma will be awarded (e.g. B.A. in Psychology or B.S. in Biology, at the student's option).

## **SECOND BACCALAUREATE DEGREE**

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

Transfer graduates from accredited four-year U.S. institutions who apply for admission to work toward a second baccalaureate degree at the University of Central Florida must meet the regular graduation requirements of the major department and the 30 semester hour residency requirement. Students holding the baccalaureate degree from an accredited U.S. institution are considered to have completed all General Education Program Requirements. Students who hold a degree from a non-accredited and/or a foreign institution may be required by the Dean of the College in which they are majoring to fulfill all or part of the U.C.F. General Education Program requirements.

## **MINORS**

Minors in a limited number of programs have been authorized for certification with baccalaureate degrees granted August 25, 1978, and thereafter. Minors, like majors, must be certified at the same time of certification for graduation with a baccalaureate degree. Certification will not be made at a later time even if additional courses have been completed unless an additional baccalaureate degree is certified. Minors must be indicated on the Intent to Graduate Card.





# ACADEMIC POLICIES AND PROCEDURES

## ACADEMIC STANDING

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

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

## STUDENT CLASSIFICATIONS

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

<b>FRESHMAN:</b>	Through 29 semester hours.
<b>SOPHOMORE:</b>	30-59 semester hours.
<b>JUNIOR:</b>	60-89 semester hours.
<b>SENIOR:</b>	90 or more semester hours, prior to completion of baccalaureate requirements.
<b>POST BACCALAUREATE:</b>	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.
<b>GRADUATE:</b>	Any student enrolled in graduate courses who has been admitted to a graduate program.

Other student classifications are as follows:

<b>AUDITOR:</b>	A student registered for any credit course who is not seeking credit.
<b>CO-OP STUDENT:</b>	A student enrolled in the Cooperative Education Program remains a registered student during all off-campus assignment semesters. Furthermore, there is no lapse in continuity in the co-op school calendar: a co-op student is either on assignment or attending class during each school semester. (See Veteran's Benefits for co-ops.)
<b>SPECIAL STUDENT:</b>	A student of demonstrated academic ability who does not meet the regular requirements for admission (Early Admission, non-degree, transient and auditor).
<b>TEMPORARY:</b>	A student who applied on time and is permitted to register and attend class pending completion of his admissions file.
<b>TRANSIENT:</b>	(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.
<b>NONDEGREE:</b>	A student earning credit, but not working on a degree program.
<b>PROVISIONAL:</b>	A student entering from a regionally unaccredited high school, college or university may be admitted on provisional status where appropriate. By obtaining a 2.0 GPA (C average) or better at the end of the first semester of attendance, the provisional status will be removed. Earning less than a "C" average the first term would result in disqualification.

## ACADEMIC TERMS AND ACTIONS DEFINED

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 Probation	Action taken when a Student's UCF cumulative or overall GPA drops below 2.0. A student, also, may be admitted on Academic Probation. Academic Probation will continue until the current term, UCF cumulative and overall GPA reach 2.0 or better.
Disqualified (1st Suspension)	A student of 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. <i>Readmission after two semesters is not automatic.</i> 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 taken by the University Admissions and Standards Committee.
Exclusion (2nd 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.
Appeal	Every student has the right to Appeal any of the preceding three academic actions either in person or in writing. The Appeal should be made to the Admissions and Standards Committee. Contact the Director of Admissions for procedure.
Readmission	If a student has dropped out of the University <i>for any reason</i> , he must reapply on the appropriate form (see calendar for deadline).

First time UCF students may be admitted on Academic Probation at the discretion of the Admissions Officer or the Admissions and Standards Committee. Academic Probation is intended to inform the student making unsatisfactory progress of his need to alter study habits and to seek additional counseling. Early recognition will indicate to the student the possible jeopardy to academic goals, and will also allow an opportunity to demonstrate acceptable performance.

## EARNING CREDIT WHILE DISQUALIFIED OR EXCLUDED

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

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

## GRADING SYSTEM

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

### GRADING SYSTEM

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

### OTHER ACTIONS

W—Withdrawn	0 grade point
-------------	---------------

I—Incomplete .....	0 grade point
X—Audit (no credit) .....	0 grade point
S—Satisfactory (with credit)/Satisfactory Progress (Research, Thesis, or Dissertation) .....	0 grade point
U—Unsatisfactory (no credit) .....	0 grade point
R—(followed by grade) —Subsequently repeated (no credit) .....	0 grade point

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

## SEMESTER HOURS EXPLAINED

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

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

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

## ACADEMIC HONORS

### I President's Honor Roll Certificate

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

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

### II Dean's List

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

### III Baccalaureate Honors

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

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

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

## GRADE FORGIVENESS POLICY

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

1. Grade forgiveness is limited to two courses.
2. UCF does not honor grade forgiveness granted at other institutions unless it is *part of an AA degree* transferred to UCF from a Florida public community college. In addition, a student may not exercise grade forgiveness by repeating at UCF a course which was initially taken elsewhere.
3. Because of the two course limit, a student who has repeated two or more courses at a Florida public community college and included those courses in the transfer of an AA may *not* use grade forgiveness again at UCF. But, any other transfer student may exercise the policy for courses taken and repeated at UCF since any forgiveness he may have been granted elsewhere will not transfer to UCF.
4. Grade forgiveness is not retroactive and, therefore, may not be used for a course repeated before Fall 1981.
5. If, however, a student *who repeated a course at UCF before Fall 1981* wishes to repeat the course again to take advantage of the forgiveness policy, he may do so. In this case, the lower of the previous two grades will be forgiven. This special circumstance is the only one in which a student will be allowed to repeat a course more than once.
6. A student may enroll in a course for which he wishes to exercise grade forgiveness only with the permission of the chairman in whose department the course is offered. This decision is based on the space available in the class and, as a result, the chairman may withhold his decision until Add/Drop.
7. Grade forgiveness awarded for repeated courses will not retroactively alter any previous academic action. This means, for example, that a Probation or Disqualification status will not be removed from the records of the quarter or semester in which the student originally took the course. In addition, no academic records can be altered after a student graduates.
8. If a student withdraws from a course repeated under the Grade Forgiveness Policy or receives an Incomplete in the course, the attempt will count as one of the two allowable attempts. However, the original grade will *not* be replaced with the "I" or the "W" received in the repeat attempt.
9. All grades will remain on the student's official transcript. The original course grades will be annotated with a "T" to indicate that the course has subsequently been repeated, and the repeat course grade will be annotated with an "R." The original grade will not be computed in the grade point average except in a case in which the student withdraws from a course he is repeating or takes an Incomplete.
10. With prior approval of the dean of the college in which the course is offered, the student may substitute a course different from the original one if (1) the substitute course has been changed in prefix, number, hours, or title, but not in substance, or (2) the substitute course replaces a course no longer offered by UCF.
11. If it is determined that the student is ineligible for the forgiveness policy, neither a refund of fees nor automatic withdrawal from the course will be made.

## GRADE FORGIVENESS PROCEDURE

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

1. Pick up a "Grade Forgiveness Request Form" from the Office of Records and Registration and complete it for each course he chooses to repeat.
2. Secure the signature of the chairman in whose department the course is offered.
3. If the course is a substitution for the original one (see 10. above), secure the signature of the dean of the college in which the course is offered.
4. The completed form must be turned in to the Office of Records and Registration immediately after registration and *no later than the last day of Add/Drop*. **NOTE:** This is one day earlier than the deadline stated in the original policy. No petitions will be accepted after the deadline.

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

## ACADEMIC ETHICS POLICY

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

- A. Dishonesty consisting of cheating of any kind with respect to examination, course assignments, or illegal possession of examination papers. Any student helping another to cheat is as guilty as the student assisted.
- B. Plagiarism consisting of the deliberate use and appropriation of another's work without any indication of the source and the passing off of such work as the student's own. Any student who fails to give credit for ideas or materials taken from another is guilty of plagiarism.

### Procedure

In cases of cheating or plagiarism:

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

## INCOMPLETE GRADE

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

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

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

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

No withdrawal is permitted after the deadline except in *extraordinary* circumstances such as serious medical problems. Students who need to petition for a medical withdrawal should contact the Office of Undergraduate Studies, ADM 210.

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

## SCHEDULE CHANGES—Add-Drop Policy

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

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

# OTHER RELATED INFORMATION

## STUDENT CONSUMER INFORMATION

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

## STEPS IN THE GRADUATION PROCESS

A student should apply to the Registrar for graduation before registering for his final semester of attendance and not later than the last day of the Add-Drop Period for that semester.

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

The following steps are required of a student who is near or in his/her last semester before graduation:

1. The student must complete an "Intent to Graduate" form, available in the Registrar's Office, not later than the last day of the Add/Drop period in the semester in which graduation is anticipated.
2. The candidate for graduation must initiate a checksheet for graduation with his/her advisor. At the end of the semester the checksheet will be completed and forwarded for approval to the Dean of the college in which the student is enrolled. If approved, the Dean will forward the checksheet through appropriate channels to the Registrar's Office for inclusion in the student's permanent university record.

Successful completion of the degree requirements stated in the bulletin under which the student has indicated he wishes to graduate (following the rules stated on page 45 shall constitute a recommendation of the respective college faculty that the degree be awarded, assuming the student is in good standing in the University.

A student must complete all requirements for a baccalaureate or graduate degree no later than the date of the semester graduation ceremony. A student registered as a transient student at another institution during the last semester before graduation must have received a waiver of the last 30 hour residence requirement, must complete all courses by the date of UCF's graduation and must provide an official transcript of work taken no later than 5 days after the UCF graduation date.

## REQUIREMENTS FOR TEACHER CERTIFICATION

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

### I. GENERAL PREPARATION

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

### II. TEACHING SPECIALIZATION

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

### III. PROFESSIONAL PREPARATION

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

1. The State Approved Program of Teacher Education (i.e. a major in the College of Education) and satisfaction of state requirements for SAT or ACT scores.
2. The Program of Teacher Education (i.e. a major in the College of Education) test scores between the 20th and 40th percentiles for college bound students on the

SAT or ACT, and credit in a special course EDF 3937-Special Topics: Teaching Skills Development.

3. The Basic Certification Program (i.e. a major in some other college) and admissibility to the internship phase of the program.

#### IV. COMPREHENSIVE EXAMINATION

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

Beginning July 1, 1981, a Regular Florida Teacher's Certificate may be issued to persons meeting all requirements for the Temporary Certificate and satisfactorily completing a year long internship approved by the State Board of Education.

### TIME-SHORTENED DEGREE OPPORTUNITIES

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

#### 1. Early Admission Program

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

- a. Superior test scores (SAT 1100 or above, ACT—26 or above).
- b. "A"-"B" grades in high school.
- c. A recommendation from the student's high school counselor.
- d. A letter of permission from parents or guardian.
- e. A campus interview to ascertain the student's maturity and ability to adjust to collegiate responsibilities.

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

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

#### 2. College Level Examination Program (CLEP)

The University of Central Florida grants university credit for examinations taken under the CLEP program provided the score obtained is at the 50th percentile or above on the National Sophomore CLEP norms.

The University of Central Florida will award up to 45 semester hours of university credit under the CLEP program. (See page 54.)

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

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

#### 4. University Course Credit by Examination

Regularly enrolled \*undergraduate students at the University of Central Florida may obtain credit for specific university courses through Departmental Examinations. Those who feel they have acquired the knowledge and/or skills of a specific university course should contact their advisor and the chairman of the department in which the course is offered to arrange for an examination. Degree credit will be awarded for those courses successfully completed by departmental examination. Credit by examination may not be attempted in a course in which the student has previously enrolled and may not be used to reduce the last 30 semester hours in residency requirement. *Credit by examination shall not be given for any*

course lower in content than courses in the same discipline (i.e., with the same rubric) in which a student is currently enrolled or which he/she has already completed. Permission to take an examination is approved by the chairman of the department and the dean of the college in which the course is offered. Standard forms requesting university credit by examination may be obtained from the Registrar's Office by presentation of an I.D. card.

\*Excludes transient and non-degree students.

## UNIVERSITY OF CENTRAL FLORIDA CLEP POLICY

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

Awarding CLEP credit is subject to the conditions listed below.

1. Credit may be awarded in the CLEP general examination area, CLEP general subtest area, or CLEP subject examination area provided the student; (a) has not previously received comparable college course credit in the CLEP examination area, (b) does not receive comparable college credit in the CLEP examination area in the same semester the examination is taken or in a subsequent semester, (c) has not previously completed a more advanced course in the examination area, and (d) does not complete a more advanced course during the semester in which the CLEP examination is taken.
2. Partial credit may be awarded in two of the CLEP general examination subtest areas (Humanities and Social Science-History). Partial credit may be awarded to students who have course duplication in one subtest area but not in the other subtest area (e.g., a student has completed HUM 2211 but has not completed introduction to Literature or a more advanced literature course). In such a situation the student would be eligible to receive credit in the literature subtest area provided that he receives a satisfactory total score and a satisfactory subtest score. The restrictions listed in item 1 also apply to partial credit.

The following table provides information related to the CLEP general examination areas and subtest areas for which credit may be awarded. In addition, this table delineates the number of credit hours per examination, the minimum passing scaled score, the courses and other CLEP examinations which duplicate the CLEP general examination, and the CLEP usage. Information can be secured from the University Counseling and Testing Center on CLEP subject examinations for which credit may be awarded.

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



TABLE I

CLEP General Examinations, Maximum Credit Hours, Minimum Passing Scaled Scores, Courses and Examinations Which Duplicate the CLEP General Examinations and Recommended CLEP Usage

CLEP GENERAL EXAMINATION*		Maximum Semester Hours		Minimum Passing Scaled Scores		Courses and Examinations which duplicate the general examination test area and conversely		Recommended CLEP Usage	
Area	Subtest Areas	Gen Exam	Subtest	Total*	Subtotal	UCF Course	Other Subject Exams	Former Environmental Studies Program	New General Education Program
English Composition (with essay)	Fine Arts	6	3	610	50	ENC 1010: Vocabulary Study ENC 1101: Composition I	English Comp. Comp.	3 SH Comm: Comp req. (Lower Division) 3 SH General Elective (Lower Division)	3 SH Eng Comp. I (Lower Division) 3 SH General Elective (Lower Division)
Humanities	Literature	6	3	497	49	LIT 2010: Intro. to Lit.**	Intro Math** MGF 1124: Prin. of Math MAE 1810: Elem School Math I MAT 1024: Fund Algebra**	3 SH Cult & Hist foundation: Any Lit req.	3 SH General Elective (Lower Division)
Mathematics	Biology	NA	3	50	50	BSC 1020C: Bio Principles ZOO 1020: Bio. of Man	Biology	3 SH Sci Environment: Bio Sci req.	3 SH Science Foundation
Natural Science***	Physical Science	NA	3	498*	49	OCE 1012: Oceanography & Space PSC 1512: Physical Sci	Chem. & Society**	3 SH Soc Sci: Either SOC 2000, POS 2041 or ECO 2000 req.	3 SH Social Foundation SOC 2000, POS 2041
Social Science History	Social Science History	6	3	498*	50	SOC 2000: General Soc. POS 2041: Am Nat Govt. ECO 2000: Econ. & Man**	Intro to Sociology Am. Govt.	3 SH Soc Sci: Either SOC 2000, POS 2041 or ECO 2000 req.	3 SH Social Foundation SOC 2000, POS 2041
Social Science History	History	6	3	498*	49	EUH 2001: West. CIVIL. II AMH 2010: U.S. History	Western Civilization	3 SH Cult & Hist foundation: Hist req.	3 SH Cult & Hist foundation I AMH 2010 or EUH 2001

\*The minimum total score must be attained before subscores can be used for awarding credit.

\*\*Not currently offered at the University of Central Florida.

\*\*\*Students must complete General Education Science foundation laboratory requirement.

Office of Institutional Research  
August 1981

## 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.

It is required that all University fees be paid at or before the end of the Add/Drop registration period. University policies do not permit deferring fees or paying by installments during the semester. Failure to pay fees on or before due date will result in cancellation of the current registration.

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

### General Fees and Costs

- A. Application fees must be paid by U.S. check or money order (required with all applications for admission to the University and not refundable) . . . . . \$15.00
- B. Registration Fees per semester for campus, centers, and continuing education courses. Minimum registration of one credit hour (at the level the student is classified) must be charged for students registering for zero hours (co-op student on work assignment, applicant for graduation during the semester that student is not registered, etc.)

#### Fall and Spring Semesters 82-83

	Fla. Resident	Non-Fla. Resident
Lower Division*	\$25.00 per hr.	\$66.00 per hr.
Upper Division*	28.00 per hr.	91.00 per hr.
Graduate*	38.00 per hr.	110.00 per hr.
Thesis*	41.00 per hr.	113.00 per hr.

#### Summer Semester, 1982

	Fla. Resident	Non-Fla. Resident
Lower Division*	\$14.00 per hr.	\$55.00 per hr.
Upper Division*	17.00 per hr.	80.00 per hr.
Graduate*	38.00 per hr.	110.00 per hr.
Thesis*	41.00 per hr.	113.00 per hr.

\*Lower division courses are for those numbered 0-2999

Upper division courses are those numbered 3000-4999

Graduate courses are those numbered 5000-7999

Thesis is course number 6970-6973

- C. Room and Board (required of student living in University residence halls) per semester . . . . . \$949.00-\$1103.00  
Charge for late payment . . . . . 15.00
- 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 . . . . . \$10.00
- 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 . . . . . \$18.00 Fall & Spring Semesters,  
\$12.00 Summer Semester
- H. Intern Participation Holder . . . . . \$3.76/hr.
- I. I.D. Card replacement . . . . . \$5.00

## CHECKS

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

## REFUND OF FEES

A refund of fees, or reduction in fee liability for those students who have an authorized deferment, will be made under certain conditions upon presentation at the Student Accounts Office of a Certification of Withdrawal issued by the Registrar. No refund or reduction in fee liability will be made under this policy except upon proper application.

- A. A full refund will be made when:
  - 1. Withdrawal is made before the end of the add/drop period,
  - 2. The course is cancelled by the University, or
  - 3. A student is denied admission to an offered course by the University for whatever reason.
- B. A partial refund (25% of the total fees paid less building and capital improvement fees) will be made when:
  - 1. **Complete** withdrawal from the University is made prior to the end of the fourth week of classes, during a 16 (or 17) week semester or at the end of the first quarter of classes during a mini-semester or summer semester (rounded to the end of the week in which the first quarter occurs).
- C. Refunds up to 100% of tuition and registration fees will be made upon withdrawal from one or more courses when:
  - 1. Exceptional circumstances, as determined by the University, exist. Exceptional circumstances include, but are not limited to, sickness, death, involuntary call to military service or administrative errors created by the University.

## PAST DUE ACCOUNTS

Any, and all, financial obligations to the University must be met by the student if "good standing" is to be maintained. Failure to meet such obligations can result in the withholding of grades and transcripts, and denial of registration and readmission to the University. The services of a professional collection agency; and recourse to the courts may also be invoked if deemed necessary by the University Controller. All costs of collection, including attorney's fees shall be borne by the debtor.

# ACADEMIC PROGRAMS

## DEGREES OFFERED

### ASSOCIATE OF ARTS DEGREE

University of Central Florida students who satisfactorily complete 60 semester hours of acceptable college work may apply for an Associate of Arts degree. University requirements include achievement of an overall and UCF grade point average of 2.0 or above, fulfillment of the Basic General Education Program requirements, and completion of the last 20 credit hours in residence at UCF.

The Associate of Arts degree is awarded only upon application. The application form may be obtained in the Registrar's Office and should be completed by the end of the fifth week in the semester in which the Associate of Arts degree is to be awarded. An Associate of Arts degree will not be awarded after completion of the baccalaureate degree.

## UNDERGRADUATE

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

### College of Arts and Sciences

#### Bachelor of Arts (B.A.)

*Majors:* Allied Legal Services, Anthropology, Art, Communication, Criminal Justice, Economics, English, Film (RTV), Foreign Languages (General), French, Journalism, History, Humanities, Humanities and Fine Arts (interdisciplinary), Music, Music Education, Philosophy, Political Science, Psychology, Public Administration, Radio-Television, Social Work, 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, Statistics, Zoology

### College of Business Administration

#### Bachelor of Science in Business Administration (B.S.B.A.)

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

### College of Education

#### Bachelor of Arts (B.A.)

*Major:* Elementary Education, Exceptional Child

*Major:* K-12—Educational Media Specialist, Physical Education, Visual Arts 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:* Civil Engineering, Electrical Engineering, Engineering Mathematics and Computer Systems, Environmental Engineering, Industrial Engineering, Mechanical Engineering

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

*Major:* Design Technology, Electronics Technology, Engineering Technology, Environmental Control Technology, Operations Technology

**College of Health**

Bachelor of Arts (B.A.)

*Major:* Communicative Disorders

Bachelor of Science (B.S.)

*Major:* Medical Record Administration, Medical Technology, Nursing, Radiologic Sciences, Respiratory Therapy.

**Office of Academic Affairs**

Bachelor of Arts (B.A.)

*Major:* Liberal Studies

Bachelor of Science (B.S.)

*Major:* Liberal Studies

**GRADUATE**

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

**College of Arts and Sciences**

Doctor of Philosophy in Computer Science (Ph.D.)

Master of Arts (M.A.)

Applied Sociology

Communication

English

History

Political Science

Master of Public Policy (M.P.P.)

Master of Science (M.S.)

Biological Science

Clinical Psychology

Computer Science

Industrial Chemistry

Industrial Psychology

Mathematical Science

Microbiology

**College of Business Administration**

Master of Arts (M.A.)

Applied Economics

Master of Business Administration (M.B.A.)

Master of Science (M.S.)

Accountancy

Management

**College of Education<sup>1</sup>**

Master of Arts (M.A.)

Master of Education (M.Ed.)

Administration and Supervision

Elementary Education including specializations in Exceptional Child,

Reading Specialist

Guidance

School Psychology (M.S.)

K-12—Educational Media Specialist, Music Education, Physical Education,

Reading Specialist, Visual Arts Education

Secondary Education—Business Education, English Language Arts,

Foreign Languages, Mathematics, Science, Social Sciences, Speech,

Vocational Education

Education Specialist (Ed.S.)<sup>1</sup>

Doctor of Education (Ed.D.)<sup>1</sup>

**College of Engineering**

Master of Science (M.S.)

Engineering

Master of Science in Engineering (M.S.E.)

Civil Engineering

Electrical Engineering  
Engineering Mathematics and Computer Systems  
Environmental Engineering  
Industrial Engineering  
Mechanical Engineering  
Doctor of Philosophy in Engineering (Ph.D.)

Electrical Engineering  
Environmental Engineering  
Industrial Engineering  
Mechanical Engineering

**College of Health**

Master of Arts  
Communicative Disorders

<sup>1</sup> The College of Education through cooperative programs offers work leading to Educational Specialist and Doctor of Education degrees from Florida Atlantic University and the University of Florida. Information about applications, admission and regulations are available from the College of Education.



# ACADEMIC PROGRAMS

## LIBERAL STUDIES PROGRAM

Director: *John Bolte*, AD 374, Phone 275-2351

Coordinator: *Dennis Kamrad*, AD 374, Phone 275-2351

### PURPOSE

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

The program is administered through the office of the Associate Vice President for Academic Affairs 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 decision on professional curricula until the sophomore year.

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

Students fulfilling the requirements for a degree in Liberal Studies must complete either the UCF Basic General Education Program or the General Education requirement at a Florida State Junior College. In addition, 6 semester hours of Advanced General Education Program courses are required.

The Liberal Studies student must complete:

1. A minimum of four course area groupings in which at least three disciplines are represented.
2. A minimum of 14 semester hours in each area with an additional 15 semester hours to be completed in a fifth area or used to strengthen one or more of the four course area groupings. Students choosing only four course area groupings may include a maximum of 8 semester hours of general electives in completing the fifth area.

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

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

## COURSE AREA GROUPINGS

### AIR FORCE OR ARMY ROTC

VII

For students who take and complete the Air Force or Army ROTC four-year or two-year upper division programs.

### HEALTH SCIENCES

IV

Communicative Disorders, Health Sciences, Medical Record Administration, Medical Technology, Nursing, Radiologic Sciences, Respiratory Therapy, and other Health Related Professions.

### BEHAVIORAL SCIENCES

VII

Anthropology, Psychology, Sociology, and Social Welfare.

### BIOLOGICAL SCIENCES

VI

Biology, Botany, Microbiology, and Zoology.

<b>BUSINESS ADMINISTRATION</b>	<b>I</b>
Accounting, Business Administration, Economics + , Finance, Management, Marketing, and Quantitative Business Analysis.	
<b>COMMUNICATION</b>	<b>VII</b>
Journalism, Radio-Television, Speech, and general courses in Communication.	
<b>EDUCATION*</b>	<b>II</b>
Business Education, Library Science, Physical Education, Teaching Analysis, Vocational Education, and selected courses from Elementary and Secondary Education.	
<b>ENGINEERING</b>	<b>III</b>
Selected courses from the Engineering core and departmental offerings. A maximum of 9 semester hours from the following courses may be used in the General Education Program and Liberal Studies program: EGN 4033, 4813, 4814, 4815, 4823, 4824, 4825, 4832, 4843, and 4844.	
<b>FINE ARTS</b>	<b>V</b>
Art, Music and Theatre.	
<b>HUMANITIES</b>	<b>V</b>
English, Foreign Literature, History, Humanities, Philosophy, and Religion.	
<b>LANGUAGES</b>	<b>V</b>
French, German, Italian, Russian, Spanish.	
<b>MATHEMATICAL SCIENCES</b>	<b>VI</b>
Computer Science, Mathematics, and Statistics.	
<b>PHYSICAL SCIENCES</b>	<b>VI</b>
Astronomy, Chemistry, Forensic Science, Geography (Physical), Geology, Physics, and general courses in the Earth and Space Sciences.	
<b>SOCIAL SCIENCES</b>	<b>VII</b>
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.

The Liberal Studies disciplines are:

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



# COLLEGE OF ARTS AND SCIENCES

## UNDERGRADUATE PROGRAMS

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

## GRADUATE PROGRAMS\*

Computer Science (Ph.D.)	History (MA)
Applied Sociology (MA)	Industrial Chemistry (MS)
Biological Science (MS)	Industrial Psychology (MS)
Clinical Psychology (MS)	Mathematical Science (MS)
Communication (MA)	Statistical Computing (MS)
Computer Science (MS)	Microbiology (MS)
English (MA)	Public Policy (MPP)

## OTHER PROGRAMS

Predental	Prepharmacy
Premedical	Prepodiatry
Preoptometry	Preveterinary
	Prelaw

\*See the Graduate Studies catalog.

# COLLEGE OF ARTS AND SCIENCES

**Dean:** *R. A. Llewellyn*, HFA 509, Phone 275-2251

**Associate Dean:** *J. P. Idoux*, HFA 509, Phone 275-2251

**Associate Dean:** *J. B. Rollins*, HFA 509, Phone 275-2251

**Assistant to the Dean:** *L. A. Tanzi*, HFA 528, Phone 275-2681

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 and Statistics, Music, Physics, Political Science, Psychology, Public Service Administration, Sociology, 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.

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**

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

## **Prelaw**

There is no preferred pattern for prelaw. Law schools accept superior students with a good liberal arts background, regardless of major field. A Bachelor of Arts or Bachelor of Science degree with approximately three-fourths representing theory content is typically required. The quality of undergraduate education for the legal profession, according to the Association of American Law Schools, is grounded in three basic skills and insights: comprehension and expression in words, critical understanding of the human institutions and values with which the law deals, and 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 political science should seek advisement in the Department of Political Science.

## **Interdisciplinary Studies**

The College of Arts and Sciences offers a major in Humanities and Fine Arts for the student who desires a broad exposure to courses in the College without the need to specialize in one department. It is a flexible program whose purpose is a liberal education and general background in the Humanities and Fine Arts. The course require-

ments for the College Major are 24 upper division hours in one department and 24 upper division hours in two other departments with not less than 9 in any one. A typical program follows:

Basic Program (general education and electives or AA Degree)	60 hours
Main area	24 hours
Secondary area	15 hours
Secondary area	9 hours
Upper Division general education	6 hours
Electives	6 hours
Total	120 hours

Contact Dr. Paul Riley (HFA 409, Phone 275-2273) for information on this major.

#### **Office of Academic Support and Information Services**

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 office (HFA 208, 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 Art, English, Foreign Language, History, 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.

#### **Minor in Afro-American Studies**

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

#### **Natural Science Majors Requirement**

In addition to meeting all University requirements, each degree program in the Departments of Biological Science, Chemistry, Computer Science, Mathematics and Statistics, and Physics must contain courses which will introduce the student to the three major scientific disciplines within the College; i.e., physical sciences, biological sciences, and mathematical and computer sciences. To satisfy this requirement, each student must take six courses distributed among the two scientific disciplines outside that of his major with a minimum of two courses in either discipline. Each department has identified a group of approved courses from which its majors may select in order to satisfy this College requirement. These courses will be of sufficient academic rigor to acquaint the student with both the philosophy and methodology of professionals within their disciplines. With proper justification a student may be permitted to utilize courses offered outside the College of Arts and Sciences to satisfy this distribution requirement by obtaining the prior approval of the Dean. Such requests must carry departmental approval before submission to the College of Arts and Sciences Academic Standards Committee which will then forward the request, with its recommendation, to the Dean.

#### **Program Planning**

Although suggested curricula are available in most areas, each student will plan his program in consultation with a faculty advisor appointed by the chairman of the major department or by the Dean of the College of Arts and Sciences.

## DEPARTMENT OF ART

Chairman: C. Wellman, FA 525, Phone 275-2676

Faculty: Chavda, Eyfells, Gaudnek, Lotz, Rivers, Skoglund

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

The Department of Art offers programs leading toward both the Bachelor of Arts (B.A.) degree and the Bachelor of Fine Arts (B.F.A.) degree.

**Visual Arts Forum Requirement:** All majors in the Art Department are required to attend a minimum of 75% of the Visual Arts Forum events which are offered during the period of the student's matriculation in the department. Attendance is taken at each of these events.

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

### MINOR

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

## BACHELOR OF ARTS: ART

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See page 64)

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, History of Art I, II 6 hours

ART 2201C, 2202C, Design Fundamentals, I, II 6 hours

Visual Arts Forum (attendance required) 0 hours

##### B. Restricted Electives

###### 1. Any one:

ART 4634C, Special Problems in Film Design (3) 3-4 hours

PHI 3800, Aesthetics (4)

THE 4072, Principles of Motion Picture Art (4)

###### 2. Studio Courses 6 hours

Any two 3000 or 4000 level studio courses

##### C. Specialization 15 hours

3000 and 4000 level courses in Art History

##### D. Language and Comprehensive Examination

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

Total Semester Hours in Art Courses or approved cognates 36-37

Total Semester Hours Required 120

II. Art (Studio Areas)

A. Required Courses

ART 2201C, 2202C,	Design Fundamentals I, II	6 hours
ART 2300C, 2301C,	Drawing Fundamentals I, II	6 hours
ARH 2050, 2051,	History of Art I, II	6 hours
Visual Arts Forum (attendance required)		0 hours

B. Restricted Electives

1. Any one:

ART 4634C,	Special Problems in Film Design (3)	3-4 hours
PHI 3800,	Aesthetics (4)	
THE 4072,	Principles of Motion Picture Art (4)	
ART 3230C	Design in Advertising (3)	

2. Art History

Any 3000 and 4000 level Art History course 3 hours

3. Upper Division

Electives in Art 4-6 hours

C. Specialization

3000 and 4000 level courses in one Studio Area, not to include any required courses stated above (see Areas of Studio Specialization below) 12 hours

D. Portfolio Requirement

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

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

Total Semester Hours Required 120

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



## BACHELOR OF FINE ARTS: ART

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

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See page 64)
3. Required Courses

ARH 2050, 2051,	History of Art I, II	6 hours
ART 2201C, 2202C,	Design Fundamentals I, II	6 hours
ART 4634C,	Special Problems in Film Design	3 hours
ART 2300C, 2301C,	Drawing Fundamentals I, II	6 hours
ART 3330C, 3331C,	Intermediate Drawing I, II	6 hours
ART 4965,	Studio and Exhibition	3 hours
Visual Arts Forum (attendance required)		0 hours
4. Restricted Electives
  - a) Art History and Theory 12 hours  
Any 3000 and 4000 level Art History and Theory Courses
  - b) Either:

PHI 3800,	Aesthetics (4), or	4 hours
THE 4072,	Principles of Motion Picture Art (4)	15-21 hours
  - c) Specialization  
3000 and 4000 level courses in one Studio Area, not to include any required courses listed above.  
The combination specializations in Drawing-Printmaking, Sculpture-Ceramics, and Photography-Printmaking require 9 or 12 semester hours of upper division work in each half of the combinations: a total of 21 semester hours for the combination.
5. Electives  
To be selected primarily from upper level courses outside the Department, with the approval of the student's advisor.

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

Total Semester Hours Required 120

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

## DEPARTMENT OF BIOLOGICAL SCIENCES

**Chairman:** *F. Snelson*, BL 211, Phone 275-2141

**Faculty:** *Berringer, Charba, Ehrhart, Ellis, Gennaro, Koevenig, Kuhn, Laird, Miller, Osborne, Stout, Sweeney, Sweet, Taylor, Vickers, Washington, White, Whittier, Wodzinski*

The Department of Biological Sciences offers a Bachelor of Science in Biological Science with options in biology, botany, limnology, microbiology, and zoology, a minor in Biology, as well as the Master of Science in Biological Science and Microbiology.

In an age when new discoveries are reported daily on both celestial and molecular levels, the study of living organisms has gained new importance among the sciences. Students in the life sciences find themselves in demand in teaching and many phases of research. The Core Curriculum required of all Biological Sciences majors provides a

background in the chemical and mathematical sciences in addition to Biology; thus allowing career opportunities for graduates in areas outside their major. In addition, an increasing number of graduates are furthering their education in professional or graduate schools. Through the judicious selection of electives in consultation with a faculty advisor, a subspecialty, such as physiology, may be emphasized in one or more of the options outlined below.

#### MINOR

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

Required courses (18 hours); BOT 2010C, BSC 2010C, MCB 3013C, PCB 3063C, PCB3063L, and ZOO 2010C.

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

Group I—Ecology: MCB 4603C or PCB 3043 and PCB 3043L

Group II—Physiology: BOT 4503C, MCB 4404C, PCB 3023, or PCB 4723.

Group III—Electives: Any 3000 level or above course(s) designed for majors in Biological Sciences, exclusive of those listed in Groups I and II.

To be eligible for a minor in biology, a student must have a GPA of at least 2.0 in all biological science courses subject to the following constraints:

A. No CLEP or TSD credits may be used

B. No D grades from other institutions will be accepted.

#### BACHELOR OF SCIENCE: BIOLOGICAL SCIENCE

##### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 64 and 68)

To be eligible for a major in any of the biological sciences, a student must have a GPA of at least 2.0 in all biological science courses subject to the following constraints: A. No CLEP or TSD credits may be used; B. No D grades from other institutions will be accepted.

3. Required Courses

BOT 2010C	General Botany	3 hours
BSC 2010C	General Biology	4 hours
CHM 2045, 2046	Chemistry Fundamentals I, II	7 hours
CHM 2046L	Chemistry Fundamentals Laboratory	1 hour
CHM 3210, 3211	Organic Chemistry I, II	6 hours
CHM 3211L	Organic Laboratory Techniques	2 hours
MCB 3013C	General Microbiology	4 hours
MCB 4404C	Microbial Metabolism	3-4 hours
or		
PCB 3023	Cell Physiology	
PCB 3043	Principles of Ecology/with Lab	4 hours
PCB 3063	Genetics/with Lab	4 hours
PHY 2050C, 2051C	College Physics I and II	8 hours
STA 3023	Fundamentals of Probability & Statistics	3 hours
ZOO 2010C	General Zoology	3 hours

4. Restricted Electives

(See specialization requirement listed below.)

##### MATH

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

5. Electives

Number of hours varies with the specialization.

Total Semester Hours Required

128

## AREAS OF SPECIALIZATION

(Students desiring to specialize in the areas identified below shall include the following courses in completing degree requirements.)

1. Biology
  - Restricted Electives Biology, Botany, Chemistry, Microbiology, or Zoology, to be selected with student's advisor from courses numbered 3000 or above. 24 hours
2. Botany
  - BOT 3223C Plant Anatomy 3 hours
  - BOT 3303C Plant Kingdom 4 hours
  - BOT 4503C Plant Physiology 4 hours
  - BOT 4713C Plant Taxonomy 5 hours
  - Restricted Electives Biology, Botany, Chemistry, Microbiology, or Zoology. To be selected with student's advisor from courses numbered 3000 or above; including at least 4 hours of Botany. 8 hours
3. Limnology
  - COP 1110 Computer Programming 3 hours
  - PCB 4302C Limnology I 4 hours
  - PCB 4303C Limnology II 4 hours
  - ZOO 4453C Ichthyology 4 hours
  - Restricted Electives Biology, Botany, Chemistry, Computer Science, Microbiology, Physics, Statistics or Zoology courses numbered 3000 or above approved by the student's advisor. 12 hours
4. Microbiology
  - BCH 4053, 4054 Biochemistry I, II 6 hours
  - CHM 3121C Analytical Chemistry 5 hours
  - MCB 3203C Pathogenic Microbiology 4 hours
  - MCB 4114C Microbial Systematics & Diagnosis 4 hours
  - MCB 4404C Microbial Metabolism 4 hours
  - MCB 4603C Environmental Microbiology 4 hours
  - PCB 3223 Immunology & Serology 4 hours
5. Zoology
  - PCB 4723C Animal Physiology 4 hours
  - ZOO 3303C Vertebrate Zoology 4 hours
  - ZOO 3713C Comparative Vertebrate Anatomy 5 hours
  - ZOO 4203C Invertebrate Zoology 4 hours
  - Restricted Electives ZOO courses numbered 3000 or above approved by the student's advisor 8 hours

## DEPARTMENT OF CHEMISTRY

**Chairman:** G. Mattson, SC 117, Phone 275-2246

**Faculty:** Baker, Clausen, Cunningham, Gupton, Hampton, Hertel, Idoux, Juge, Knudson, Kujawa (Geology), Madsen, Mattson, McGee (Forensic Science), Trefonas

The Department of Chemistry offers a Bachelor of Science in Chemistry, Bachelor of Science in Forensic Science, and the Master of Science in Industrial Chemistry.

Completion of the undergraduate program in chemistry, which is accredited by the American Chemical Society, provides access to a number of career opportunities in industry, government service, or education. Positions may entail basic or applied research, product development or control, sales, management or teaching. The program may lead to further study at the graduate level in analytical, biological, inorganic, organic, physical, or industrial chemistry or in related scientific areas. With appropriate choice of electives it also constitutes excellent preparation for the professional schools of dentistry, medicine, pharmacy, podiatry, or veterinary medicine.



## MINOR

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

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

Restricted electives (7 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; CHS 4110C, 4200

## BACHELOR OF SCIENCE: CHEMISTRY

### Degree Requirements

#### 1. University graduation requirements

(See pages 43-45)

#### 2. Special college and/or department requirements

(See pages 64 and 70)

#### 3. Required Courses

CHM 2045, 2046	Chemistry Fundamentals I, II	7 hours
CHM 2046L	Chemistry Fundamentals Laboratory	1 hour
CHM 3210, 3211	Organic Chemistry I, II	6 hours
CHM 3211L, 3212L	Organic Laboratory Techniques I, II	4 hours
CHM 3121C	Analytical Chemistry	5 hours
CHM 3410, 3411	Physical Chemistry I, II	8 hours
CHM 3411L	Physical Chemistry Laboratory I	2 hours
CHM 4610	Inorganic Chemistry	3 hours
CHM 4130C	Advanced Analytical Laboratory Technique	4 hours
CHM 4912	Undergraduate Research	4 hours
ENC 3241	Professional Report Writing II	3 hours
MAC 3311, 3312, 3313	Calculus with Analytic Geometry I, II, III	12 hours
PHY 2040, 2041, 2040L, 2041L	General Physics I, II	8 hours
STA 3023	Fundamentals of Probability and Statistics	3 hours

#### 4. Restricted Electives

##### a. Biological Sciences

BSC 2010C Basic Biology 7 hours

4 hours

Approved electives restricted to those biological science courses

not listed as designed for non-majors. 3 hours

##### b. COP 1110 Computer Programming

or

COP 3215 Programming and Numerical Methods 3 hours

##### c. PHY 3752C Physics of Scientific Instruments 4 hours

or

CDA 4012 Computer Interfacing for Scientists 3 hours

##### d. Any two

BCH 4053 Biochemistry I 3 hours

BCH 4054 Biochemistry II 3 hours

CHM 4220 Advanced Organic Chemistry 3 hours

CHM 4580 Advanced Physical Chemistry 3 hours

CHM 5710 Chemical Structure I 3 hours

CHS 4110C Nuclear and Radio Chemistry 3 hours

CHS 4200 Concepts in Industrial Chemistry 3 hours

CHS 5250 Chemical Synthesis I 3 hours

#### 5. Electives

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

Total Semester Hours Required

128

## FORENSIC SCIENCE PROGRAM

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 43-45)

2. Special college and/or department requirements

(See page 64)

3. Required Courses

BSC 2010C	Basic Biology	4 hours
CHM 2045, 2046	Chemistry Fundamentals I, II	7 hours
CHM 2046L	Chemistry Fundamentals Laboratory	1 hour
CHM 3210, 3211	Organic Chemistry I, II	6 hours
CHM 3211L	Organic Laboratory Techniques I	2 hours
CHM 3121C	Analytical Chemistry	5 hours
CHS 3511	Criminalistics I	3 hours
CHS 3531	Forensic Analysis Techniques	3 hours
CHS 4591	Forensic Science Internship	6 hours
COP 1110	Computer Programming	3 hours
ENC 3241	Professional Report Writing II	3 hours
CHM 3410	Physical Chemistry	4 hours
CHM 4130	Advanced Analytical Chemistry	4 hours
MAC 3253, 3254	Applied Calculus I, II	8 hours
PHY 2050C, 2051C	College Physics I, II	8 hours
STA 3023	Fundamentals of Probability & Statistics	4 hours

4. Restricted Electives

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

5. Electives

3 hours

Total Semester Hours Required

120

## DEPARTMENT OF COMMUNICATION

**Chairman:** R. Buchanan, FA 534, Phone 275-2681

**Faculty:** Arnold, Butler, Davis, Fedler, Grasty, Hall, Hightower, Hoglin, Hosokawa, Johnson, Kissel, Meeske, Morgan, O'Keefe, Pryor, Smith, 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, allow-

ing 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. This program earns elective credit only and cannot be applied to the major requirement in a specific Communication degree program.

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

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

#### MINOR

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

1. Film  
Required courses: FIL 3200 (4), FIL 4201 (4), FIL 3300 (4), Either RTV 3000 (3) or JOU 3600 (4).
2. General Communication  
COM 3311<sup>1</sup> (3) and 15 semester hours selected from the following courses: SPC 3425 (3), SPC 4440 (3), SPC 3445 (3), SPC 4540<sup>1</sup> (3), COM 3110 (3), COM 3120 (3).
3. Organizational Communication  
COM 3110 (3), SPC 3445 (3), SPC 3301 (3), SPC 3425 (3), SPC 4330 (3), COM 3120 (3).
4. Journalism: Advertising/Public Relations Sequence  
PUR 4000 (3), ADV 4000 (3), ADV 4101 (4), ADV 4003 (4), ADV/PUR practicum 4941 (3).
5. Journalism: News Editorial Sequence  
JOU 3100<sup>1</sup> (4), JOU 3200<sup>1</sup> (4), MMC 4200 (3), MMC 4602 (4) or JOU 3003 (3), plus JOU elective (writing course) (3 hrs.).
6. Radio-TV  
RTV 3000 (3), RTV 4700 (3); Choose one—FIL 3200 (4), RTV 3210 (4); Choose one—RTV 3300 (5), RTV 3501 (4).
7. Speech Communication  
COM 3311<sup>1</sup> (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).

<sup>1</sup>Prerequisite of Departmental English proficiency test required.

## BACHELOR OF ARTS: COMMUNICATION

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 64 and 72)
3. Required Courses
 

COM 3311 <sup>1</sup>	Communication as a Behavioral Science	3 hours
SPC 4330	Nonverbal Communication	3 hours
SPC 4540	Attitudes and Communication	3 hours
SPC 3425	Group Interaction	3 hours
4. Restricted Electives (See Area of Specialization)
5. Electives (See Area of Specialization)

### AREAS OF SPECIALIZATION

1. General Communication Track Requirements
 

COM 3301	Interpersonal Communication	3 hours
SPC 3542	Persuasion	3 hours
MMC 4200	Communication Law	3 hours

Select one course from history:

RTV 3000	Foundations of Broadcasting	3 hours
JOU 3003	History of American Journalism	3 hours
SPC 4651	Rhetoric of Social and Political Action	3 hours
SPC 5200	Evolution of Communication Theory	3 hours

Select 2 courses from motivation:

PUR 4000	Public Relations	3 hours
ADV 4000	Principles of Advertising	3 hours
RTV 4402 <sup>1</sup>	Broadcast Criticism	3 hours
SPC 3250	Speech and Human Relations	3 hours

Select 2 courses from research:

MMC 4609	Opinion and the Mass Media	4 hours
SPC 4440	Group Dynamics	3 hours
SPC 4350	Studies in Listening	3 hours
COM 4912	Studies in Human Communication Research	3 hours
COM 4463	Communication and Courtroom Advocacy	3 hours

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

2. Organizational Communication Track Requirements

COM 3110	Business and Professional Communication	3 hours
SPC 3445	Leadership	3 hours
SPC 4440	Group Dynamics	3 hours
SPC 4350	Studies in Listening	3 hours
SPC 3301	Interpersonal Communication	3 hours
COM 3120	Organizational Communication	3 hours
PUR 4000	Public Relations	3 hours

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

<sup>1</sup>Prerequisite of Departmental English proficiency test required.

## BACHELOR OF ARTS: FILM

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 64 and 72)

3. Required courses

COM 3311 <sup>1</sup>	Communication as a Behavioral Science	3 hours
RTV 3000	Foundations of Broadcasting	3 hours
RTV 3200	Broadcast Techniques	4 hours
THE 3251	History of Motion Picture	3 hours
JOU 3600	Photojournalism	4 hours
FIL 3200	Film Production	4 hours
FIL 4201	Film Production II	4 hours
FIL 3300	Film Documentary	4 hours
MMC 4200	Communication Law	3 hours

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

<sup>1</sup>Prerequisite of Departmental English proficiency test required.

## BACHELOR OF ARTS: JOURNALISM

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 64 and 72)

3. Required Courses		
COM 3311 <sup>1</sup>	Communication as a Behavioral Science	3 hours
JOU 3100 <sup>1</sup>	News Reporting	4 hours
MMC 4200	Legal Responsibilities of the Mass Media	3 hours
VIC 3001	Photo Communication	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

<sup>1</sup>Prerequisite of Departmental English proficiency test required.

### AREAS OF SPECIALIZATION

1. Required Courses: News-Editorial Track		
JOU 3200 <sup>1</sup>	News Editing	4 hours
JOU 4104 <sup>1</sup>	Public Affairs Reporting	4 hours
MMC 4602	Contemporary Media Issues	3 hours
JOU 3003	History of American Journalism	3 hours
JOU 4300 <sup>1</sup>	Feature Writing	4 hours
JOU elective or ADV 4000		3 hours

Recommended: News-Editorial majors should plan to work in an off campus internship with a newspaper. In addition, majors are strongly urged to work with the *Future*. Also, it is suggested that they select a minor outside the communication department. Recommended minors include: Political Science, History, English, Economics, Sociology, Public Service Administration or some area in Business Administration, for example. Internship credits can be applied only as general electives and not to your major.

2. Required Courses: Advertising/Public Relations Track		
PUR 4000	Principles of Public Relations	3 hours
ADV 4000	Principles of Advertising	3 hours
ADV 4003	Ad Layout and Prep.	4 hours
ADV 4101	Ad Copy and Campaigns	4 hours
ADV 4103	Radio-TV Advertising	3 hours
COM 3110	Business & Prof. Communication	3 hours
ADV/PUR	Practicum (4941)	3-6 hours
or		
PUR 4800	Public Relations Campaigns	3 hours

Recommended: Students in the ADV/PUR track may elect to do a second different internship for an additional 3 elective hours. Check with your advisor *before* registering for an internship.

<sup>1</sup>Prerequisite of Departmental English proficiency test required.

### BACHELOR OF ARTS: RADIO-TELEVISION

#### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 64 and 72)
3. Required courses
 

COM 3311 <sup>1</sup>	Communication as a Behavioral Science	3 hours
RTV 3200	Broadcast Techniques	4 hours
RTV 3000	Foundations of Broadcasting	3 hours
RTV 4403	R/TV and Society	3 hours
RTV 4700	Broadcast Regulations	3 hours
RTV 4800	Broadcast Management	3 hours
RTV 3300 <sup>1</sup>	Broadcast Journalism I	4 hours
RTV 3501 <sup>1</sup>	Broadcast Continuity and Programming I	4 hours
4. Restricted Electives:
 

Production—Choose one course		
RTV 3210	Radio Production	4 hours

RTV 3220	Television Production	4 hours
FIL 3200	Film Production	4 hours

5. Electives

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

Total Semester Hours Required 120

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.

<sup>1</sup>Prerequisite of Departmental English proficiency test required.

## BACHELOR OF ARTS: SPEECH

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 64 and 72)

3. Required Courses

COM 3311 <sup>1</sup>	Communication as a Behavioral Science	3 hours
SPC 3301	Interpersonal Communication	3 hours
SPC 3542	Persuasion: Motivation	3 hours
SPC 3425	Group Interaction	3 hours
SPC 3250	Speech and Human Relations	3 hours
SPC 3601	Platform Speaking	4 hours
SPC 4330	Non-verbal	3 hours

4. Restricted Electives:

Select 6 hours from research area:

SPC 3445	Leadership	3 hours
SPC 4440	Group Dynamics	3 hours
SPC 4540	Attitudes and Communication	3 hours
SPC 4350	Listening	3 hours
COM 4918	Research Planning	3 hours
COM 4463	Communication and Courtroom Advocacy	3 hours

Select 5-6 hours from Rhetoric:

SPC 4651	Rhetoric of Social and Political Action	3 hours
ORI 3001	Interpretation I	3 hours
SPC 3410	Parliamentary Procedure	1 hour
LIN 2200	Phonetics	4 hours
SPC 5200	Evolution of Communication Theory	3 hours

5. Electives

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

Total Semester Hours Required 120

<sup>1</sup>Prerequisite of Departmental English proficiency test required.

## DEPARTMENT OF COMPUTER SCIENCE

Chairman: T. Frederick, FA 461-B, Phone 275-2341

Faculty: Andrews, Brigham, Brilliant, Cottrell, Driscoll, Dutton, Gerber, Gomez, Guha, Hart, Hughes, Kinsley, Lang, Mukhopadhyay, Thornton, Workman.

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

mal courses as well as a specialization in selected areas. In addition, the department conducts research in programming systems/languages, information systems, computer architecture, computational methods and other areas.

The department's minicomputer laboratory includes a DEC VAX 11/780 with 4MB memory, 56 ports, a Benson-Varian 9211 printer/plotter, 2 AED 512 color graphics terminals and a TEKTRONIX 4052 graphics terminal with accessories. Both UNIX and VMS operating systems are available along with PASCAL, C and FORTRAN. The department's microcomputer laboratory includes the WICAT System 150 with ADA, 4 Zilog MCZ 1/30's, CROMEMCO System 3, and sixteen APPLE and IBM personal computers with a full range of peripherals. Specialized research equipment includes a GENRAD/FUTUREDATA universal microprocessor development system network with emulators and evaluation boards for all major 16-bit architectures, a KONTRON universal prom burner and a TEKTRONIX logic analyzer. The department's computer facilities are supported by three full time technical staff and an electronics laboratory. In addition, there is access to UNIVAC 1100, CDC CYBER, AMDAHL V6 and HARRIS 550 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 courses* used to satisfy the requirements for the major in Computer Science.
2. A minimum GPA of 2.00 in *computer science* courses used to satisfy the requirements for the major in Computer Science.
3. The above requirements apply not only to the overall program, but also to the courses taken at UCF.

#### MINORS

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

1. Computer Science for Business Majors  
Required courses (15 hours): CAP 3001, 3002, 3006, 3007, COP 3120.  
Restricted electives (3 hours minimum): ACC 5431, CIS 4112, COP 1110, 2510, 2511, 3402C, ECO, 4412, FIN 3453, MAC 3233, 3311, 3312, 3313, MAN 4510, 4722, 4724, MAR 3613, MAS 3113, STA 4102, 4163.
2. Computer Science  
Required courses (12 hours): COP 2510, 2511, 3402C, 4530.  
Restricted Electives (minimum 6 hours): CIS 4112, CNM 4110, COP 3121, 3404, 4550, 4620, COT 3000.

### BACHELOR OF SCIENCE: COMPUTER SCIENCE

#### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 64 and 76)  
Laboratory Course in Biological Sciences 4 hours  
ENC 3241 (Professional Report Writing II) is required 3 hours
3. Required courses: Courses used to satisfy the requirements for the major can be counted only once in the major.
 

Computer Science		
COP 2510	Programming I	3 hours
COP 2511	Programming II	3 hours
COP 3402C	Assembly Language Programming	3 hours
COP 3404	Computer Systems Concepts/Programming	3 hours
COT 3000	Introduction to Discrete Structures	3 hours
COP 3530	Data Structures	3 hours
Mathematics and Statistics		
MAC 3311	Calculus with Analytic Geometry I	4 hours
MAC 3312	Calculus with Analytic Geometry II	4 hours
STA 3023	Fundamentals of Probability & Statistics	3 hours

Physics and Engineering

PHY 2040	University Physics I	3 hours
PHY 2041	University Physics II	3 hours
PHY 2041L	University Physics Laboratory II	1 hour
EEL 3341C	Introduction to Digital Circuits	3 hours

4. Restricted Electives

A minimum of 28 semester hours of courses as specified in one of the five areas of specialization.

5. Electives

The number of hours varies with the specialization.

Total Semester Hours Required 120

**AREAS OF SPECIALIZATION**

1. General Computer Science. Students desiring to specialize in the area must complete a minimum of 28 hours as follows:

Group A (All courses listed)

CDA 4102	Introduction to Computer Architecture	3 hours
CNM 4110	Numerical Calculus	3 hours
COP 4550	Programming Languages I	3 hours
COP 4620	Programming Systems	3 hours
COT 4001	Discrete Computational Structures	3 hours

Group B (A minimum of 9 hours)

CAP 5722	Computer Graphics Systems I	3 hours
CIS 4112	Databases	3 hours
COP 3121	COBOL Programming	3 hours
COP 5554	Programming Languages II	3 hours
MAC 3313	Calculus with Analytic Geometry III	4 hours
MAP 3302	Differential Equations I	3 hours
MAS 3113	Matrices	4 hours
MHF 3104	Boolean Algebra	3 hours
STA 4163	Statistical Methods I	3 hours
STA 4164	Statistical Methods II	3 hours

Group C

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

2. Programming and Systems. Students desiring to specialize in the area must complete a minimum of 28 hours, as follows:

Group A (All courses listed.)

CDA 4102	Introduction to Computer Architecture	3 hours
CIS 4112	Databases	3 hours
COP 4550	Programming Languages I	3 hours
COP 4620	Programming Systems	3 hours
COT 4001	Discrete Computational Structures	3 hours

Group B (A minimum of 9 hours)

CAP 5722	Computer Graphics Systems I	3 hours
CDA 4161	Programming for Large Scale Digital Systems	3 hours
COP 3121	COBOL Programming	3 hours
COP 5554	Programming Languages II	3 hours
COP 5613	Operating System Design Principles	3 hours
MAC 3313	Calculus with Analytic Geometry III	4 hours
MAS 3113	Matrices	4 hours
STA 4103	Comp. Proc. Statistical Data	3 hours
STA 4163	Statistical Methods I	3 hours
STA 4164	Statistical Methods II	3 hours

Group C

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

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

Group A (All courses listed.)

CNM 4110	Numerical Calculus	3 hours
COT 4001	Discrete Computational Structures	3 hours
MAC 3313	Calculus with Analytic Geometry III	4 hours



MAP 3302	Differential Equations I	3 hours
MAS 3113	Matrices	4 hours
or		
MAS 3103	Linear Algebra	4 hours
Group B (A minimum of 9 hours.)		
CAP 5722	Computer Graphics Systems I	3 hours
CDA 4102	Introduction to Computer Architecture	3 hours
CNM 5142	Computational Methods/Linear Systems	3 hours
COP 4550	Programming Languages I	3 hours
COP 4620	Programming Systems	3 hours
MHF 3104	Boolean Algebra	3 hours
STA 4163	Statistical Methods I	3 hours
STA 4164	Statistical Methods II	3 hours

Group C

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

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

Group A (All courses listed.)

CIS 4112	Databases	3 hours
CIS 4323	Data Processing Systems Analysis & Design	3 hours
CIS 4324	Data Processing Systems Implementation	3 hours
COP 3121	COBOL Programming	3 hours

Group B (A minimum of 15 hours with at least 3 courses selected from [1] and at least 2 courses from [2].)

[1]

CDA 4102	Introduction to Computer Architecture	3 hours
COP 4550	Programming Languages I	3 hours
COP 4620	Programming Systems	3 hours
COP 5554	Programming Languages II	3 hours
MAS 3113	Matrices	4 hours
STA 4102	Computer Processing Statistical Data	3 hours
STA 4163	Statistical Methods I	3 hours
STA 4164	Statistical Methods II	3 hours

[2]

ACC 3003	Principles of Accounting	6 hours
BUL 3111	Legal Environment of Business	3 hours
FIN 3403	Business Finance	3 hours
MAN 3010	Management of Organizations	3 hours
MAN 3301	Personnel Management	3 hours
MAR 3023	Marketing	3 hours

Group C

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

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

Group A (All courses listed.)

CDA 4102	Introduction to Computer Architecture	3 hours
CDA 4142	Microcomputer Organization	3 hours
CDA 4143	Microcomputer Interfacing/Software	3 hours
CDA 4144	Microcomputer Interfacing	3 hours
COP 4620	Programming Systems	3 hours

Group B (A minimum of 9 hours.)

CAP 5722	Computer Graphics Systems I	3 hours
CDA 5106	Advanced Computer Architecture I	3 hours
CIS 4112	Databases	3 hours
COP 4550	Programming Languages I	3 hours
COT 4001	Discrete Computational Structures	3 hours
EEL 4342C	Introduction to Digital Circuits & Systems	4 hours
EEL 4701C	Digital Systems Organization	4 hours
MAC 3313	Calculus with Analytic Geometry III	4 hours
or		
MAS 3113	Matrices	4 hours

MHF 3104

STA 4163

STA 4164

Group C

Boolean Algebra

Statistical Methods I

Statistical Methods II

3 hours

3 hours

3 hours

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



## MAJOR IN ECONOMICS

Contact Person: D. Dees, HFA 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 43-45)
  2. Special college and/or department requirements  
(See page 64)
  3. Required courses

ECO 2013	Principles of Economics I	3 hours
ECO 2023	Principles of Economics II	3 hours
ECO 3101	Intermediate Price Theory	3 hours
ECO 3203	Aggregate Economic Conditions Analysis	3 hours
ECO 3411	Quantitative Methods and Business Decision Analysis	3 hours
  4. Restricted Electives
    - a. Select six

ECO 3702	International Economics	3 hours
ECO 4224	Money: Issues and Analysis	3 hours
ECO 4303	History of Economic Thought	3 hours
ECO 4412	Economic Statistics and Econometrics	3 hours
ECO 4503	Economics of the Public Sector	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 Economies	3 hours
ECP 4403	Business, Government & Industrial Organization	3 hours
ECP 4605	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

Chairman: S. Omans, FA 432, Phone 275-2212

Faculty: Adicks, Barnes, Browne, Donnelly, Grove, Hartman, Jaffe, McCown, Omans, Price, Schiffhorst, Sommer, Umphrey, Wyatt

The UCF English Department is responsible for the effective teaching of literature in English, including World Literature, as well as expository and creative writing. It serves not only the special needs of those students concentrating in literature, writing, and linguistics, but also the broad needs of the University by offering courses in expository writing and literature to students from other departments.

### MINOR

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

English Minor, required courses: 12 semester hours selected from ENL 2010,

3021, AML 2011, 3020, ENL 3273, LIT 2110, 3120. The student must complete 9 additional semester hours of English courses chosen by the student.

Technical Writing and Editing Minor, required courses: the following 22 semester hours: ENC 2023, 3210 or 3241, 3310, 3311, 4424, 4425, 4426, 4440. Students completing the minor will intern with a central Florida corporation.

## BACHELOR OF ARTS: ENGLISH

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See page 65) Writing Proficiency Exam
3. Required courses  
Foundation (for all concentrations)  
(See also Literature Concentration, Writing Concentration or Linguistic Concentration below)
 

LIT 3000	Literary Analysis	3 hours
ENL 2010	English Literature I	3 hours
ENL 3021	English Literature II	3 hours
AML 2011	American Literature I	3 hours
AML 3020	American Literature II	3 hours

Choose any one of:

LIT 2110	World Literature I	3 hours
LIT 3120	World Literature II	3 hours
ENL 3273	British Literature Since 1914	3 hours
LIN 4100	History of English Language	3 hours
LIN 4341	Modern English Grammar	3 hours
4. Restricted Electives  
(See Literature Concentration, Writing Concentration or Linguistic Concentration below)
5. Electives  
To be selected primarily from upper level courses with the approval of the student's advisor.
6. Foreign Language Requirement  
Proficiency in one modern foreign language must be shown in one of the following ways: passing a proficiency exam; presenting four years of high school credit in one language; completing 12 semester hours in one language; completing 6 semester hours in one language (in which case an additional 6 semester hours of upper-level English courses are required).

Total Semester Hours Required 120

### AREA OF SPECIALIZATION

1. Literature. The following courses are required for this specialization.  
Foundation (as above)
 

CRW 2000	Principles of Creative Writing	3 hours
ENL 4311	Chaucer	3 hours
ENL 4330	Shakespeare	3 hours

Choose two of:

ENL 5347	Age of Milton	3 hours
ENL 5225, 5236	Age of Dryden & Pope	3 hours
LIT 5366	Romantic Revolt	3 hours
LIT 5367	Experience of Realism	3 hours

Choose three of:

AML 4321	Modern American Literature	3 hours
AML 4261	Literature of the South	3 hours
LIT 3082	European Fiction Since 1900	3 hours
AML 4101	American Novel	3 hours
ENL 4373	Modern British Literature	3 hours
ENL 4101	English Novel	3 hours

2. Writing. Students desiring to specialize in the area should meet the requirements:
- Foundation (as above)
- |          |                                |         |
|----------|--------------------------------|---------|
| CRW 2000 | Principles of Creative Writing | 3 hours |
|----------|--------------------------------|---------|
- Choose one of:
- |          |                                 |         |
|----------|---------------------------------|---------|
| CRW 2100 | Introduction to Fiction Writing | 3 hours |
| CRW 2300 | Introduction to Verse Writing   | 3 hours |
- Choose four of:
- |             |                                   |         |
|-------------|-----------------------------------|---------|
| CRW 3001    | Creative Writing Workshop I       | 3 hours |
| CRW 3002    | Creative Writing Workshop II      | 3 hours |
| CRW 3410    | Writing Scripts                   | 3 hours |
| ENC 3310    | Writing Skills                    | 3 hours |
| ENC 3311    | Expository Writing                | 3 hours |
| ENC 3341    | Magazine Writing                  | 3 hours |
| ENC 3210/41 | Professional Report Writing I, II | 3 hours |
- Choose two of:
- |          |                           |         |
|----------|---------------------------|---------|
| CRW 4940 | Writing Practicum I       | 3 hours |
| CRW 4941 | Writing Practicum II      | 3 hours |
| CRW 4906 | Independent Study         | 3 hours |
| CRW 5932 | Teaching Creative Writing | 3 hours |
3. Linguistics
- Foundation (as above)
- |          |                                 |         |
|----------|---------------------------------|---------|
| LIN 3010 | Principles of Linguistics       | 3 hours |
| LIN 4100 | History of the English Language | 3 hours |
| LIN 4341 | Modern English Grammar          | 3 hours |
- Choose five of:
- |          |                         |         |
|----------|-------------------------|---------|
| LIN 5137 | Linguistics             | 3 hours |
| LIN 3710 | Foundations of Language | 3 hours |
| LIN 4801 | Language and Meaning    | 3 hours |
| PHI 4220 | Philosophy of Language  | 3 hours |
| LIN 4202 | Phonetics               | 3 hours |
| LIN 5705 | Psycholinguistics       | 3 hours |
| SPC 4330 | Non-Verbal Behavior     | 3 hours |
| LIN 4612 | Black English           | 3 hours |

## DEPARTMENT OF FOREIGN LANGUAGES

Chairman: A. Payas, FA 436, Phone 275-2641

Faculty: Barsch, Cervone, DiPierro, Micarelli, Taylor

Language studies in the College of Arts and Sciences provide instruction in French, German, Italian, Latin, Russian and Spanish, with majors in French and Spanish. These programs are designed to meet the needs of students who desire competency in a language and expanded understanding of a foreign culture and literature. Students enrolled in 1000, 2000 and certain 3000 level courses are required to attend the language laboratory for at least one hour a week.

Students wishing to major in a foreign language must meet all the requirements for graduation as set forth by the University, the College of Arts and Sciences, and by the Department of Foreign Languages. The student majoring in foreign language must complete 30 semester hours in the chosen language beyond the 1000 and 2000 level. Among these 30 semester hours the student must take courses numbered 3240, 3420, 3100, and 3101. Non-native French majors must also take FRE 4780 (French Phonetics and Diction) or the overseas summer course FRE 3955. (Corrective Phonetics and Vocabulary Building). Students interested in a combined major must take courses numbered 3240, 3420, 3100, and 3101 in both languages, FRE 4780 (French Phonetics and Diction) or FRE 3955 (Corrective Phonetics & Vocabulary Building), plus an additional 12 hours in the primary language and an additional 3 hours in the secondary language for a total of 45 semester hours.

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 quarter of the second year; one year in the second semester of the first year.

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

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

#### **MINORS**

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

Required courses: 18 semester hours above the 2000 level in one language including the courses numbered 3240 and 3420.

### **BACHELOR OF ARTS: FRENCH OR SPANISH**

#### **Degree Requirements**

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 64 and 83)
3. Required courses for French or Spanish Major
 

1100	Elementary Language & Civilization	3 hours
1101	Elementary Language & Civilization	3 hours
2200	Intermediate Language & Civilization	3 hours
2201	Intermediate Language & Civilization	3 hours
3240	Conversation	3 hours
3420	Composition	3 hours
3100	Survey of Literature I	3 hours
3101	Survey of Literature II	3 hours
<b>French Majors</b>		
FRE 4780	French Phonetics and Diction	3 hours
or		
FRE 3955	Corrective Phonetics & Vocabulary Building	3 hours
4. Restricted Electives  
Students are required to choose two of the following:
 

LIN 4906	Articulatory Phonetics	3 hours
LIN 4341	Modern English Grammar	3 hours
LIN 3010	Principles of Linguistics	3 hours
Other restricted electives		18 hours
5. Electives
 

	Total Semester Hours Required	120
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### **BACHELOR OF ARTS: FOREIGN LANGUAGE COMBINATION**

#### **Degree Requirements**

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 64 and 83)
3. Required Courses for Combined Major in Foreign Languages
 

3240	Conversation	3 hours
3420	Composition	3 hours
3100	Survey of Literature I	3 hours
3101	Survey of Literature II	3 hours
FRE 4780	French Phonetics and Diction	3 hours
or		
FRE 3955	Corrective Phonetics & Vocabulary Building	3 hours
4. Restricted Electives  
15 credits in first language

6 credits in second language

Students are required to choose two of the following:

LIN 4906	Articulatory Phonetics	3 hours
LIN 4341	Modern English Grammar	3 hours
LIN 3010	Principles of Linguistics	3 hours
Other restricted electives		18 hours

5. Electives

Total Semester Hours Required

120

### Summer Study Abroad

The Department of Foreign Languages has been offering a Summer Study program in Spain since 1972, one 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 1982. Credit bearing courses are available in these programs in language (all levels), art, and civilization of France, Italy and Spain. These programs are open to all students of the State University System of Florida.

### AREA OF SPECIALIZATION

1. Russian Area Studies. The University of Central Florida offers an academic program in Russian Area Studies. Five departments in the University have cooperated to provide this unique study program so that the student may more fully enjoy the varied offerings of the University. Upon successful completion of courses, the student will receive a certificate of participation.

## DEPARTMENT OF HISTORY

**Chairman:** J. Shofner, FA 551-B, Phone 275-2224

**Faculty:** Crepeau, Evans, Fetscher, Greenhaw, Kallina, Pauley, Wehr

Students majoring in history must complete a minimum of 36 hours in history courses. At least six hours must be selected from each of three different geographical areas, such as: United States, Europe, Asia or Latin America.

History majors are encouraged but not required to develop a proficiency in a foreign language.

History majors who are interested in a pre-law program should work closely with their advisors in selecting major courses and electives which will best prepare them for law school. These students should use their electives for additional courses in history as well as English, speech and philosophy. Such a course of study will prepare them for success in law school and will concomitantly provide a broad liberal education.

### MINOR

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

Required courses: 18 semester hours of history, twelve of which must be at the 3000-4000 level. Specific courses must be selected in conference with a departmental advisor.

## BACHELOR OF ARTS: HISTORY

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 64 and 83)

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. Russian Area Studies. The history department participates in the Russian Area Program. For information consult with Professor Evans.

## DEPARTMENT OF HUMANITIES, PHILOSOPHY AND RELIGION

Chairman: P. Riley, FA 416, Phone 275-2273

Faculty: Flick, Jones, Kassim, Levensohn, Riser

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

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

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

### MINORS

The Department of Humanities, Philosophy and Religion offers minors consisting of 18-21 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 43-45)

2. Special college and/or department requirements

(See pages 64 and 65)

The department requires one year of a foreign language or equivalent.

3. Required Courses (all specializations)

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	3-4 hours
e. Any course in literature, history, philosophy or religion	3 hours
f. One course in art history or appreciation	3 hours
g. One course in music appreciation	3 hours
h. One course in theatre history	3 hours



- |   |           |
|---|-----------|
| 2. THE ARTS (See advisor for specific courses.)       |           |
| a. One course in world literature                     | 3 hours   |
| b. One course in history                              | 3 hours   |
| c. One course in history of philosophy                | 3 hours   |
| d. One course in religion                             | 3-4 hours |
| e. Two courses in art                                 | 6 hours   |
| f. Two courses in creative writing                    | 6 hours   |
| g. 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<br>(See pages 43-45)                                       |          |
| 2. Special college and/or department requirements<br>(See pages 64 and 65)                       |          |
| 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                              |          |
| PHI 1100           Critical Thinking             | 3 hours  |
| PHI 2010           Introduction to Philosophy    | 3 hours  |
| PHH 3100           Ancient Philosophy            | 3 hours  |
| PHI 3600           Ethics                        | 3 hours  |
| PHI 4700           Philosophy of Religion        | 3 hours  |
| REL 3203           Hebrew and Christian Heritage | 4 hours  |
| REL 3314           Religions of China & Japan    | 3 hours  |
| REL 3342           Hinduism                      | 3 hours  |
| REL 3353           Islam                         | 3 hours  |
| b. Restricted electives                          |          |
| Four elective courses in religion or philosophy  | 12 hours |

## DEPARTMENT OF MATHEMATICS AND STATISTICS

**Chairman:** *J. Anthony*, FA 451, Phone 275-2585

**Faculty:** *Andrews, Armstrong, Barr, Bean, Brigham, Caron, A. Dutton, Franklin, Heizer, Hurst, Jones, Malone, Norman, O'Hara, Ostle, Pettofrezzo, Rautenstrauch, Rodriquez, Salzman, Sherwood, Somerville, M. Taylor*

The Department of Mathematics and Statistics offers courses and programs which lead to a Bachelor of Science in Mathematics, a Bachelor of Science in Statistics, a minor in mathematics, a minor in statistics, 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 and statistics are designed to serve (1) students who wish to pursue careers in mathematics or statistics 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 or 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 Mathematics and Statistics have developed along several lines. There are the usual service courses in precalculus, calculus and elementary statistics along with strong programs in the upper division in the traditional areas of algebra and analysis, applied mathematics, statistical methods, and statistical theory.

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

### MINORS

The Department of Mathematics and Statistics offers the following minors.

#### 1. Mathematics (minimum 21 hours)

Required Courses: MAC 3311, 3312, 3313; MAP 3302.

(MAC 3311 and 3312 may be waived by the Department Standards Committee for a student with adequate high school preparation in calculus.)

Restricted Electives: A minimum of two courses selected from STA 4442, STA 5447, 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 and Statistics at U.C.F.

#### 2. Statistics (minimum 18 hours)

Required Courses: STA 3023 or STA 3032 or equivalent; STA 4163, 4164; STA 4202 or STA 4222.

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 for STA 3023 or STA 3032 and STA 4163 must be taken from the Department of Mathematics and Statistics at U.C.F.

## BACHELOR OF SCIENCE: MATHEMATICS

### Degree Requirements

#### 1. University graduation requirements

(See pages 43-45)

#### 2. Special college and/or department requirements

All mathematics and statistics courses except for MAC 3311, 3312, 3313, MAP 3302 and STA 3023 must either be taken from the Department of Mathematics and Statistics at U.C.F. or must be approved by the Department Standards Committee.

#### 3. Required Courses

BSC 1010C	Basic Biology	4 hours
COP 2510	Programming I	3 hours
COP 2511	Programming II	3 hours
MAC 3311	Calculus with Analytic Geometry I	4 hours
MAC 3312	Calculus with Analytic Geometry II	4 hours
MAC 3313	Calculus with Analytic Geometry III	4 hours
MAP 3302	Differential Equations	3 hours
MAP 4363	Applied Boundary Value Problems I	4 hours
MAS 3103	Linear Algebra	4 hours

MHF 2300	Logic and Proof in Mathematics	3 hours
PHY 2040	University Physics I	3 hours
PHY 2040L	University Physics Laboratory I	1 hour
PHY 2041	University Physics II	3 hours
PHY 2041L	University Physics Laboratory II	1 hour
STA 3023	Fundamentals of Probability and Statistics	3 hours
STA 4321	Statistical Theory I	3 hours
One course selected from		
ENC 3241	Professional Report Writing II	3 hours
ENC 3310	Writing Skills	3 hours
ENC 3311	Expository Writing	3 hours

#### 4. AREA OF SPECIALIZATION

##### a. Mathematics

MAA 4226	Introduction to Analysis I	3 hours
MAA 4227	Introduction to Analysis II	3 hours
MAS 4301	Algebraic Structures	3 hours
or		
MTG 4302	Introduction to Topology	3 hours
STA 4322	Statistical Theory II	3 hours

A minimum of 8 hours selected from upper division or graduate mathematics or statistics courses or from CNM 4110, 5142; COT 4001, or EGN 4634. (MAC 3233, 3253, 3254, MAE 3817 and MAA 5211 may not be used.) One additional course in either the biological or physical sciences must be taken. A list of courses which may be used to satisfy this requirement may be obtained from the Department Standards Committee.

##### b. Applied Mathematics

CHM 2045	Chemistry Fundamentals I	4 hours
CHM 2046	Chemistry Fundamentals II	3 hours
CHM 2046L	Chemistry Fundamentals Laboratory	1 hour
CNM 4110	Numerical Calculus	3 hours
MAP 4364	Applied Boundary Value Problems II	3 hours
STA 4442	Probability Theory and Applications	3 hours
MAS 4153	Vector and Tensor Analysis	3 hours

One course selected from upper division or graduate mathematics or statistics courses or from CNM 5142 or COT 4001. (MAC 3233, 3253, 3254, MAE 3817 and MHF 4404 may not be used.)

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

#### 5. Electives

The number of hours depends on the courses chosen to satisfy university requirements and the area of specialization. The courses used as electives up to a total of 120 hours must be approved by the Department Standards Committee.

Total Semester Hours Required 120

## BACHELOR OF SCIENCE: STATISTICS

### Degree Requirements

#### 1. University graduation requirements

(See pages 43-45)

#### 2. Special college and/or department requirements

All mathematics and statistics courses except for MAC 3311, 3312, 3313, MAP 3302, and STA 3023, must either be taken from the Department of Mathematics and Statistics at U.C.F. or must be approved by the Department Standards Committee.

Four courses in the biological and physical sciences must be taken with at least one course in the biological sciences and at least one course in the physical sciences. A list of courses which may be used to satisfy this requirement may be obtained from the Department Standards Committee.

#### 3. Required courses

STA 3023	Fundamentals of Probability and Statistics	3 hours
STA 3664	Statistical Quality Control	3 hours

STA 4102	Computer Processing of Statistical Data	3 hours
STA 4163	Statistical Methods I	3 hours
STA 4164	Statistical Methods II	3 hours
STA 4202	Experimental Design	3 hours
STA 4222	Sample Survey Methods	3 hours
STA 4321	Statistical Theory I	3 hours
STA 4322	Statistical Theory II	3 hours
CNM 4110	Numerical Calculus	3 hours
COP 2510	Programming I	3 hours
COP 2511	Programming II	3 hours
MAC 3311	Calculus with Analytic Geometry I	4 hours
MAC 3312	Calculus with Analytic Geometry II	4 hours
MAC 3313	Calculus with Analytic Geometry III	4 hours
MAS 3113	Matrices	4 hours
MHF 2300	Logic and Proof in Mathematics	3 hours
One course selected from		
ENC 3241	Professional Report Writing II	3 hours
ENC 3310	Writing Skills	3 hours
ENC 3311	Expository Writing	3 hours
4. Restricted Electives		
A minimum of 6 hours selected from upper division or graduate mathematics or statistics courses or from CNM 5142, COP 3402, 3522, 4530 or COT 4001. (MAC 3233, 3253, 3254, MAE 3817 and MHF 404 may not be used.)		
5. Electives		
The number of hours depends on the courses chosen to satisfy university requirements. The courses used as electives up to a total of 120 hours must be approved by the Department Standards Committee.		
Total Semester Hours Required		120

## DEPARTMENT OF MUSIC

**Chairman:** G. Wolf, FA 105A, Phone 275-2867

**Faculty:** Eubank, Farina, Gardner, Hotaling, Lesko, Martell, Owens, Palmer, Pickering, Stenberg, Szabo, Voelker, Whisler, Wrancher.

**Part-time Faculty:** Ault, Curtis, Hasse, Higgins, Mascaro, McQuinn, Micarelli, Petta, Rodak, Schwab, Townes.

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

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

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

### SPECIAL MUSIC MAJOR ENTRANCE REQUIREMENTS

In order to be accepted as a music major, the following entrance requirements must be met:

1. **Audition.** Each student must demonstrate an advanced level of proficiency in the performance as evidenced by his ability to perform compositions representing a variety of musical periods. Memorization is required for pianists and vocalists. Accompanists for vocalists will be furnished only upon request prior to the audition. Each candidate must bring music for the compositions he intends to perform. The college will provide large instruments such as the tuba, string bass, or tympani for these auditions. All smaller instruments must be brought to the University. The audition will serve as a placement examination for accepted candidates.
2. **Music Education majors** must furnish proof of scoring at or above the 40th percentile on either the S.A.T. (835) or A.C.T. (17) before they can be admitted to the State Approved Education Program.

### K-12 Certification

The Music Education programs are approved by the Florida State Department of Education. Students who wish to be certified to teach in elementary and secondary

schools should consider a major in Music Education. Courses leading to teacher certification are offered cooperatively with the College of Education. A reciprocal certification arrangement is in effect with approximately 30 other states, with reciprocal certification pending in other states. In addition, a Master of Education degree in Music Education is offered in cooperation with the College of Education.

#### **COMPREHENSIVE EXAMINATIONS**

Comprehensive examinations in Music Theory and Music History will be given during the Junior year. At the end of the first semester there will be ear-training, sight-singing, part-writing, and visual analysis examinations; at the end of the second semester there will be a music history examination.

#### **POLICY REGARDING MAJOR ENSEMBLE PARTICIPATION**

1. Every music or music education major carrying an academic credit load of eight (8) or more hours must participate in a credit-bearing major ensemble in his applied major area.

Major ensembles acceptable in fulfillment of this requirement are chorus, symphony orchestra, concert band, marching band and wind ensemble. Students concentrating in piano, guitar and organ must take University Choir as their major ensemble.

2. Music majors must earn eight (8) hours of major ensemble credit to graduate. Music education majors must similarly earn seven (7) hours in their degree program. No more than one major ensemble may be used to satisfy this requirement in any given semester, although a student may participate in more than one ensemble if he so desires.
3. Music education majors in wind, brass, strings, and percussion are required to participate in the University Chorus for a minimum of two semesters during their degree program. The minor ensemble requirement will be reduced by two hours in order to accommodate this requirement. Vocal music education majors may elect to substitute one (1) hour of band or orchestra for one (1) hour of the minor ensemble provided they have sufficient facility on an appropriate instrument.
4. Assignment to major ensembles will be made by the ensemble directors.
5. Any undergraduate student taking a course in Principal Performance must take concurrently a major ensemble appropriate to his principal instrument.

#### **POLICY REGARDING MINOR ENSEMBLE PARTICIPATION**

1. Music majors must earn eight (8) semester hours of minor ensemble credit during at least seven (7) separate semesters to graduate. Music education majors must earn four (4) hours of minor ensemble credit during at least three (3) separate semesters to graduate.
2. The following ensembles will be considered minor ensembles: Brass Ensembles, Percussion Ensembles, Piano Ensembles, String Ensembles, Vocal Ensembles, Woodwind Ensembles.

N. B. Opera Workshop will not be considered a *minor* ensemble. Other minor ensembles may be instituted at the discretion of the Ensemble Coordinator.

#### **MINOR**

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

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

### **BACHELOR OF ARTS: MUSIC**

#### **Degree Requirements**

1. University graduation requirements  
(See pages 43-45)
  2. Special college and/or department requirements  
(See pages 64 and 90)
  3. Required Courses
- |                       |                           |         |
|-----------------------|---------------------------|---------|
| MUS 1011              | Music Forum (8 semesters) | 0 hours |
| MUT 2111, 2112, 3116, |                           |         |

3117, 4431	Music Theory	15 hours
MVK/MVS, MVW/MVB MVP/MVV	Principal Performance I (8 semesters) (including 2 semesters P. P. IV)	16 hours
MUN	Major Ensemble (8 semesters)	8 hours
MUN	Minor Ensemble	8 hours
MUH 4211, 4212	Music History	6 hours
MUG 3101	Basic Conducting	2 hours
PHS 3805	Physical Basis of Music	2 hours
Music Electives		10 hours

Any secondary performance class not in area of major instrument or any MUC, MUE, MUG, MUH, MUL, MUN, MUS, MUT courses numbered 3000 or higher except the following: MUS 3670, MUH 4218, MUT 4031, 4275.

In partial fulfillment of the Music Electives requirement, Piano Majors take Piano Literature (MUL 3401, 3402) for 4 hours; Voice Majors take Foreign Diction (FRE 1005, GER 1005, ITA 1005—1 hour each for a total of 3 hours) and Song Literature (MUL 3622, 3624—1 hour each for a total of 2 hours) for a combined total of 5 hours; Piano Pedagogy Majors take Piano Literature (MUL 3401, 3402) for 4 hours, Piano Pedagogy (MVK 4640, 4641) for 2 hours, and Studio Teaching (MUS 4401) for 2 hours, for a combined total of 8 hours.

#### 4. Restricted Electives

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

#### 5. Electives

6 hours

4 hours

Total Semester Hours Required 121

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

### Special Non-Course Requirements

1. Piano Proficiency Examination before admission to Principal Performance III.
2. Music History and Music Theory Comprehensive Examinations.
3. Two faculty-approved public recitals: a junior recital of 30 minutes length, and a senior recital of 45 minutes length. Students who select the Piano Pedagogy option will perform two faculty-approved thirty-minute recitals.
4. Any student who graduates from UCF with a major in music must complete his last two semesters of required principal performance and his senior recital while in attendance at UCF.

## BACHELOR OF ARTS: MUSIC EDUCATION

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 64 and 90)

3. Required Courses

MUS 1011	Music Forum (6 semesters)	0 hours
MUT 2111, 2112, 3116, 3117, 4431	Music Theory	15 hours
MVB/MVK/MVP MVS/MVV/MVW	Principal Performance (6 semesters) (including 2 semesters P.P. III)	12 hours
MUN	Major Ensemble (7 semesters)	7 hours
MUN	Minor Ensemble	4 hours
MUH 4211, 4212	Music History	6 hours
MUG 3101	Basic Conducting	2 hours
PHS 3805	Physical Basis of Music	3 hours
MVB 1211	Secondary Performance-Trumpet	1 hour
MVP 1211	Secondary Performance-Percussion	1 hour
MVS 1211	Secondary Performance-Violin	1 hour
MVW 1213	Secondary Performance-Clarinet	1 hour
EDF 3603	Teaching Analysis	3 hours
EDF 4214	Classroom Learning Principles	3 hours
EDG 4326	Teaching in the Schools	5 hours

EDG 4341	Teaching Strategies	5 hours
EDE 3943	Junior Year Student Teaching	3 hours
EDE or ESE 4943	Senior Year Student Teaching	7 hours
MUE 4330	Elementary School Music Instructional Analysis	2 hours
MUE 4350	Secondary School Music Instructional Analysis	2 hours
<b>Program A—Instrumental Music Education Specialization</b>		
MVV 1211	Secondary Performance-Voice	1 hour
MVB/MVP/MVS/MVW	Secondary Performance-Instruments (See Music Education Advisor for specific requirements)	6 hours
MVK	Secondary Performance-Piano	2 hours
MVB/MVK/MVP/ MVS/MVV/MVW	Principal Performance IV	2 hours
MUG 3301	Instrumental Conducting	2 hours
MUT 4321	Arranging and Transcription	1 hour
MUE 4480	Marching Band Techniques	1 hour
<b>Program B—Choral Music Education Specialization</b>		
MVK 1111-1114	Class Piano (Not required of Piano Majors)	4 hours
MVV 1211	Secondary Performance-Voice (Not required of Voice Majors)	2 hours
MVS 1216	Secondary Performance-Guitar	1 hour
MUG 3201	Choral Conducting	2 hours
MVB/MVK/MVP/ MVS/MVV/MVW	Principal Performance IV	2 hours
ITA 1005, FRE 1005, GER 1005	Diction	3 hours
<b>Program C—Elementary School Music Education Specialization</b>		
MVK 1111-1114	Class Piano (Not required of Piano Majors)	4 hours
MVV 1211	Secondary Performance-Voice (Not required of Voice Majors)	3 hours
MVS 1216	Secondary Performance-Guitar	1 hour
MVO 1214	Secondary Performance-Recorder Special Topics in Elementary School Music (2 semesters)	1 hour
4. Electives		4 hours
	Total Semester Hours Required	0 hours
		137-143

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

Special Non-course requirements

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

## DEPARTMENT OF PHYSICS

Chairman: J. Noon, EN 312, Phone 275-2325

Faculty: Bolemon, Bolte, Brennan, Hudson, Llewellyn, Meyers, Oelfke

The Department of Physics offers a Bachelor of Science degree in Physics and a minor in Physics. Physics is the basic science fundamental to many different fields of endeavor. Physics majors are encouraged to prepare for interdisciplinary type careers by using electives to study other areas in depth, planning with an advisor by the sophomore year (or after arrival, for transfer students).

Independent investigation and use of scientific instrumentation (such as lasers, lock-in amplifiers, multi-channel analyzers, oscilloscopes) are emphasized at the upper division. Computer programming requiring numerical analysis and familiarity with microcomputers is required. Students planning graduate study should consult faculty advisors about increased course content in physics (some electives are offered in alternate years) and mathematics such as applied boundary problems, vector and tensor analysis, matrices; double majors are encouraged where appropriate. Extra independent study courses and laboratory work may be arranged but general courses such as astronomy, physical science, or physics of science fiction do not satisfy requirements for the major.

Research of the faculty covers air sampling techniques, astrophysics, atmospheric electricity, computing, gravity, instrumentation, lasers, mathematical modeling, microprocessors, nuclear physics, optics, physics education, plasmas, radio astronomy, solar energy, thin film and organic semiconductors.

#### MINOR

The Department of Physics offers a minor consisting of a minimum of 20 semester hours. Required courses: PHY 2040, 2040L, 2041, 2041L, 3421C. The remaining 8 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 43-45)
2. Special college and/or department requirements  
(See pages 64 and 93)

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.

BSC 1010	Basic Biology	4 hours
CHM 2045, 2046, 2046L	Chemistry Fundamentals	8 hours
MAC 3311, 3312, 3313	Calculus with Analytic Geometry	12 hours
PHY 2040, 2040L	University Physics	8 hours
2041, 2041L		
PHY 3421C	Optics and Modern Physics	4 hours
PHY 3043	Mechanics & Special Relativity	3 hours
MAP 3302	Differential Equations	3 hours
PHY 3044	Electricity, Magnetism & Electromagnetic Waves	3 hours
COP 3215	Programming and Numerical Methods	3 hours
PHS 3151	Computer Methods in Physics	3 hours
PHY 3752C	Physics of Scientific Instruments	4 hours
PHY 3045	Wave Mechanics & Solid State	3 hours
PHY 3046	Thermodynamics and Statistical Physics	3 hours
CDA 4012	Computer Interfacing for Scientists	3 hours
PHY 3722C	Physics Laboratory—Electronics	3 hours
STA 3023	Fundamentals of Probability & Statistics	3 hours
PHY 3802L	Intermediate Physics Laboratory	3 hours
PHY 4803L	Advanced Physics Laboratory	3 hours

### 4. Restricted Electives

Upper division PHY courses or those to be used in partial fulfillment of the requirements of a double major

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

Total Semester Hours Required

126 hours

## DEPARTMENT OF POLITICAL SCIENCE

Chairman: S. Lillie, LR 260A, Phone 275-2608

Faculty: Bledsoe, Handberg, Jervey, Kennedy, Maddox, Morales, Stern, Whisler

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

Political Science courses are divided into three areas of specialization: American Politics and Policy, International Relations and Comparative Government, and Political Theory.

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

### MINOR

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

1. Political Science

Required courses: POS 2041 and two 4000-level courses. In the event a student has taken the varying credit POS 4941, only 3 semester hours from this course can be used in the minor. Only two Junior College courses (6 semester hours) 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 Junior College courses (6 semester hours) 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 43-45)

2. Special college and/or department requirements

(See pages 64 and 95)

3. Required Courses

POS 2041	American National Government	3 hours
POS 3703	Scope and Methods of Political Science	4 hours

4. Restricted Electives

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

Emphasis 1: American Politics and Policy

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

<b>Emphasis 2: International Relations-Comparative Government</b>		
Four courses from area B		16 hours
One course from area A		4 hours
One course from area C		4 hours
One additional course from any area		4 hours
<b>Emphasis 3: Prelaw</b>		
POS 4284	Judicial Process and Politics	4 hours
One of the following:		
POS 4603	American Constitutional Law I	
POS 4604	American Constitutional Law II	
INR 4401	International Law I	
INR 4402	International Law II	4 hours
One course from area B*		4 hours
One course from area C		4 hours
Three or four courses from any area		12/16 hours
*This requirement may be met by one of the International Law courses.		
Total Hours in Major		35 hours

5. Electives	Total Semester Hours Required	120 hours
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### 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 4261	Political Corruption
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 4003	American Public Policy
PUP 4503	Government and Science
PUP 4602	Politics of Health
POS 4265	Power and Policy in the United States
POS 4210	Political Psychology
PUP 4009	Topics in Public Policy

#### B. International Relations and Comparative Government

INR 3002	International Relations
GEO 3470	World Political Geography
INR 4224	Contemporary International Politics of Asia
INR 4274	International Politics of the Middle East
INR 4104	American Foreign & Defense Policy
INR 4401	International Law I
INR 4402	International Law II
INR 4335	Coercion in International Politics
INR 4035	International Political Economy
INR 4243	Contemporary Politics of Latin America
CPO 3103	Comparative Politics
INR 3024	Nationalism: A Systematic Analysis
CPO 3034	Politics of Developing Areas

POS 3253	Contemporary Revolution and Political Violence
CPO 4123	Government and Politics of Great Britain
CPO 4643	Government and Politics of the Soviet Union
CPO 4024	Non-Western Politics
CPO 4133	Government and Politics of Canada
CPO 4309	Comparative Latin American Politics
<b>C. Political Theory</b>	
POT 3302	Modern Political Ideologies
POT 4003	Political Theory
POT 4314	Contemporary Democratic Theory
SOC 4221	Political Sociology
POT 4045	Ancient, Medieval and Early Modern Political Philosophy
POT 4054	Modern Political Philosophy
POS 4252	Politics of the Future

## PRELAW: POLITICAL SCIENCE

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

Prelaw students are encouraged to work closely with the prelaw advisor in planning their programs. By judicious use of electives, the student not only builds a firm foundation for law school entry, but in addition, acquires a broad vocational training which can result in career options upon graduation. For further information, contact Dr. Robert L. Bledsoe, LR 251, Phone 275-2608.

### 1. Some suggested electives include:

ACC 2001	Principles of Accounting I
ACC 2021	Principles of Accounting II
BUL 3111	Legal Environment of Business
ENC 3210	Professional Report Writing I
EUH 2545	Introduction to Anglo-American Law
LEA 3011	Legal Research and Writing

## INTERNSHIP PROGRAM: POLITICAL SCIENCE

For students who excel, a limited number of Internships may be available each semester for 3 to 12 hours of credit. Under the Internship Director, the student is typically placed in an office of local, state, or national government, a law office, or campaign headquarters. For further information contact the Department Internship Director.

## RUSSIAN AREA STUDIES: POLITICAL SCIENCE

The Department of Political Science in conjunction with the Departments of History, Sociology, Economics, and Foreign Languages offers an interdisciplinary program in Russian Area Studies. A certificate of participation is awarded upon successful completion of prescribed courses. A student with any major may earn the certificate. For further information, contact Dr. Henry Kennedy, LR 255, Phone 275-2608.

## DEPARTMENT OF PSYCHOLOGY

**Chairman:** R. Tucker, CB 317, Phone 275-2216

**Faculty:** Abbott, Blau, Brophy, Burr, Burroughs, Connally, Fisher, Guest, McGuire, Rollins, Shirkey, Tell, Thomas, Wooten, Zegman

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

### MINOR

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

Required courses: PSY 2013 plus a minimum of 12 semester hours of upper level

courses and a minimum of 9 semester hours must be taken at UCF. A maximum of 3 semester hours may be completed in courses identified as independent study. A maximum of 3 semester hours of PSY 3951 will apply.

## BACHELOR OF ARTS: PSYCHOLOGY

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 64 and 97)
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

**Chairman:** G. Holten, CB 336, Phone 275-2603

**Faculty:** Ammons, Becker, Carter, Duffey, Gibson, Jones, Korstad, Pyle, Slaughter, Stalnaker

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

### ALLIED LEGAL SERVICES

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

## BACHELOR OF ARTS: ALLIED LEGAL SERVICES

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 64 and 98)
3. Required Courses (28 semester hours)
 

LEA 3001	Law and the Legal System	4 hours
LEA 3011	Legal Research and Writing	4 hours
LEA 3101	Civil Practice and Procedure	4 hours
LEA 3201	Property and Real Estate Law	4 hours
LEA 3601	Criminal Procedures	4 hours
LEA 4301	Contracts and Agency	4 hours
LEA 4501	Domestic Relations Law	4 hours

4. Restricted Electives
  - a. Eight (8) additional semester hours of Allied Legal Services Coursework
  - b. Ten (10)-Twelve (12) semester hours of supporting courses selected from other disciplines or departments with the approval of the student's advisor. Courses may be selected from among, but not necessarily limited to, offerings in accounting, communications, criminal justice, history, political science, public administration, social work, and sociology.

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 43-45)
2. Special college and/or department requirements  
(See pages 64 and 98)
3. Required Courses (20 semester hours)
 

CCJ 2020	Introduction to Criminal Justice	4 hours
CCJ 3010	Crime in America	4 hours
CCJ 3290	Prosecution and Adjudication	4 hours
CCJ 3300	The Correctional and Penal System	4 hours
PAD 3003	Public Administration	4 hours
4. Restricted Electives
  - a. 16 additional semester hours of CCJ coursework.
  - b. 16 additional semester hours of Allied Supporting courses to be selected with and approved by the student's advisor. These courses may vary from student to student depending upon individual needs or objectives, but include selected courses from public administration, allied legal services, sociology, statistics, and psychology.

5. Electives Total Semester Hours Required 120

### **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 43-45)
2. Special college and/or department requirements  
(See pages 64 and 98)
3. Required Courses (31 semester hours)
 

PAD 3003	Introduction to Public Administration	4 hours
PAD 4034	Public Policy Administration	4 hours
PAD 4104	Administrative Theory	4 hours
PAD 4110	Intergovernmental Relations	4 hours
PAD 4204	Fiscal Management	4 hours

PAD 4414	Public Personnel Administration	4 hours
LEA 4801	Administrative Law	4 hours
STA 2014	Principles of Statistics or a course in Social Science Research utilizing statistical methods	3 hours

4. Restricted Electives

- Twelve (12) additional semester hours of Public Administration coursework (may include GEO 3602).
- Ten (10) semester hours in an Allied Public Service Field. This field and the corresponding courses are selected with and approved by the student's advisor. The courses may come from, but not necessarily be limited to, such disciplines as accounting, allied legal services, communications, computer sciences, criminal justice, economics, geography, health, management, political science, social work, sociology and statistics.

5. Electives

Total Semester Hours Required

120

## DEPARTMENT OF SOCIOLOGY

**Chairman:** W. R. Brown, LR 114G, Phone 275-2227

**Faculty:** Abel, Allen, Cook, Dees, Green, Hodgins, Jones, Kazmerski, Miller, Stearman, Trof, Unkovic, Wallace, Washington, Wright

The Department of Sociology offers the student an opportunity to obtain a Bachelor of Arts in Sociology, Anthropology, or Social Work.

Students should consult with their advisors early in their academic career if they plan to pursue graduate work or to select an area of specialization within the Department.

### MINORS

The Department of Sociology offers the following minors:

1. Anthropology

Required Courses: ANT 2003, SOC 2000, ANT 3000, 3410, 3422, LIN 4020, eight additional hours to be chosen in consultation with the student's advisor. No more than two courses can be transferred from other Sociology/Anthropology departments and no more than eight semester hours of 1000 and 2000 level Sociology/Anthropology courses can be applied. Minimum number of semester hours required—27.

2. Sociology

Required Courses: SOC 2000, 3201, and 3640 or SOC 3600; and a minimum of 9 semester hours of courses with SOC, MAF, or DHE prefixes. No more than two Sociology courses may be transferred from another sociology department and no more than eight semester hours of 1000 or 2000 level Sociology courses can be applied. Lists of several minors in Sociology that complement other majors are available in the department.

Minimum number of semester hours required—18.

## BACHELOR OF ARTS: SOCIOLOGY

### Degree Requirements

The Sociology curriculum is designed to give students the perspective, competencies, and experience needed to work effectively in areas concerning human relations, organizational problems, and social research and evaluation in business, industry, governmental, planning, and social organizations. Lists of areas of specializations are available in the Sociology Department. A minimum of 41 semester hours is required for a major.

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 64 and 100)

3. Required Courses (23 semester hours)

SOC 2000	General Sociology	3 hours
SOC 3201	Social Institutions	3 hours

ANT 2003	General Anthropology	3 hours
SOC 3640	Development of Social Thought	3 hours
or		
SOC 3600	Modern Sociological Thought	3 hours
SOC 3500	Research Methods	4 hours
SOC 4507	Data Analysis PR: A course in Statistics	4 hours
SOC 4480	Applied Sociology	3 hours
4. Restricted Electives		
One course from each of the four following groups (12 hours) plus 6 additional hours from any of the groups below.		
1. Family		
MAF 4501	The Family	3 hours
SOC 3834	Sex Roles in Modern Society	3 hours
SOC 4241	Sociology of Aging	3 hours
2. Social Problems		
SOC 3020	Social Problems	3 hours
SOC 3110	Sociology of Deviant Behavior	3 hours
SOC 3130	Juvenile Delinquency	3 hours
SOC 3150	Criminology	3 hours
SOC 3251	Sociology of Mental Illness	3 hours
SOC 3161	Sociology of Alcoholism	3 hours
SOC 4160	Sociology of Drug Abuse	3 hours
SOC 3745	Race & Ethnic Minorities in the U.S.	3 hours
SOC 3720	Afro-American Social Problems	3 hours
3. Social Processes		
DHE 4101	Population	3 hours
SOC 3410	Social Stratification	3 hours
SOC 3402	Social Change: A Historical and Theoretical Approach	3 hours
SOC 3850	Collective Behavior	3 hours
SOC 4830	Sociological Social Psychology	3 hours
4. Social Organization		
SOC 3310	Urban Sociology	3 hours
SOC 3871	Modern Organizations	3 hours
SOC 4221	Political Sociology	3 hours
SOC 4281	Sociology of Education	3 hours
SOC 4262	Sociology of Occupations & Professions	3 hours
SOC 4334	Soviet Sociology	3 hours
SOC 4230	Medical Sociology	3 hours
Special Courses: Qualified students may apply for an Internship in Field Experience, and/or Social Research Practicum (SOC 4509).		
5. Electives		
Total Semester Hours Required		120

## BACHELOR OF ARTS: ANTHROPOLOGY

The Anthropology Program offers undergraduate training in all four subfields of the discipline: Physical Anthropology, Archeology, Linguistics and Cultural Anthropology. In addition, area studies dealing with the North American Indians and Latin American Culture are available to the student. In keeping with the holistic nature of the discipline, students are required to pursue a course of study which comprehends all four subfields of Anthropology. A minimum of 45 semester hours are required for a degree.

### Degree Requirements

- University graduation requirements  
(See pages 43-45)
- Special college and/or department requirements  
(See pages 64 and 100)
- Required Courses (30 hours)
 

ANT 2003	General Anthropology	3 hours
SOC 2000	General Sociology	3 hours

ANT 3000	Introduction Archeology/Physical	3 hours
ANT 3410	Introduction Social Anthropology	3 hours
ANT 3511	Physical Anthropology	3 hours
ANT 4086	Method and Theory	3 hours
ANT 3422	Comparative Social Organizations	3 hours
LIN 4020	Anthropological Linguistics	3 hours
ANT 4705	Applied Anthropology	3 hours
SOC 3500	Research Methods	3 hours
4. Restricted Electives (15 hours)		
Area Studies (Select two)		
ANT 3312	Ethnology of North American Indians	3 hours
ANT 3313	Plains Indians of North America	3 hours
ANT 3332	Peoples and Cultures of Latin America	3 hours
Specialized Studies (Select three)		
ANT 3241	The Anthropology of Religion	3 hours
ANT 3432	Culture and Personality	3 hours
ANT 3424	Culture and Community	3 hours
SOC 3834	Sex Roles	3 hours
ANT 3464	Human Microevolution	3 hours
ANT 3512	Biobehavioral Anthropology	3 hours
ANT 3552	Primatology	3 hours
ANT 3142	Old World Prehistory	3 hours
ANT 3144	New World Prehistory	3 hours
ANT 3122	Archeological Methods	3 hours
ANT 3141	Prehistory of Complex Societies	3 hours
5. Electives		
Total Semester Hours Required		120

## BACHELOR OF ARTS: SOCIAL WORK

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

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

### Degree Requirements

- University graduation requirements  
(See pages 43-45)
- Special college and/or department requirements  
(See pages 64 and 100)
- Required Courses (45 hours)
 

SOW 3302	Introduction to Social Welfare and Social Work	3 hours
SOW 3110	Assessing Individual Behavior	3 hours
SOW 3191	Assessing Human Systems	3 hours
SOW 3232	Social Welfare Policy, Services and Issues	3 hours
SOW 3504	Social Research	3 hours
SOW 4300	Generalist Practice in Social Work	3 hours
SOW 4352	Interpersonal Skills in Social Work Practice	3 hours
SOW 4341	Micro-Level Roles and Interventions in Social Work	3 hours
SOW 4343	Macro-Level Roles and Interventions in Social Work	3 hours
SOW 4431	Evaluating Social Work Practice and Service Programs	3 hours
SOW 4620	Social Work with Minorities	3 hours



SOW 4510	Field Education	9 hours
SOW 4522	Field Education Seminar	3 hours
4. Restricted Electives (9 hours)		
These electives are to be courses consistent with the objectives of the Social Work Program and chosen with the approval of the student's faculty advisor. 9 hours		
5. Electives		
	Total Semester Hours Required	120

### Areas of Concentration

- Child Welfare Concentration
 

CCJ 4540	Delinquency Control	4 hours
or		
DEP 3302	Psychology of Exceptional Children	3 hours
EDF 4003	Overview of Education	3 hours
MAF 4501	The Family	3 hours
SOW 4654	Children's Services	3 hours
In addition, SOW 4510 Field Education must be completed in a child welfare agency		9 hours
- Gerontology Certificate Program
 

See page 153, College of Undergraduate Studies

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

## MAJOR IN SOCIAL SCIENCES

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

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

## BACHELOR OF SCIENCE: SOCIAL SCIENCES

### Degree Requirements

- University graduation requirements  
(See pages 43-45)
- Special college and/or department requirements  
(See pages 64 and 103)
- Required Courses  
None
- Restricted Electives
  - Choose one
 

POS 3703	Scope and Methods of Political Science	4 hours
PSY 4214	Research Methods (Psychology)	3 hours
SOC 3500	Research Methods (Sociology)	3 hours
  - 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 Macroeconomics	3 hours
ECO 2023	Principles of Microeconomics	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 2020	Introduction to Criminal Justice	4 hours
or		
LEA 3001	Law and the Legal System	4 hours
Sociology		
SOC 2000	General Sociology	3 hours
ANT 2003	General Anthropology	3 hours
5. Electives		
	Total Semester Hours Required	120

## DEPARTMENT OF THEATRE

Director: H. Smith, FA 514, Phone 275-2861

Faculty: Ippolito, Smith, Welsh

The Department of Theatre offers the student an opportunity to concentrate in the area of theatre either as a preparation for graduate or professional study or as a course of study in the liberal arts.

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

### MINORS

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

THE 1020	Theatre Survey	3 hours
TPP 2210	Tech. Theatre Production	3 hours
THE 2071	Cinema Survey	3 hours
TPP 2110	Acting I	3 hours
TPP 3310	Directing I	3 hours
TPP 3130	Classical/Mime	3 hours
or		
TPP 3111	Acting II	3 hours
DAA 3200	Theatre Dance I	3 hours
TPA 3250	Makeup Technique	3 hours
	Total Semester Hours Required	24

### Program "A" Performance

TPP 2110	Acting I	3 hours
TPP 3111	Acting II	3 hours
TPP 3130	Classical/Mime	3 hours
TPA 3250	Makeup Technique	3 hours
DAA 3200	Theatre Dance I	3 hours
TPP 3310	Directing I	3 hours
TPP 4260	Acting for Film & Television	3 hours
TPP 4311	Directing II	3 hours
THE 4800	Children's Theatre	3 hours
TPP 4140	Audition Techniques	3 hours
TPP 3700	Stage Diction	3 hours

### Restricted Electives

MUL 2011		3-9 hours
MUN 3340 or 3341		
ARH 2050		
RTV 3230		
	Total Semester Hours Required	120

### Program "B" Technical Theatre & Design

TPA 2210	Technical Theatre Production	3 hours
TPA 2082	Stage Properties	3 hours
THE 3230	Theatrical Costume History and Design	3 hours
TPA 3250	Makeup Techniques	3 hours
TPA 3060	Scene Design I	3 hours
TPA 3220	Stage Lighting	3 hours
TPA 3221	Lighting Design	3 hours
THE 3925	Theatre Practicum II	2, 2 hours

TPP 2110	Acting I	3 hours
TPP 3310	Directing I	3 hours
Restricted Electives		3-9 hours
MUL 2011		
Any ARH or ART		
THE 3251 or 4072		
	Total Semester Hours Required	120
Program "C" Film		
THE 3251	History of Motion Picture	3 hours
THE 4072	Principles of Motion Picture Art	3, 3 hours
TPP 3310	Directing I	3 hours
or		
TPP 2210	Acting I	3 hours
TPA 3060	Scene Design	3 hours
ART 3600C	Photography	3 hours
THE 4073	Film Production	3, 3 hours
THE 4075	Modern Motion Picture Technique	3 hours
	Special Topics and/or Independent Study in Film	6 hours
Restricted Electives		3-9 hours
TPA 3220	Stage Lighting	3 hours
	Total Semester Hours Required	120
4. Restricted Electives		
See each program.		
5. Electives		
	Total Semester Hours Required	120

## PREPROFESSIONAL PROGRAMS

**Preprofessional Coordinator:** *O. M. Berringer*, HPH 303, Phone 275-2292

The Office of the Preprofessional Coordinator 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 his office are numerous and range from basic advising and counseling in preprofessional matters to providing a Composite Evaluation of the student (upon his 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 application to the professional school. Additionally, all preprofessional students are strongly encouraged to affiliate with and participate in the activities of the Preprofessional Medical Society (BL 310).

### PREPROFESSIONAL PLANNING

Preprofessional students should bear in mind that admission to a health professional school is competitive, that is, the professional schools have many more applicants than places available and they select those applicants they feel have the best credentials. In general, the best applicants have credentials that significantly exceed stated admission requirements. For this reason, preprofessional students should pay close attention to the characteristics of successful applicants. For example, while many dental and medical schools require only two and three years respectively of college preparation, more than 91 percent of all premedical and 95 percent of all premedical students accepted throughout the nation last year had four years of college. Consequently, since majors such as "premed" do not lead to a degree, each preprofessional student is urged to pursue a degree granting program not only to become more competitive for admission, but also to prepare for an alternate career in the event admission to a professional school is denied. Any degree granting program offered by the University may be selected as a major; however, those programs within the sciences will generally lend themselves most adequately to preprofessional preparation due to the nature and content of their curricula. While satisfying degree requirements, students will find in their curricula many courses required for admission to

most professional schools. Additionally, prudent use of elective hours in the curricula will permit other appropriate preprofessional courses to be obtained.

Obviously, preprofessional students are expected to be high achievers, to obtain good grades with heavy loads and rigorous course combinations. Most professional schools expect applicants to present at least a B average and to carry a minimum of 15 credit hours every term they are enrolled.

#### **CURRICULA GUIDELINES**

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 1010C, ZOO 1010C

Genetics, PCB 3063 and 3063L

General Chemistry, CHM 2045, 2406, 2046L

Organic Chemistry, CHM 3210, 3211, 3211L

Microbiology, MCB 2013C

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 2040, 2040L, 2041L, is preferable)

Statistics, STA 3023

Additional required/strongly recommended courses not common to *all* preprofessional students are the following:

*Premedical and pre dental* students should take

Cell Physiology, PCB 3203

Comparative Anatomy, ZOO 3713C

Embryology, ZOO 4603C

Histology, ZOO 3753C

Microbiology, MCB 3203C, and PCB 3233C

Analytical Chemistry, CHM 3121C plus either (or both) Biochemistry, CHM 4053, 4054, or Physical Chemistry, CHM 3410.

Physics of Scientific Instruments, PHY 3752C.

*Preoptometry* students *must* take

General Botany, BOT 1010C

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 1010C

Microbiology, MCB 3203C and it is *strongly recommended* they take Physics of Scientific Instruments, PHY 3752C

*Preveterinary* students *must* take

General Botany, BOT 1010C

Analytical Chemistry, CHM 3121C

Microbiology, MCB 3203C

Animal Science, ASG 3003, 3403, and 3404. These courses to be taken as a transient student at the University of Florida, preferably during the summer following the sophomore year.

Additionally, the UCF courses Histology (ZOO 3753C), Embryology (ZOO 4603C) and Physics of Scientific Instruments (PHY 3752C) are strongly recommended.

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: ACC 2001 and 2021, or ACC 3003.

Communications: SPC 3301 or 4330.

Health Sciences: APB 3600; HSC 3328, 4302, 4411; SPA 3001.

Literature: LIT 2110 and 3120.

Management: GEB 3004.

Philosophy: PHI 3600, 3630.

Political Science: PUP 4602.

Psychology: CLP 3143; DEP 3004, 3202, 3212, EAB 3704; GEY 3610; PSB 3002, 3442, 4013C.

Sociology: SOC 3020, 3110, 3161, 3251, 4160, 4230; SOW 3203.

### STANDARDIZED EXAMINATIONS

Various nationally 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]. These examinations are generally offered twice each year: in the spring and fall. Pre-professional students are advised to take the appropriate examination in the *spring* preceding application to the professional school rather than waiting for the fall examination.

### 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;
3. *The Education of Osteopathic Physicians*, published by the American Association of Colleges of Osteopathic Medicine; 4720 Montgomery Lane, Suite 609, Washington, D.C. 20114;
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;
6. *American Schools and Colleges of Veterinary Medicine*, by John Mangiameli. 4630 Montgomery Avenue, Suite 201, Bethesda, Maryland 20014;
7. *American Schools and Colleges of Veterinary Medicine*, by John Mangiameli, 800 Tuckahoe Road, Yonkers, N.Y. 10710;
8. *Your Future in Veterinary Medicine*, by Wayne H. Riser, D.V.M., M.S., published by ARCO Publishing Company, Inc., 219 Park Avenue South, New York, New York 10003.

Each preprofessional student is encouraged to obtain a copy of the publication appropriate to his preprofessional area. Several of these are usually available in the University bookstore.



# COLLEGE OF BUSINESS ADMINISTRATION

## UNDERGRADUATE PROGRAMS

Accountancy (BSBA)  
Economics (BSBA)  
Finance (BSBA)  
General Business Administration (BSBA)  
Management (BSBA)  
Marketing (BSBA)

## GRADUATE PROGRAMS\*

Accountancy (MS)  
Applied Economics (MA)  
Business Administration (MBA)

\*See the Graduate catalog for information.

# COLLEGE OF BUSINESS ADMINISTRATION

**Dean:** *C. Eubanks*, HPH 210, Phone 275-2181

**Associate Dean:** *L. Jarvis*, HPH 202, Phone 275-2186

**Assistant Dean:** *W. Kilbride*, HPH 216, Phone 2136

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 choice and becoming a valuable member of society. All undergraduate and graduate programs are accredited by the American Assembly of Collegiate Schools of Business (AACSB).

Admission to the University of Central Florida does not imply admission to the College of Business Administration. Students will not be allowed to enroll in the 3000/4000 level courses taught by the College of Business Administration until they are admitted to the College. Admission to the College will be granted only after the University lower division General Education program has been completed to include the computer science, college algebra and statistics requirements. In addition, the basic Accounting and Economics sequence must be completed. A minimum GPA of 2.0 must be achieved in ACC 2001 and 2021, ECO 2013 and 2023, ENC 1101 and 1102, MAC 1104, STA 3023, and CAP 3001. Students who otherwise meet the University admission requirements, such as entering freshmen and transfer students, will be classified as "provisional" Business Administration majors until they meet the requirements set forth above. All students should meet with an academic advisor in the College of Business Administration to outline a program of study.

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

Accountancy  
Economics  
Finance

General Business Administration  
Management  
Marketing

## COMMON BODY OF KNOWLEDGE

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

ACC 2001	Principles of Accounting I	3 hours
ACC 2021	Principles of Accounting II	3 hours
or		
ACC 3003	Principles of Accounting I & II	6 hours
BUL 3111	Legal Environment of Business	3 hours
ECO 2013	Principles of Economics I	3 hours
ECO 2023	Principles of Economics II	3 hours
MAC 3233	Concepts of Calculus	3 hours
STA 3023	Fundamentals of Probabilities and Statistics	3 hours
ECO 3411	Quant. Methods & Busi. Deci. Analysis	3 hours
CAP 3001	Comp. Fund. for Business App.	3 hours
ENC 3210	Professional Report Writing	3 hours
FIN 3403	Business Finance	3 hours
MAN 3010	Management of Organizations	3 hours
MAR 3023	Marketing	3 hours
MAN 3504	Production/Operations Management	3 hours
MAN 4720	Business Policies	3 hours
GEB 3351	Business in the International Environment	3 hours

Students in the College of Business Administration cannot receive credit for the following courses: MAN 3705, GEB 3004, EGN 3842, 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.

## STUDENT LOAD—MAXIMUM

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

## COMMUNITY/JUNIOR COLLEGE TRANSFERS

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

1. Complete the entire university-parallel program at the Community-Junior College (the Associate of Arts Degree) including:
  - A. the general education requirements prescribed by the Community/Junior College.
  - B. the one-year accounting and economics sequences (sophomore years).
  - C. a course in College Algebra
  - D. a course in Statistics
2. Professional courses should not be taken at a community/junior college in the areas of Management, Marketing, Real Estate, or Finance. These professional areas are third and fourth year course areas in the College of Business Administration and cannot be satisfied with Community/Junior College courses.

## MINOR (not open to Business Majors)

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

Required courses: ACC 3003; ECO 2023, 2013; FIN 3403; MAN 3010; MAR 3023; one 3000/4000 level business course elective. A GPA of 2.0 is required for these courses. FIN 3100, GEB 3004, and MAN 3705 may not be used as the business course elective.

## DEPARTMENT OF ACCOUNTANCY

**Chairman:** C. Avery, HPH 403, Phone 275-2463

**Faculty:** Brandon, Campbell, S. Cossaboom, Grierson, Hunt, W. Johnson, Phillips, Robertson, J. Salter, M. Salter, Savage, Scarlett, Robertson, Veit, Wilson

### OBJECTIVES OF ACCOUNTANCY PROGRAMS

The objective of the baccalaureate program with a concentration in accountancy is to provide basic conceptual accounting and business knowledge as a foundation for accounting career development.

Special qualifications for satisfying this program's requirements are:

- a. A minimum grade of "C" must be earned in each accounting course completed. Principles of Accounting I and II are included under this rule.
- b. A transfer student to this program must take a minimum of twelve (12) semester hours in accounting at the University of Central Florida as approved by the department chairman.

### BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: ACCOUNTANCY

#### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
  2. General Education Program  
(See page 44)
  3. Required Courses
    - a. Business College Common Body of Knowledge
    - b. ACC 3101 Financial Accounting I 3 hours
    - ACC 3121 Financial Accounting II 3 hours
    - ACC 3401 Cost Accounting 3 hours
    - ACC 3861 Financial Accounting for Governmental  
and Nonprofit Organizations 3 hours
    - ACC 4701 Systems I 3 hours
    - ACC 4501 Federal Income Tax I 3 hours
    - ACC 4601 Auditing I 3 hours
  4. Restricted Electives:
    - ECP 4703 Managerial Economics 3 hours
    - FIN 4430 Asset Selection Management 3 hours
    - or
    - FIN 4431 Financial Structure Management 3 hours
  5. Electives: No more than 6 semester hours of accounting electives may be counted towards the Bachelor's Degree
- Total Semester Hours Required 126

### DEPARTMENT OF ECONOMICS

**Chairman:** B. Rungeling, HPH 436, Phone 275-2646

**Faculty:** Fritz, Hicks, D. Hosni, Joseph, Klbride, Klages, McNeil, Raffa, Reed, White, Xander.

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

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

Students interested in a B.A. in Economics should refer to the Economics Major in the College of Arts and Sciences.

#### MINOR (in Economics for Non-Business Administration majors)

Required Courses: ECO 3101, 3203, 3411. These requirements are in addition to the prerequisites ECO 2013 and 2023.

Elective Courses: Three courses from the following: ECO 3702, 4224, 4303, 4412, 4504; ECP 3203, 3424, 3433, 4403, 4605, 4703; ECS 4003, 4013.



## BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: ECONOMICS

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
  2. General Education Program  
(See page 44)
  3. Required Courses
 

a. Business	College Common Body of Knowledge	
b. ECO 3101	Intermediate Price Theory	3 hours
ECO 3203	Aggregate Economic Conditions Analysis	3 hours
  4. Restricted Electives  
All economics majors will be required to take five (5) electives from the following for a total of twenty-one (21) hours beyond the Common Body of Knowledge.
 

ECO 3702	International Economics	3 hours
ECO 4224	Money: Issues and Analysis	3 hours
ECO 4303	History of Economic Thought	3 hours
ECO 4412	Economic Statistics and Econometrics	3 hours
ECO 4504	Economics of the Public Sector	3 hours
ECP 3203	Contemporary Labor Economics	3 hours
ECP 3424	The Economics of Regulated Industries	3 hours
ECP 3433	Transportation Economics	3 hours
ECP 4403	Business, Government & Industrial Organization	3 hours
ECP 4605	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
- |  |                                      |            |
|--|--------------------------------------|------------|
|  | <b>Total Semester Hours Required</b> | <b>120</b> |
|--|--------------------------------------|------------|

## DEPARTMENT OF FINANCE

**Chairman:** E. Moses, HPH 436, Phone 275-2525

**Faculty:** Atkinson, Budina, Chambers, Cheney, Eldred, Fowler, Hitt, Klock, Reiff, Veit

The program in finance is designed to provide the student with a broad knowledge in the areas of business finance, investments, financial institutions, insurance, and real estate. The program provides the student 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.

## BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: FINANCE

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. General Education Program  
(See page 44)
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
4. Restricted Electives  
(Select 4 courses)
 

FIN 3303	Financial Institutions	3 hours
----------	------------------------	---------

FIN 3324	Commercial Bank Administration	3 hours
FIN 4430	Asset Selection Management	3 hours
FIN 4431	Financial Structure Management	3 hours
FIN 4520	Security Analysis and Portfolio Management	3 hours
REE 3040	Fundamentals of Real Estate	3 hours
REE 4100	Real Estate Investment Analysis	3 hours
RMI 3015	Principles of Risk and Insurance	3 hours
5. Electives		
	Total Semester Hours Required	120

## GENERAL BUSINESS ADMINISTRATION

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

## BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION GENERAL BUSINESS ADMINISTRATION

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. General Education Program  
(See page 44)
3. Required Courses
  - a. Business College Common Body of Knowledge
  - b. One (1) additional course beyond the Common Body of Knowledge in Finance and Marketing (one course from each discipline).
4. Restricted Electives  
A minimum of six (6) additional courses from at least three (3) different departments (Accounting, Economics, Finance, Management, Marketing) in the College of Business Administration.
5. Electives

Total Semester Hours Required 120

## DEPARTMENT OF MANAGEMENT

**Chairman:** R. Reidenbach, HPH 343, Phone 275-2376

**Faculty:** Berry, Bogumil, Bondurant, Burnette, Callarman, Comish, Eubanks, Jones, Martin, McCartney, Pullin, A. Schou, C. Schou

The student 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 43-45)
2. General Education Program  
(See page 44)
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 4480	Service Organization Management	3 hours
MAN 4420	Procurement Management	3 hours
MAN 4724	Implementing Information Systems	3 hours
5. Electives		
	<b>Total Semester Hours Required</b>	<b>120</b>

## DEPARTMENT OF MARKETING

**Chairman:** G. Paul, HPH 420, Phone 275-2442

**Faculty:** Boone, Davis, Fuller, Gillett, Jarvis, Joyce, Mayo, McAleer, Rubin, Teeple

Marketing encompasses the total system of interacting business activities designed to plan, price, promote, and distribute want-satisfying products and services to present and potential 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 physical distribution so as to optimize the efficiency of the total system and the profits of the individual firm. Students majoring in marketing find a variety of career opportunities.

## BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION: MARKETING

### Degree Requirements

1. University graduation requirements		
(See pages 43-45)		
2. General Education Program		
(See page 44)		
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 Policies and Strategies	3 hours
4. Restricted Electives		
Minimum of 3 courses		
MAR 3303	Advertising Management	3 hours
MAR 3403	Sales Management	3 hours
MAR 4123	Product Management	3 hours
MAR 4153	Retailing Management	3 hours
MAR 4203	Channels of Distribution Management	3 hours
MAR 4703	Contemporary Marketing Issues	3 hours
MAR 4243	International Marketing	3 hours
5. Electives		
	<b>Total Semester Hours Required</b>	<b>120</b>

# COLLEGE OF EDUCATION

## UNDERGRADUATE PROGRAMS

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

## GRADUATE PROGRAMS\*

### MASTERS PROGRAMS

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

### DOCTORAL PROGRAMS

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

\*See the Graduate catalog for information

# COLLEGE OF EDUCATION

Dean: *C. Miller*, ED 328, Phone 275-2366

Associate Dean: *R. Cowgill*, ED 328, Phone 275-2366

Associate Dean: *N. McLain*, ED 115, Phone 275-2436

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

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

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

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

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

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

## **UNDERGRADUATE CAREER TEACHING PROGRAM**

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

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

All UCF Teacher Education Programs provide for two semesters of student teaching—one at the junior level and one at the senior level. Such provisions are consistent with current Florida Department of Education and legislative sentiments for a year-long internship.

The Career Teacher Program consists of three distinct phases:

### **PHASE I—EXPLORATION**

EDG 4341 Teaching Strategies 5 hours

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

### **PHASE II—DEVELOPMENTAL**

Junior Student Teaching 3 hours

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

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

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

### PHASE III—APPLICATION

Senior Year Student Teaching

7 hours

EDE 4943

Senior Student Teaching—Elementary OR

ESE 4943

Senior Student Teaching—Secondary

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

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

### CERTIFICATION FOR TEACHING

All College of Education undergraduate curricula 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.

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.



## DEPARTMENT OF EDUCATIONAL FOUNDATIONS

**Chairman:** *William K. Esler*, ED 243, Phone: 275-2426

**Faculty:** *Barr-Johnson, Beadle, Blume, Dziuban, Harlacher, Harrow, Hielt, Hoover, Lange, Manning, Miller, Olson, Sciortino, Sullivan, Wood*

### PROFESSIONAL PREPARATION

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

EDG 4341	Teaching Strategies	5 hours
EDG 4324	Teaching in the Schools	5 hours
EDF 3603	Analysis of Educational Foundations	3 hours
EDF 4214	Classroom Learning Principles	3 hours
EDE 3942, 3943 or ESE 3940	Junior Year Student Teaching	3 hours
EDE 4943 or ESE 4943	Senior Year Student Teaching	7 hours

EDG 4341, Teaching Strategies, is the preferred entry course for the Exploratory portion, (Phase I) of the teacher education program. Courses to fulfill the Special Methods and Specialization certification requirements are offered by other departments within the college and university.

### STUDENT INTERNSHIPS PROGRAM

**Director:** *Harold J. Haughee*, ED 214, Phone: 275-2401

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

### DEPARTMENT OF EDUCATIONAL SERVICES

**Chairman:** *J. Powell*, ED 318, Phone 275-2595

**Faculty:** *Bollet, Cleland, Cornell, Gergley, Hernandez, Higginbotham, Hunter, Lue, H. P. Martin, Mealor, Midgett, O'Leary, Olson, Orwig, Percy, Renner, Rohter, Rothberg, Shadgett, Toler.*

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

### BACHELOR OF ARTS: EXCEPTIONAL CHILD EDUCATION

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 114 and 117)

3. Required courses

Specialization

RED 3012	Foundations of Reading	3 hours
MAE 3310	Teaching Math in the Elementary School	4 hours

PET 4641	Motor Development: Habilitation & Remediation for Exceptional Students	3 hours
EEX 3001	Orientation to Special Education	3 hours
EEX 3105	Language Development and Common Disorders	3 hours
EEX 3221	Assessment of Exceptional Learners	3 hours
EEX 4601	Introduction to Behavioral Management	3 hours
EEX 4933	Organization and Communication Seminar in Special Education	3 hours
EEX 3263	Arts and Sciences for Exceptional Students	4 hours
EEX 4240	Techniques for the Exceptional Adolescent-Adult	3 hours
EED 4211	Teaching the Emotionally Disturbed	4 hours
or		
ELD 4240	Teaching the Learning Disabled	4 hours
or		
EMR 4311	Teaching the Intellectually Disabled	4 hours
EED 4212	Curriculum and Programmic Adaptations, E.H.	4 hours
or		
ELD 4241	Program Planning for Specific Learning Disabilities	4 hours
or		
EMR 4371	Curriculum Method and Methods for Retarded Persons	4 hours
Restricted Electives		6 hours
Electives		6 hours
	Total Semester Hours	120 hours

## BACHELOR OF ARTS: PHYSICAL EDUCATION

1. University graduation requirements  
(See pages 43-45)
  2. Special college and/or department requirements  
(See pages 114 and 117)
  3. Required Courses
    - Specialization
      - DAE 3301 Instructional Analysis of Dance & Rhythmics 2 hours
      - LEI 3443C Recreation and Intramurals 2 hours
      - PEO 3011C Instructional Analysis in Team Sports 4 hours
      - PEO 3031C Instructional Analysis of Individual  
Activities 2 hours
      - PEP 3000 Instructional Analysis of Performer  
Centered Activities 2 hours
      - PEQ 3101C Instructional Analysis in Aquatics 2 hours
      - PET 3450C Teaching PE in the Secondary School 2 hours
      - PET 3453 Coaching Theory & Athletic Training 3 hours
      - PET 3461C Teaching PE in the Elementary School 2 hours
      - PET 4050C Motor Development and Learning 3 hours
      - PET 4312C Anatomic and Mechanical Foundations of  
Human Movement 3 hours
      - PET 4370C Exercise Physiology—Cardiovascular 2 hours
      - PET 4371C Exercise Physiology—Respiratory 2 hours
      - PET 4410 Organization and Administration of Typical  
and Atypical Physical Education Programs 2 hours
  4. Restricted Electives  
None
  5. Electives 12 hours
- Total Semester Hours Required 120 hours



## BACHELOR OF ARTS: EDUCATIONAL MEDIA SPECIALIST

1. University graduation requirements  
(See pages 43-45)
  2. Special college and/or department requirements  
(See pages 114 and 117)
  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 Collections	3 hours
LIS 4540	Interactive Techniques in Media Services	3 hours
LIS 4601	Reference Sources and Services	3 hours
LIS 4731	Organization of Media and Information	3 hours
  4. Restricted Electives  
Electives in supportive areas to be selected on advice of Educational Media Counselor 15 hours
  5. Electives 15 hours
- Total Semester Hours Required 120 hours

## DEPARTMENT OF INSTRUCTIONAL PROGRAMS

**Chairman:** R. Martin, ED 346, Phone 275-2161

**Faculty:** Anderson, Armstrong, Bird, Brumbaugh, Clarke, Cox, Fardig, Green, Gurney, Hall, Hynes, Joels, McGee, E. Miller, Palmer, Paugh, Poe, Siebert, Sorg, Thompson, Weidenheimer.

### Elementary Education

The career Elementary Education program is planned for students interested in the education of young children, six through twelve years of age. Students who major in elementary education are qualified to teach grades one through six upon graduation and receipt of a Florida teaching certificate.

An elementary education major must have the following preparation: (1) a broad general education; (2) a specialized knowledge of content, techniques and materials needed to teach different elementary school subjects such as art, language arts, mathematics, music, physical education, science and social studies; and (3) professional study which includes planned laboratory activities with children in schools identified as Teacher Education Centers.

Early Childhood Education (nursery and kindergarten). In combination with preparation to teach grades one through six, requirements may be met for preparation/certification to teach Kindergarten (6 semester hour minimum).

### Secondary Education

Career programs are available for prospective teachers who have an interest in working with adolescent students in a specific academic area at the middle, junior, or high school levels. Specializations are available in Biology, Chemistry, English, Foreign Language, Mathematics, Physics, Social Studies, and Speech.

### Art/Music

Two programs are designed to prepare specialists to function at both the elementary and secondary levels (K-12). A major in Visual Arts 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 Instructional Programs responsible for professional requirements.

### Vocational Education

The vocational education degree is for individuals in Industrial/Technical areas or selected Health Occupations who wish to teach their specialization in secondary or

post-secondary schools. To be eligible for the degree, students must have worked full time in the occupation for at least two years and must demonstrate competence through an examination for licensure in the area in which they wish to teach. A maximum of 30 semester hours of credit by examination or credit granted through licensing may count toward the degree.

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

#### Minor

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

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

## BACHELOR OF ARTS: BUSINESS EDUCATION

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 114 and 119)

3. Required Courses

#### Core Requirements

ACC 2001	Principles of Accounting I	3 hours
ACC 2021	Principles of Accounting II	3 hours
BTE 2061	Typewriting Production	2 hours
BTE 3062	Professional Typewriting Production	3 hours
BTE 3266	Office Technology	3 hours
BTE 4265	Office Systems and Procedures	3 hours
BTE 4366	Business Correspondence	3 hours
BUL 3111	Legal Environment of Business	3 hours
ECO 2013	Principles of Macroeconomics	3 hours
ECO 2023	Principles of Microeconomics	3 hours
EVT 3062	Professional Role of the Vocational Teacher	3 hours

#### Special Methods

BTE 3391	Business Instruction Analysis I	2 hours
BTE 4393	Business Instruction Analysis III	2 hours

### AREAS OF SPECIALIZATION (select one area)

#### (a) Comprehensive Area

BTE 2063	Principles of Shorthand I	3 hours
BTE 3151	Advanced Shorthand	3 hours
BTE 4152	Shorthand Dictation and Transcription	3 hours
BTE 4392	Business Instructional Analysis II	2 hours
BTE 3292L	Shorthand Laboratory for Instructional Development	1 hour

#### (b) Basic Business and Accounting Area

ACC 3101	Financial Accounting	3 hours
CAP 3001	Computer Fundamentals for Business	3 hours
CAP 3002	Business Application Programming	3 hours
GEB 3004	Management	3 hours

4. Restricted Electives (none)

5. Electives

Total Semester Hours Required

123 hours

## BACHELOR OF ARTS: ELEMENTARY EDUCATION

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See pages 114 and 119)

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 3401	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 (Area of Academic Concentration).		9 hours
A minimum of 9 semester hours is required in a related field of academic concentration. Elementary Education majors are advised to select courses leading to certification to teach English, mathematics, social sciences, or sciences in the junior high school, which also may increase employability in a middle school or departmentalized elementary school; or Early Childhood Education; or another area. Prerequisites for "How Children Learn Mathematics" are MAE 1810 and MAE 2811 or the course "Instruction of Mathematics in the Elementary School." PHY 3015C is required (in addition to BSC 1020C and PHY 3014C).		
5. Electives		
Total Semester Hours Required		120

## BACHELOR OF ARTS: ENGLISH LANGUAGE ARTS EDUCATION

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
  2. Special college and/or department requirements  
(See pages 114 and 119)
  3. Required Courses
 

Lower Division		
ENC 1101	Composition I	3 hours
ENC 1102	Composition II	3 hours
LIT 3000	Literary Analysis	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	
ENL 4373	Modern British Literature	3 hours
Language and Composition		
ENC 3310	Writing Skills	3 hours
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  
Select from the following: ENL 4330, LIN 3010, ENL 3273, LAE 5464, LIN 4100 or other Literature courses.
  5. Electives
- |                               |  |     |
|-------------------------------|--|-----|
| Total Semester Hours Required |  | 120 |
|-------------------------------|--|-----|

## BACHELOR OF ARTS: FOREIGN LANGUAGE EDUCATION

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 114 and 119)
3. Required Courses

### AREAS OF SPECIALIZATION (Select one)

French Language		
FLE 3063	Language as Human Behavior	2 hours
FRE 1100	Elementary Language and Civilization	3 hours
FRE 1101	Elementary Language and Civilization	3 hours
FRE 2200	Intermediate Language and Civilization	3 hours
FRE 2201	Intermediate Language and Civilization	3 hours
FRE 3240	French Conversation	3 hours
FRE 3420	French Composition	3 hours
FRW 3100	Survey of French Literature I	3 hours
FRW 3101	Survey of French Literature II	3 hours
Spanish Language		
FLE 3063	Language as Human Behavior	2 hours
SPN 1100	Elementary Language and Civilization	3 hours
SPN 1101	Elementary Language and Civilization	3 hours
SPN 2230	Intermediate Language and Civilization	3 hours
SPN 2231	Intermediate Language and Civilization	3 hours
SPN 3240	Spanish Conversation	3 hours
SPN 3420	Spanish Composition	3 hours
SPW 3100	Survey of Spanish Literature I	3 hours
SPW 3101	Survey of Spanish Literature II	3 hours
Special Methods		
FLE 3333	Foreign Language Instructional Analysis	4 hours
4. Restricted Electives		12 hours
Select upper division courses in Area of Specialization.		
LIN 3010, or 4801	Language and Meaning	3 hours
ANT 3410	Social Anthropology	3 hours
5. Electives		
See your advisor concerning courses related to "English for Speakers of other Languages" (ESOL), and Bilingual Education.		
Total Semester Hours Required		123

## BACHELOR OF ARTS: MATHEMATICS EDUCATION

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 114 and 119)
3. Required Courses

Specialization		
MAC 1104	College Algebra	3 hours
MAC 1114	College Trigonometry	3 hours
MAC 3311	Calculus w/Analytic Geometry I	4 hours
MAC 3312	Calculus w/Analytic Geometry II	4 hours
MHF 2300	Logic & Proof	3 hours
MTG 4212	Modern Geometry	4 hours
STA 3023	Fundamentals of Probabilities & Statistics	3 hours
COP 2510	Programming I	3 hours
MAE 5637	Lab Program in Math	3 hours
Special Methods		
MAE 3330	Math Instructional Analysis	4 hours
4. Restricted Electives		6-8 hours
(Select two courses in mathematics)		

5. Electives

Select in consultation with advisor.

Total Semester Hours Required

120

**BACHELOR OF ARTS: SCIENCE EDUCATION**

**Degree Requirements**

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 114 and 119)
3. Required Courses

**Biology Specialization**

**CORE**

BSC 1010C	Basic Biology	4 hours
CHM 1034	General Chemistry	3 hours
BOT 1010C	General Botany	3 hours
PCB 3043	Principles of Ecology	3 hours
PCB 3043L	Principles of Ecology Laboratory	1 hour
PCB 3063	Genetics	3 hours
PCB 3063L	Genetics Laboratory	1 hour
ZOO 1010C	General Zoology	3 hours
ZOO 3733C	Human Anatomy	4 hours

**Special Methods**

SCE 3330	Science Instructional Analysis	4 hours
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4. Restrictive electives

Select 6-8 hours from the following courses: BOT 3223C, 3303C, MCB 2013C, PCB 3703C.

5. Electives

Select in consultation with advisor.

Total Semester Hours Required

120



## Chemistry Specialization

### CORE

CHM 2045	Chemistry Fundamentals I	4 hours
CHM 2046	Chemistry Fundamentals II	3 hours
CHM 2046L	Chemistry Fundamentals Laboratory	1 hour
CHM 3121C	Analytical Chemistry	5 hours
CHM 3210	Organic Chemistry I	3 hours
CHM 3211	Organic Chemistry II	3 hours
CHM 3211L	Organic Chemistry Laboratory	2 hours

### Special Methods

SCE 3330	Science Instructional Analysis	4 hours
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### Mathematics

MAC 1104	College Algebra	3 hours
MAC 1114	College Trigonometry	3 hours
MAC 3311	Calculus with Analytic Geometry I	4 hours
MAC 3312	Calculus with Analytic Geometry II	4 hours

### 4. Restricted Elective

Select one Chemistry course		3 hours
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### 5. Electives

Select in consultation with Advisor

Total Semester Hours Required	120
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## Physics Specialization

### CORE

AST 3005X	Astronomy	3 hours
PHY 2040	University Physics I	3 hours
PHY 2040L	University Physics Laboratory I	1 hour
PHY 2041	University Physics II	3 hours
PHY 2041L	University Physics Laboratory II	1 hour
PHY 3421C	Optics and Modern Physics	4 hours
PHY 3752C	Physics of Scientific Instruments	4 hours

### Special Methods

SCE 3330	Science Instructional Analysis	3 hours
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### 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 course in Physics

### 5. Electives

Select in consultation with Advisor

Total Semester Hours Required	120
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## BACHELOR OF ARTS: SPEECH EDUCATION

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 114 and 119)
3. Required Courses

#### Lower Division

ENC 1101	Composition I	3 hours
ENC 1102	Composition II	3 hours

#### Speech and Communications

SPC 1014	Fundamentals of Oral Communication	3 hours
COM 1000	Basic Communications	3 hours
COM 3311	Communication as a Behavioral Science	3 hours
LIN 3200	English Phonetics and American Dialects	4 hours
ORI 3001	Oral Interpretation I	3 hours

SPC 3425	Group Interaction & Decision Making	3 hours
SPC 3511	Argumentation and Debate	3 hours
SPC 3445	Leadership through Oral Communication	3 hours
SED 4371	Direction Extracurricular Speech Activities	3 hours
Special Methods		
SED 3335	Speech Instructional Analysis	3 hours
4. Restricted Electives		6 hours
	Select from the following: LIN 3010, CRW 3410, LIN 4801, ENG 4544 or ENC 3310.	
5. Electives		
	Total Semester Hours Required	120

## BACHELOR OF ARTS: SOCIAL SCIENCE EDUCATION

### Degree Requirements

1. University graduation requirements		
	(See pages 43-45)	
2. Special college and/or department requirements		
	(See pages 114 and 119)	
3. Required Courses		
Specialization (lower division)		
ECO 2013	Principles of Macroeconomics	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
SOC 2000	General Sociology	3 hours
Specialization (upper division)		
GEO 3370	Resources Geography	3 hours
GEO 3470 or 3602	World Pol. Geog. or Urban Geog.	3 hours
CPO 3103	Comparative Politics	3 hours
Special Methods		
SSE 3333	Social Science Instructional Analysis	4 hours
4. Restricted Electives (upper division)		15 hours
	Select six hours from History, six hours from Sociology or Political Science, and three hours from the <i>remaining area</i> .	
5. Electives		
	Total Semester Hours Required	120



## BACHELOR OF ARTS: VISUAL ARTS EDUCATION

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 114 and 119)
3. Required Courses
 

<b>Specialization</b>		
ART 2201C	Design Fundamentals I	3 hours
ART 2300C	Drawing Fundamentals I	3 hours
ART 3110C	Ceramics	3 hours
ART 3230C	Design in Advertising	3 hours
ART 3400C	Printmaking	3 hours
ART 3510C	Painting	3 hours
ART 3600C	Photography	3 hours
ART 4130C	Fibers, Fabrics, Textiles and Synthetics	3 hours
ART 4166C	Metals, Woods, Leather and Stones	3 hours
<b>Special Methods</b>		
ARE 4141	Methodology for Teaching K-12 Art Education I	2 hours
ARE 4142	Methodology for Teaching K-12 Art Education II	2 hours
<b>Curriculum</b>		
ARE 4440	Two-Dimensional Instructional Materials	3 hours
ARE 4443	Three-Dimensional Instructional Materials	3 hours
ARE 4441	Graphics Instructional Materials	3 hours
ART 5109C	Crafts Design	3 hours
4. Restricted Electives (select one)  
ARH 2050 or 2051 or 4700. 3 hours
5. Electives

Total Semester Hours Required 120

## BACHELOR OF ARTS: TECHNICAL/VOCATIONAL

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college and/or department requirements  
(See pages 114 and 119)
3. Required Courses
 

<b>Professional Education</b>		
<b>Phase I Exploration</b>		
EVT 3371	Essential Teaching Skills in VOED	3 hours
EDF 4214	Classroom Learning Principles	3 hours
<b>Phase II Developmental</b>		
EVT 3365	Methods of Teaching in VOED Subjects	4 hours
EVT 3367	Evaluation of Vocational Instruction	2 hours
EVT 3562	Special Needs of Vocational Students	3 hours
EVT 3815	Management of Vocational Classroom & Laboratory OR	
EVT 3311	Preparation for Clinical Teaching in VOED	3 hours
EVT 3062	Professional Role of the Vocational Teacher	3 hours
EVT 4066	Principles and Practices of VOED	3 hours
<b>Phase III Application</b>		
EDG 4941	Directed Field Experiences	9 hours

### AREAS OF SPECIALIZATION

Health Occupations 30 hours  
 Students must complete a specialization in the Health Occupations area by meeting the licensure requirements for teacher certification set forth in the Florida Accreditation Codes.



**Industrial/Technical**

30 hours

Students must complete a specialization in an Industrial/Technical area by passing both the written and performance portions of the National Occupational Competency Test. This Occupational Competency Test must be successfully completed before the student is eligible for EDG 4941, Directed Field Experience.

In both Health Occupations and Industrial/Technical specializations, students must have completed at least two years of work experience PRIOR TO GRADUATION at the Journeyman, professional, technician, engineer or trained employee level.

A sample of National Occupational Competency Tests Available:

- |                                  |                           |
|----------------------------------|---------------------------|
| Auto Mechanic                    | Industrial Electrician    |
| Air Conditioning & Refrigeration | Machine Drafting          |
| Architectural Drafting           | Machine Trades            |
| Audio-Visual Communication       | Major Appliance Repair    |
| Automotive Body & Fender         | Masonry                   |
| Brick Masonry                    | Printing                  |
| Cabinet Making & Millwork        | Plumbing                  |
| Carpentry                        | Power Sewing              |
| Cosmetology                      | Quantity Food Preparation |
| Commercial Art                   | Sheet Metal               |
| Diesel Engine                    | Small Engine Repair       |
| Electrical Installation          | Tool & Die Making         |
| Electronics Communications       | Welding                   |

- 4. Restricted Electives (none)
- 5. Electives (must be upper division level)

9 hours

**Total Semester Hours Required 121**



# COLLEGE OF ENGINEERING

## UNDERGRADUATE PROGRAMS

### ENGINEERING

- Civil Engineering (BSE)
- Electrical Engineering (BSE)
- Engineering Mathematics & Computer Systems (BSE)
- Environmental Engineering (BSE)
- Industrial Engineering (BSE)
- Mechanical Engineering (BSE)

### ENGINEERING TECHNOLOGY

- Design Technology (BET)
- Electronics Technology (BET)
- Environmental Control Technology (BET)
- Operations Technology (BET)

## GRADUATE PROGRAMS\*

### ENGINEERING

- Civil Engineering (MSE)
- Electrical Engineering (MSE, Ph.D.)
- Engineering (MS)
- Engineering Mathematical & Computer Systems (MSE)
- Environmental Engineering (MSE, Ph.D.)
- Industrial Engineering (MSE, Ph.D.)
- Mechanical Engineering (MSE, Ph.D.)

### ENVIRONMENTAL SYSTEMS MANAGEMENT (MSESM)

\*See the Graduate Studies Catalog for information

# COLLEGE OF ENGINEERING

Dean: *R. Kersten*, EN 207, Phone 275-2156

Associate Dean: *G. Schrader*, EN 212, Phone 275-2156

## PROFESSIONAL COLLEGE OF ENGINEERING

The Professional College of Engineering at the University of Central Florida was formally organized by the Engineering faculty in the Fall of 1974. The objective of the Professional College of Engineering is to produce well qualified, competent graduates from outstanding accredited programs for the practice of engineering and to conduct research and service responsive to the State of Florida and national needs. To achieve high professional status, the Professional College of Engineering has developed a unique and outstanding educational program to serve the people of Florida by providing engineering education in specifically selected professional disciplines.

## ENGINEERING CURRICULUM

The Engineering curriculum is directed toward professional objectives which are best met by completing the baccalaureate degree program followed by additional professional education at the graduate level leading to the Master of Science in Engineering.

The satisfactory completion of an engineering curriculum of a minimum of 128 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. As of Fall 1977, it is the policy of the Professional College of Engineering that all graduates from the Engineering Curricu-

lum who receive the Bachelor of Science in Engineering or Master of Science in Engineering degrees must have taken the Fundamentals of Engineering examination (Examination of the Florida State Board of Professional Engineers and Land Surveyors or equivalent) as a graduation requirement. This policy will apply to all students entering UCF as of Fall 1977.

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  $3\frac{1}{2}$  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 his degree will be determined by the Dean of the College.



## ENGINEERING TECHNOLOGY CURRICULUM

Satisfactory completion of an engineering technology curriculum of 128 semester hours, including general education courses, an engineering technology core curriculum, and required and elective courses in a selected technology module of the student's choice, leads to the degree of Bachelor of Engineering Technology. Technology graduates may also seek a wide variety of careers in private practice, industry, and government. Programs of study are applications oriented and are designed to assist the student in the attainment of his or her career objectives.

Students who wish to be admitted to the engineering technology program must possess an Associate in Science (or equivalent education) degree in an appropriate engineering technology area. The engineering technology program provides junior and senior year education. Freshman and sophomore year technology education must be taken at a community college or equivalent. Typically students who have completed the A.S. degree in technology should complete the BET program in two additional years. The status of a student and the specific credits acceptable toward the degree will be determined by the Dean of the College. Provisional credits accepted for transferred course work will become final only after a student has demonstrated the ability to do satisfactory work at the University. Students from engineering programs may transfer into the engineering technology program at the junior level.

## CERTIFICATE PROGRAM: ENGINEERING, TECHNOLOGY, AND SOCIETY

**Contact Person:** J. Paul Hartman, EN 215B, Phone 275-2156

The College of Engineering offers a certificate program to interested students within the University of Central Florida in the programmatic area of Engineering, Technology, and Society (ETS). The program is primarily intended for students not enrolled in the College of Engineering. To meet the requirements, the student must complete a minimum of 14-15 semester hours as follows:

### Four of the following courses: (12 hours)

EGN 4033	Technology and Social Change
EGN 4814	Engineering and Technology in History
EGN 4824	Energy and Society
EGN 4825	Environment and Society
EGN 4832	Computers, Cybernetics and Society
EGN 4844	Man and Machine

### An Independent Study or Research Project (2-3 hours)

EGN 4906 or EGN 4912

The Independent Study or Research Project will generally be done after the student has completed at least 3 of the specified courses and has developed an appropriate project under the guidance of one of the instructors.

## STUDENT PERFORMANCE

Prior to enrolling in courses at the professional level, each student must: (1) receive approval from the office of the Dean of Engineering, and (2) secure from his advisor an approved course of study for his remaining work. Generally, students with a 2.250 grade point average or higher in the basic phase will receive approval.

Counseling is provided so that the student may be aided in making a choice of major. Required and elective courses for each area are listed later in this Bulletin and changes or substitutions may be made only with the approval of the Dean.

Any student whose written or spoken English in any course is unsatisfactory may be reported by the instructor to the Dean. The Dean may assign supplementary work, including additional course work, consistent with the needs of the student. The granting of a degree may be delayed until the work is satisfactorily completed.

A student enrolled in the College as an undergraduate must fulfill all University degree requirements including the General Education Program in either engineering or engineering technology, as well as the specialized curriculum requirements for the particular degree option being pursued. To be certified for graduation, a student must achieve a minimum grade point average of: (1) 2.250 in all core courses; (2) 2.250 in all courses in the major (option); and, (3) 2.000 in remaining course work presented for the degree.

## BACHELOR OF SCIENCE IN ENGINEERING DEGREE PROGRAM

Program Coordinator: J. Paul Hartman, EN 215B, Phone 275-2156.

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 and the fundamentals of engineering problem solving. 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, 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 interest.

### ENGINEERING CORE REQUIREMENTS<sup>1</sup>

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

COP 3215	Programming and Numerical Methods <sup>2</sup>	3 hours
or		
EGN 3210	Engineering Analysis and Computation <sup>2</sup>	3 hours
EGN 1111C	Engineering Graphics	2 hours
EGN 1380	Chemical Foundations of Engineering <sup>3</sup>	4 hours
EGN 2382	Engineering Concepts <sup>4</sup>	3 hours
EGN 3311	Engineering Analysis-Statistics	3 hours
EGN 3363	Structure and Properties of Materials	3 hours
EGN 3383	Electrical Science	3 hours
EGN 3613	Engineering Economic Analysis	2 hours
EGN 3704	Engineering and the Environment	2 hours
MAC 3311, 3312, 3313	Calculus and Analytic Geometry	12 hours
Biological or Earth Science Electives <sup>2</sup>		3 hours

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

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

<sup>3</sup> Students without one secondary school unit of Chemistry should enroll in CHM 1034 and CHM 2046L prior to taking EGN 1380.

<sup>4</sup> Students without one secondary school unit of Physics should enroll in PHY 2050C prior to taking EGN 2382.

#### PROFESSIONAL PHASE

EGN 3321	Engineering Analysis-Dynamics	3 hours
EGN 3331C	Mechanics of Materials	3 hours
EGN 3343	Thermodynamics	3 hours
EGN 3353C	Fluid Mechanics	3 hours
EGN 3373	Principles of Electrical Engineering	3 hours

EGN 3375C	Electrical Devices and Systems	3 hours
EGN 3703	Systems Analysis <sup>5</sup>	3 hours
or		
EGN 4714	Linear Control Systems <sup>5</sup>	3 hours
EGN 4624	Engineering Administration	3 hours
EGN 4634	Operations Research	2 hours
MAP 3302	Differential Equations	3 hours
PHY 3421C	Optics and Modern Physics	4 hours
STA 3032	Probability and Statistics for Engineers	3 hours

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

## DEPARTMENT OF CIVIL ENGINEERING AND ENVIRONMENTAL SCIENCES

**Chairman:** *M. Wanielista*, EN 410, Phone 275-2841

**Faculty:** *Block, Carroll, Cooper, Harper, Hartman, Jenkins, Kersten, Kuo, Muiga, Seaman, Smith, Taylor, Yousef*

The Department of Civil Engineering and Environmental Sciences offers an option in Environmental Engineering and an option in Civil Engineering. The Environmental Engineering option is concerned primarily with the interaction of man and his environment, and the planning, design, and control of systems for environmental quality management, with emphasis on the water environment. The Civil Engineering option is primarily concerned with fundamental civil engineering design and analysis skills in such areas as structures, soil mechanics, sanitary engineering and transportation. Environmental and civil engineers are responsible for research, development, planning, design, and construction of structures and processes that form the basis of contemporary civilization.

Programs of study are available within these options which enable the student to pursue an integrated sequence of courses in major fields. These include not only basic and fundamental civil and environmental engineering disciplines, but also specialized support courses in areas of environmental and water resources engineering, structures and geotechnical engineering, and transportation and urban systems engineering. These courses reflect contemporary developments and trends in these engineering disciplines.

The curriculum in Environmental Engineering (leading to a B.S.E. degree) is fully accredited by the Accreditation Board for Engineering and Technology (ABET).

## BACHELOR OF SCIENCE IN ENGINEERING CIVIL ENGINEERING

### Degree Requirements

- University graduation requirements  
(See pages 43-45)
- General Education Program requirements  
(See page 44)
- Engineering core requirements  
(See page 131)
- Required Courses

CES 4124	Structural Engineering Analysis	3 hours
CES 4605	Structural Steel Design	3 hours
or		
CES 4704	Structural Concrete Design	3 hours
ECI 4305	Geotechnical Engineering I	3 hours
ECI 4323	Civil Engineering Systems Design	2 hours
ENV 4404	Hydrology and Hydraulics	4 hours
ENV 4504	Environmental Engineering—Process Design	4 hours
TTE 4004	Transportation Engineering	3 hours

### 5. Restricted Electives

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

6. Electives		3 hours
None		
Total Semester Hours Required		128

## BACHELOR OF SCIENCE IN ENGINEERING: ENVIRONMENTAL ENGINEERING

### Degree Requirements

1. University graduation requirements (See pages 43-45)		
2. General Education Program requirements (See page 44)		
3. Engineering core requirements (See page 131)		
4. Required Courses		
EES 4202	Chemical Process Control	3 hours
EES 4204	Biological Process Control	3 hours
ENV 4119	Air Pollution	3 hours
ENV 4355	Solid and Hazardous Wastes	3 hours
ENV 4404	Hydrology and Hydraulics	4 hours
ENV 4434	Environmental Engineering Systems Design	2 hours
ENV 4504	Environmental Engineering Process Design	4 hours
5. Restricted Electives		
Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chairman. Must include at least one design course.		3 hours
6. Electives		
None		
Total Semester Hours Required		128

## DEPARTMENT OF ELECTRICAL ENGINEERING AND COMMUNICATION SCIENCES

**Chairman:** B. Petrasko, EN 315, Phone 275-2786

**Faculty:** Belkerdid, Erickson, Harden, Haley, Harris, Malocha, Mathews, Miller, Patz, Phillips, Simons, Towle, Walker, Walters

Electrical Engineers are primarily concerned with the development and utilization of devices and systems which are based on electrical phenomena. The range of 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 computer engineering, electrical networks, and electronics, electromagnetic fields and microwaves, electromechanics and control, power transmission and utilization, communication and information theory, and solid state systems and devices.

Many modern scientific developments are either essentially electrical in character or depend on electrical equipment and technique. Electrical Engineering graduates will find a broad employment opportunity in the field since it enters into much of industry and service where power is utilized, intelligence transmitted, and control exercised over physical, chemical, or mechanical operations. The curriculum in Electrical Engineering (leading to the B.S.E. degree) is fully accredited by the Accreditation Board for Engineering and Technology (ABET).

## BACHELOR OF SCIENCE IN ENGINEERING: ELECTRICAL ENGINEERING

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. General Education Program requirements  
(See page 44)
3. Engineering core requirements  
(See page 131)
4. Required Courses
 

EEL 3122	Electrical Networks	3 hours
EEL 3307C	Electronic Engineering	4 hours
EEL 3470	Electromagnetic Fields	3 hours
EEL 4342C	Logical Component Design	4 hours
EEL 3552C	Signal Analysis and Communications	4 hours
5. Restricted Electives  
Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chairman, and must include one additional design course. 7 hours
6. Electives  
None

Total Semester Hours Required 128

## ENGINEERING MATHEMATICS AND COMPUTER SYSTEMS

**Chairman:** G. Whitehouse, EN 412, Phone 275-2236

**Faculty:** Bauer, Carroll, Moslehy, Klee, Patz, Simons

In contemporary professional engineering practice, and in research and development activities there is an increasing need for engineers with a high degree of training and capability in the application of mathematics and computers to the modeling, simulation and solution of complex technical problems. Many of our modern industries and government organizations are involved in the design and analysis of highly complex equipment and systems often requiring rigorous mathematical treatment which can only be carried out effectively through the use of modern, high speed, digital/analog/hybrid computer facilities. The computer has become an indispensable partner to the aerospace systems designer, the microelectronic circuit designer, the environmental systems analyst, the industrial manager, and many other professional engineering oriented activities. Thus, students majoring in Engineering Mathematics and Computer Systems will enjoy a broad spectrum of challenging opportunities.

The option is inter-disciplinary and allows considerable flexibility in tailoring programs to fit individual student interest. The curriculum in Engineering Mathematics and Computer Systems is fully accredited by the Accreditation Board for Engineering and Technology (ABET).

## BACHELOR OF SCIENCE IN ENGINEERING: ENGINEERING MATHEMATICS AND COMPUTER SYSTEMS

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. General Education Program requirements  
(See page 44)
3. Engineering core requirements  
(See page 131)
4. Required Courses
 

ECM 4124	Mathematical Modeling for Engineers	3 hours
ECM 4504	Mini-Computers in Engineering Systems	3 hours
ECM 4411	Discrete Time Systems	3 hours
ECM 4804	Engineering Software Design	3 hours
EEL 4342C	Introduction to Digital Circuits and Systems	4 hours



EGN 4714	Linear Control Systems	3 hours
ESI 4144	Engineering Applications of Computer Methods	3 hours
5. Restricted Electives		
Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chairman.		3 hours
6. Electives		
None		
Total Semester Hours Required		128

## DEPARTMENT OF INDUSTRIAL ENGINEERING & MANAGEMENT SYSTEMS

**Chairman:** G. Whitehouse, EN 412, Phone 275-2236

**Faculty:** Bauer, Brooks, Doering, Gambrell, Hosni, Klee, Linton, Schrader, Sepulveda, Suhr, White

The option in Industrial Engineering is concerned primarily with the design, improvement and installation of integrated systems of men, materials, and equipment for operations through the application of the principles of the engineering, mathematical, physical, and behavioral sciences.

The program of study available within this option enables the student to pursue an integrated series or sequence of courses in the major field which includes not only basic and fundamental courses but specialized courses as well, in the areas of management standards development, production and inventory control, project management, work analysis and design, management information systems, computer simulation, operations research, industrial facilities planning and design, and human engineering. These specialized courses reflect the contemporary developments and trends in each of these areas with emphasis on uses of the digital computer in appropriate courses.

There is a growing tendency on the part of industry, government and institutions to select engineering personnel for managerial positions. Because of this the IEMS courses are oriented to systems management principles and concepts so as to enable the Industrial Engineering graduate to accept and succeed in these opportunities. The curriculum in Industrial Engineering (leading to the B.S.E. degree) is fully accredited by the Accreditation Board for Engineering and Technology (ABET).



## BACHELOR OF SCIENCE IN ENGINEERING: INDUSTRIAL ENGINEERING

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. General Education Program requirements  
(See page 44)
3. Engineering core requirements  
(See page 131)

#### 4. Required Courses

ACC 3812	Accounting for Engineers	3 hours
EIN 3315C	Work Measurement and Design	3 hours
EIN 4118	Industrial Engineering Applications of Computers	3 hours
EIN 4332	Industrial Control Systems	3 hours
EIN 4364	Industrial Facilities Planning and Design	3 hours
ESI 4314	Quantitative Techniques in Industrial Engineering	3 hours
ESI 4234	Engineering Reliability and Quality Assurance	3 hours

#### 5. Restricted Electives

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

#### 6. Electives

None

Total Semester Hours Required 128

## DEPARTMENT OF MECHANICAL ENGINEERING AND AEROSPACE SCIENCES

**Acting Chairman:** *D. Jenkins*, EN 115, Phone 275-2416

**Faculty:** *Anderson, Baker, Beck, Bishop, Chang, Eno, Gunnerson, Hagedoorn, Hosler, Metwalli, Minardi, Moslehy, Nuckolls, Smith, Ventre*

The Department of Mechanical Engineering and Aerospace Sciences is primarily concerned with dynamic physical systems such as transportation, production and energy conversion. Because such systems involve an energy source, the mechanical or aerospace engineer is concerned with the application of the basic laws of the engineering sciences to the conversion, transfer and control of the energy. When dealing with problems of this nature, the engineer must consider the economic constraints and the social implications of the proposed solutions.

The Mechanical Engineering option provides the student with the opportunity to pursue educational objectives within the framework of this broad theme. Primary emphasis is given to the departmental subdisciplines of aerospace sciences, measurement systems engineering, mechanical systems design and control, energy conversion and power systems, thermal sciences and engineering acoustics.

The program is specifically designed to give the student a broad-based undergraduate engineering sciences program to have sufficient knowledge to converse with specialists in other fields of engineering and to analyze the basic problems in these fields. By judiciously selecting courses from the department sub-disciplines, a firm foundation is laid so that the student will obtain the theoretical tools and the design methodology to pursue successfully a career in the mechanical or aerospace engineering professions. The Curriculum in Mechanical Engineering (leading to the B.S.E. degree) is fully accredited by the Accreditation Board for Engineering and Technology (ABET).

## BACHELOR OF SCIENCE IN ENGINEERING: MECHANICAL ENGINEERING

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. General Education Program requirements  
(See page 44)
3. Engineering core requirements  
(See page 131)
4. Required Courses
 

EML 3106	Thermodynamics of Mechanical Systems	3 hours
EML 3262	Kinematics of Mechanisms	3 hours
EML 3303	Measurement Systems	1 hour
EML 3502	Machine Design and Analysis	3 hours
EML 4142	Heat Transfer	3 hours
EML 4222	Vibration Analysis	3 hours
EML 4505	Engineering Design	3 hours
EML 4412L	Mechanical Engineering Laboratory	1 hour
5. Restricted Electives  
 Technical Electives are to be courses consistent with department objectives and chosen with the approval of the student's faculty advisor and department chairman.  
 5 hours
6. Electives  
 None

Total Semester Hours Required 128

## DEPARTMENT OF ENGINEERING TECHNOLOGY

**Chairman:** R. Denning, EN 118, Phone 275-2268

**Faculty:** Bullard, Dehler, Griffith, Head, Hubler, Lewis, Sammer, Worbs

The Engineering Technology Degree Program at UCF includes only the upper division (junior and senior years) and is designated primarily for the student who has completed an A.S. degree in Engineering Technology or an equivalent program at a community college. The community college two-year associate of science program is designed to provide the student with the training necessary to become an engineering technician. The upper division Bachelor of Engineering Technology program at the University of Central Florida is designed to advance the engineering technician to the engineering technologist level.

The four year engineering technology graduate will provide a vital link in the engineering—fabrication/construction—facility operations chain. He or she will be practice and applications oriented while at the same time, possessing a broad and comprehensive education in the field. As such he or she will be a key individual in teams of technical specialists dealing with the environment today. Completion of the required curriculum will prepare qualified individuals to make significant contributions to society and will allow them to progress into responsible technical and management positions.

Principal areas of study in the engineering technology curriculum, building on a sound base attained through the AS degree, will include mathematics and communications. In addition, substantial additional work will be taken in the technical sciences and technical specialty. The courses will include theory and practice along with training. Hence they will provide a sound technical base for subsequent work. For assistance in planning a program, each student will be assigned an advisor to assist in selecting the best course sequence to meet career objectives.

The areas of specialization (modules) in Engineering Technology are concerned principally with the details of design, maintenance, operation, environmental monitoring and the fabrication/construction functions. The work of the technologist is in direct support of the engineer and the emphasis is on material results and details as constructed, within the broader conceptual and systems processes of the engineer.

Four engineering technology modules (options) are offered as shown, and all are accredited by the Accreditation Board for Engineering and Technology (ABET). The courses listed in each module are recommended for all students electing to pursue that option. Any deviation from the recommended course in the option must be approved by the Department Chairman and the Dean.

## BACHELOR OF ENGINEERING TECHNOLOGY

### Degree Requirements

1. University Graduation requirements  
(See pages 43-45)
2. General Education Program requirements (See page 44)
  - Basic (43 hours)
    - Community College (36 hours)<sup>1</sup>
    - UCF (7 hours)
  - Advanced (6 hours)

<sup>1</sup> Includes algebra, trigonometry, basic science, English, speech or report writing, humanities and social sciences. At least one course each in chemistry, physics and computer science should be completed at the Community College. Credit shown is maximum transferable under this program.

### 3. Required Courses

A. Transferred from Community College		
Lower Level Technical Specialty		32 hours
General Education Program (Includes Science & Math)		26 hours
Related Studies		6 hours
TOTAL (Maximum transfer credit)		64 hours
B. Course work at UCF		
Engineering Technology Core		
ETE 4111	Electricity and Electronics	4 hours
ETG 3510	Applied Statics	4 hours
ETG 4530	Strength of Materials	3 hours
ETE 3421C	Materials and Processes	3 hours
ETI 3671	Technical Economic Analysis	2 hours
ETM 4310	Applied Thermodynamics and Fluid Mechanics	4 hours
MAC 3253	Applied Calculus	4 hours
MAP 3401	Problem Analysis	3 hours
STA 3023	Fundamentals of Probability and Statistics	3 hours
SUBTOTAL		30 hours
Additional General Education and other requirements		14 hours
Area of Specialization (see below)		20 hours
TOTAL MINIMUM HOURS REQUIRED		
(Community College 64, UCF 64)		128 hours

### AREAS OF SPECIALIZATION

#### 1. Design Technology Module

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 AS Degree programs used for entrance to UCF's Design Technology specialization are Mechanical, Drafting Design, Aerospace and Air Conditioning Technologies.

Required Courses (12 hours)

ETC 4410	Applied Structural Design I	3 hours
ETE 4735C	Electro-Mechanical Design	3 hours
ETI 3440	Product Design	3 hours
ETM 4403	Applied Kinematics	3 hours
Upper Level Technical Electives (8 hours)		
At least two courses must be selected from the courses listed below.		
BCN 4230	Construction Methods, Contracts, and Specifications	4 hours
ETC 4415C	Applied Structural Design II	3 hours
ETM 4312	Applied Energy Systems	2 hours

ETM 4512	Applied Design of Machine Elements	3 hours
ETM 4590	Design Integration	2 hours
ETM 4750	Applied Air Conditioning	3 hours
<b>2. Electronics Technology Module</b>		
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 or electrical/electronics equipment and facilities. Typical community college AS Degree programs used for entrance to UCF's Electronics Technology specialization are Electronic, Electrical and Instrumentation Technologies. A minimum of 12 semester hours of basic electronics must be included in the AS Degree program.		
Required Courses (11-12 hours)		
ETE 3632	Digital Circuits or	3 hours
ETE 4661	Computer Systems	4 hours
ETE 4650	Microcomputer Electronics	4 hours
ETE 3422	Electronic Communications	4 hours
Electives (8-9 hours)		
ETE 4210	Servo Mechanisms	3 hours
ETE 4423	Communication Systems II	3 hours
ETE 4432	Antennas and Propagation	3 hours
ETE 4122	Linear Integrated Circuits	3 hours
ETE 4161L	Senior Systems Laboratory	2 hours
ETE 4326	Feedback Control	4 hours
ETE 4541	Power Transmission	3 hours
ETE 4562	Power Utilization	3 hours
ETE 4735C	Electro-Mechanical Design	3 hours
<b>3. Environmental Control Technology Module</b>		
The specialization in Environmental Control Technology is designed to give the student upper level courses in water, wastewater, air pollution, solid wastes, sampling and analysis, and control processes that are essential for environmental operations control. Typical community college AS Degree programs used for entrance to UCF's Environmental Control Technology specialization are Environmental Control, Civil, and Chemical Technologies.		
Required Courses (12 hours)		
ETM 3314	Hydraulics/Hydrology	2 hours
EVS 3240	Water Supply Systems	3 hours
EVS 4110	Remote Sensing of the Environment	3 hours
EVS 4220	Wastewater and Treatment Plant Analysis and Control	4 hours
Electives (8 hours)		
BCN 4230	Construction Methods, Contracts, and Specifications	4 hours
ETI 4700	Occupational Safety	3 hours
EVS 4362	Air Pollution Control	3 hours
EVS 4682	Solid Waste Management	3 hours
<b>4. Operations Technology</b>		
The module in Operations Technology is designed to present the management operations, supervisory and methods courses that are essential for operations control in the sales, service, manufacturing and construction industries. The curriculum is designed to accept a broad range of AS Degree backgrounds and develop the management and supervisory skills necessary to produce a marketable skill. AS Degree programs with emphasis on Architectural, Building Construction, Aerospace, Automotive Services, Civil, Computer, Fire Control, Drafting and Graphics, Industrial Management or Supervision, Quality Control and Surveying Technologies are normally acceptable.		
Required Courses (10 hours)		
ETI 3651	Computer Methods in Industry	3 hours
ETI 4650	Process Planning and Estimating	4 hours
ETI 4700	Occupational Safety	3 hours
Electives (10 hours)		

At least two courses must be selected from the courses below.

BCN 4230	Construction Methods, Contracts and Specifications	4 hours
ETC 4410C	Applied Structural Design I	3 hours
ETI 3690	Technical Sales	2 hours
ETI 3440	Product Design	3 hours
ETI 4110	Industrial Quality Control	3 hours
ETI 4650	Process Planning and Estimating	4 hours
ETI 4611	Plant Layout, Material Handling and Work Analysis	3 hours
ETM 4312	Applied Energy Systems	2 hours
ETM 4750	Applied Air Conditioning	3 hours



# COLLEGE OF HEALTH

## UNDERGRADUATE PROGRAMS

Communicative Disorders (BA)  
Medical Record Administration (BS)  
Medical Technology (BS)  
Nursing (BS)  
Radiologic Sciences (BS)  
Respiratory Therapy (BS)

## GRADUATE PROGRAM\*

Communicative Disorders (MA)

## OTHER PROGRAMS

Pre-Occupational Therapy  
Pre-Physical Therapy

\*See the Graduate Studies catalog for information.

## COLLEGE OF HEALTH

Dean: *O. Elder, Jr.*, BL 329, Phone 275-2406

Assistant Dean: *T. Mendenhall*, BL 306, Phone 275-2741

Acting Assistant to the Dean: *S. Lytle*, BL 106, Phone 275-2215

To meet the needs of students and the community, the College of Health was established in 1978. Included in the College are programs in Communicative Disorders, Medical Record Administration, Medical Technology, Nursing, Radiologic Sciences, and Respiratory Therapy. In addition to the six degree programs the College offers a core area of Health Sciences to broaden the student's understanding of the health care system as well as provide counseling in pre-physical and pre-occupational therapy. The College believes that through a liberal arts education and an intensive study in a specific health related area a graduate will be a valuable asset to health care in the nation as well as Florida.

### General Requirements for the Bachelors Degree

All 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 of the program prior to February 1 (1)\* preceding the semester in which the student desires to begin the program. Before acceptance to the program, a student must complete the background of coursework specified for the program. A minimum grade point average of 2.5 and a minimum grade of C in the major and in prerequisite courses are required for admission to and continuation in a College of Health program.

In addition to University and program requirements, each student in a College of Health program is required to complete the following:

1. HSC 3328 U.S. Health Care Systems
2. HSC 4511 Fundamentals of Medicine (2)\*\*  
or  
NUR 3725C Pathophysiology and Physical Assessment (2)\*\*

\* (1) The Nursing Program is considering the admission of two classes yearly.

\*\* (2) Human Physiology, PCB 3703C, and Human Anatomy, ZOO 3733C, are prerequisites for Fundamentals of Medicine, HSC 4511, and Pathophysiology and Physical Assessment, NUR 3725C. Medical Technology students will be allowed to substitute MCB 3203C, Pathogenic Microbiology, for ZOO 3733C, Human Anatomy.

## COMMUNICATIVE DISORDERS

**Director:** D. Hedrick, CB 103, Phone 275-2121

**Faculty:** Buckman, Ingram, Mullin, Utt

**Visiting Faculty:** Bollinger, Medland

The primary goal of the Communicative Disorders program is the preparation of clinical specialists in Speech and Language Pathology and Audiology. The undergraduate offerings are consistent with the philosophies of the American Speech and Hearing Association in that most of the course work is designed to give the student the theoretical foundations on which to build competent clinical skills. An on campus clinic as well as external affiliations including area public schools, community speech and hearing centers, hospital clinics, physicians' offices, industrial settings, and a mobile diagnostic unit are available for the development of various clinical competencies.

### MINOR

The Program of Communicative Disorders offers a minor in Communicative Disorders consisting of a minimum of 22 semester hours.

Required courses: 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 43-45)

2. Special college and/or department requirements

(See page 141)

3. Required Courses

LIN 3710	Foundations of Language	3 hours
LIN 3710L	Foundations of Language	1 hour
SPA 3001	Introduction to Communicative Disorders	3 hours
SPA 3052	Clinical Observation & Practice	1 hour
	(Taken in Fall & Spring of Senior year)	
SPA 3101	Physiological Bases of Speech and Hearing	3 hours
SPA 3112	Basic Phonetics	3 hours
SPA 3112L	Basic Phonetics	1 hour
SPA 3550	Clinical Methods	3 hours
SPA 3550L	Clinical Methods	1 hour
SPA 4030	Basic Audiology	4 hours
SPA 4130	Speech & Hearing Science	3 hours
SPA 4201	Communicative Disorders—Articulation	3 hours
SPA 4201L	Communicative Disorders—Articulation	1 hour
SPA 4222	Non-Organic Speech Disorders	3 hours
SPA 4222L	Non-Organic Speech Disorders	1 hour
SPA 4250	Organic Speech Disorders	3 hours
SPA 4250L	Organic Speech Disorders	1 hour
SPA 4326	Aural Habilitation-Rehabilitation	4 hours
SPA 4402	Communicative Disorders—Language	3 hours
SPA 4402L	Communicative Disorders—Language	1 hour
SPA 4932	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	Fundamentals of Probability & Statistics	3 hours
STA 4163	Stat. Methods I	3 hours

5. Electives 14 hours

Students who wish to obtain a Teachers Certificate for the state of Florida must include the necessary coursework as electives.

Total Semester Hours Required 128 hours



## PROGRAM IN HEALTH SCIENCES

**Director:** T. Mendenhall, BL 308, Phone 275-2741

**Faculty:** Bergner, Elder

The Health Sciences program provides several courses to broaden the student's understanding of health care and provide counseling in pre-physical and pre-occupational therapy.

### MINOR

The Program of Health Sciences offers a minor consisting of a minimum of 16 semester hours. In order to be awarded a minor in Health Sciences, a student must complete the required course work and maintain at least a 2.5 GPA and a minimum of C on all College of Health course work.

Required Courses: HSC 3328, 3081, and 4101; a minimum of 7 hours of upper division courses in the College of Health (College of Health majors may not count courses presently required of a College program).

## PROGRAM IN MEDICAL RECORD ADMINISTRATION

**Director:** L. Kuyper, BL 308, Phone 275-2741

**Faculty:** Barr, Caukins

The Medical Record Administrator is the professional member of the modern health care team responsible for: (1) the acquisition and supervision of complete medical records on each patient, (2) design and management of health information systems which collect, process, store, retrieve, and release health information and statistics, (3) assistance to administration, other health professionals and medical staff in developing quality assurance programs by abstraction of medical data, preparation of statistical reports, and analysis of information, and (4) assistance in collection and analysis of data for public health services planning.

The curriculum of the Medical Record Administration program is approved by the Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with the Council on Education of the American Medical Record Association.

Before applying to the professional phase of the program, students are required to have completed courses in biology with lab, anatomy with lab, physiology with lab, statistics, an introduction to data processing, and microbiology.

Personal qualifications include a keen intellect, initiative and organization, and above average ability for standards of accuracy and detail. Communication skills as well as diplomacy and tact in dealing with people are desirable assets.

Application and acceptance to the University does not constitute admission to the program. Separate application must be made directly to the MRA program prior to February 1 of the year in which prerequisites will have been met to be considered an applicant. A cumulative grade point average of 2.5 or better and a minimum grade of C in the prerequisite courses is required for admission to the upper division MRA program. A personal interview is also a requirement. A minimum grade of C in all prerequisite, pre-professional, and professional courses is required for continuation in the program.

Upon completion of the approved program, the student is eligible to take the national examination administered by the American Medical Record Association to qualify as a Registered Record Administrator.

## BACHELOR OF SCIENCE: MEDICAL RECORD ADMINISTRATION

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college and/or department requirements

(See page 141)

3. Required Courses

APB 3600

Introduction to Pharmacology

2 hours

COM 3110

Business and Professional  
Communication

3 hours

ENC 3210	Professional Report Writing I	3 hours
HSC 3152	Health Law	2 hours
HSC 3531	Medical Terminology	3 hours
HSC 4511	Fundamentals of Medicine	2 hours
MAN 3010	Management of Organizations	3 hours
MAN 3301	Personnel Management	3 hours
MAN 4722	Information Systems Analysis	3 hours
MRE 3000	Medical Record Administration I	3 hours
MRE 3110	Medical Record Administration II	3 hours
MRE 3202	Coding Procedures	3 hours
MRE 3800	Directed Experience I	1 hour
MRE 4210	Health Information Retrieval Systems	3 hours
MRE 4304	Medical Record Department Management	2 hours
MRE 4312	Analysis of Medical Record Department Operations	2 hours
MRE 4400	Health Care Records	4 hours
MRE 4402	Fundamentals of Medicine	4 hours
MRE 4420	Health Legislation	3 hours
MRE 4830	Directed Experience II	1 hour
MRE 4831	Directed Experience III	1 hour
MRE 4832	Directed Clinical Experience IV	1 hour
MRE 4841	Health Data Processing	3 hours
MRE 4850	Medical Record Research	2 hours
MRE 4835	Management Affiliation	5 hours

4. Restricted Electives: None

5. Electives: None

Total Semester Hours Required

129

## PROGRAM IN MEDICAL TECHNOLOGY

Director: *M. Kangelos*, BL 303, Phone 275-2741

Faculty: *Heinsohn*

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 Medical Technology Program. Separate application must be made through the Medical Technology Office prior to February 1 of the year for which admission is sought. An applicant must meet the following requirements to be considered for this upper division program; (1) a minimum overall grade point average of 2.5, (2) a minimum grade of C in all major and prerequisite courses. A minimum grade of C in all major courses is required for continuation in the program. For the last seven months of the program the students will be assigned to a hospital laboratory for clinical experience. The affiliated hospitals are located in Lakeland and Winter Haven. This will necessitate that the student move to Lakeland and Winter Haven for this period.

The degree in Medical Technology will be awarded upon completion of the University's didactic program and the clinical program in an affiliated hospital.

Upon receiving the degree in Medical Technology, the graduate will be eligible to write a national certification examination and the State of Florida licensure examination.

## BACHELOR OF SCIENCE: MEDICAL TECHNOLOGY

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college requirements

(See pages 141 and 144)

3. Required Courses

BSC 2010C	General Biology	4 hours
MCB 3013C	General Microbiology	4 hours
MCB 3203C	Pathogenic Microbiology	4 hours
PCB 3233	Immunology	4 hours
PCB 3703C	Human Physiology	4 hours
CHM 2045, 2046	Chemistry Fundamentals I & II	7 hours
CHM 2046L	Chemistry Fundamental Laboratory	1 hour
CHM 3121C	Analytical Chemistry	5 hours
CHM 2205	Introduction to Organic and Biochemistry	5 hours
MAC 1104	College Algebra	3 hours
STA 3023	Fundamentals of Probability and Statistics	3 hours
CAP 3001	Computer Fundamentals for Business Applications I	3 hours
MLS 3220	Techniques in Clinical Microscopy	2 hours
MLS 3305	Hematology	4 hours
MLS 4830C, 4831C, 4832C, 4833C, 4834C	Clinical Practice I, II, III, IV, & V	20 hours
MLS 4405	Clinical Pathogenic Microbiology	4 hours
MLS 4625C, 4630C	Advanced Clinical Chemistry I & II	8 hours
MLS 4932	Hemostasis	2 hours
MLS 4550	Clinical Immunohematology	4 hours
MLS 4420C	Clinical Mycology	1 hour
MLS 4431C	Clinical Parasitology	2 hours
MLS 4511	Clinical Serology	2 hours
MLS 4910	Clinical Research Project	2 hours
MLS	Medical Technology Seminars	2 hours

4. Restricted Electives: None

5. Electives: None

Total Semester Hours Required

138

## NURSING PROGRAM

**Program Director:** L. Eldredge, CHM 232, Phone 275-2744

**Faculty:** Brinson, Chagell, Chase, Dorner, Green, Gordon, Larrabee, Martin, Mercer, Smith

The practice of professional nursing requires a minimum of baccalaureate education; the nursing program at UCF leads to a BSN degree. The professional provides high level nursing care and in collaboration with other members of the health professions, is able to plan for and deliver comprehensive health care. The professional nurse functions as a nurse-generalist with the ability to assume primary care performance in clinical nursing; health maintenance and preventive teaching; as well as the ability to gradually assume the leadership role. The baccalaureate program provides the foundation for graduate study in nursing.

The objectives are to plan learning experiences that will stimulate the student to analytical thinking, self-directiveness and to be responsible for his/her own decisions and actions.

Acceptance to the registration at the University does not constitute admission to the upper division nursing major. *Separate application must be made directly to the nursing program's office prior to February 1 of the year in which the prerequisites have been met, to be considered an applicant.* A minimum grade point average of 2.5 and a minimum grade of a C in the major and prerequisite courses is required for admission and continuation in the upper division nursing major.

Special consideration and individual evaluation will be made for all R.N.'s. However, completion of the A.A. degree or the General Education Program is strongly recommended.

## BACHELOR OF SCIENCE: NURSING

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college requirements

(See pages 141 and 145)

3. Required Courses

*MAC 1104	College Algebra	3 hours
*STA 2014	Principles of Statistics	3 hours
*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 (Fundamentals)	3 hours
*CHM 2205	Introduction to Organic and Biochemistry	5 hours
SOW 3104	Human Growth and Development	
or		
DEP 3004	Developmental Psychology	3 hours
HUN 3011	Human Nutrition	3 hours
NUU 3111	Introduction to Baccalaureate Nursing	1 hour
NUR 3618C	Concepts Basic to Nursing Practice	9 hours
NUR 3725C	Pathophysiology and Physical Assessment	4 hours
NUR 3207C, 3134C, 4411C, NUU 4225C	Scientific Theories of Nursing I, II, III, & IV	35 hours
NUR 3208, 3135, 4412, NUU 4226	Nursing Seminar I, II, III & IV	4 hours
NUR 4660	Special Nursing Topics	3 hours
NUR 4905C	Nursing Independent Study	3 hours
NUU 4300	Critical Inquiry	2 hours

4. Restricted Electives: None

5. Electives: None

Total Semester Hours Required 128

\*Required prior to admission to the professional phase of the baccalaureate nursing program.

## PROGRAM IN RADIOLOGIC SCIENCES

Director: M. Jo. Geren Edwards, SC 228, Phone 275-2747

Faculty: Bosmeny, Edwards, III, Maynard

The baccalaureate radiologic science program is designed to provide the graduate with radiography skills, extended in-depth education in the radiologic sciences, and management and instructional skills. Graduates are capable of assuming leadership roles in the community as radiographers, and with experience advance to positions of radiologic educators, program directors, departmental managers, and quality assurance coordinators.

Radiologic Technologists (radiographers) are integral members of a team dedicated to patient care. Their primary role is to perform the technical procedures in producing X-ray studies for the diagnosis and treatment of disease and injury.

The program is approved by the Committees on Allied Health Education and Accreditation of the American Medical Association. Graduates are eligible to take the national certifying examination administered by the American Registry of Radiologic Technologists.

Application deadline is February 1 for acceptance into the upper division which begins with Summer semester.

## BACHELOR OF SCIENCE: RADIOLOGIC SCIENCES

### Degree Requirements

1. University graduation requirements

(See pages 43-45)

2. Special college requirements

(See pages 141 and 146)

3. Required Courses

BSC 2010C	Basic Biology	4 hours
CAP 3001	Computer Fundamentals for Business Applications	3 hours
MAC 1104	College Algebra	3 hours
PHY 2050C, 2051C	College Physics I & II	8 hours
RTE 3002	Fundamentals of Radiologic Technology	1 hour
RTE 3831	Clinical Education Orientation	4 hours
RTE 3806	Clinical Education II	4 hours
RTE 3816	Clinical Education III	4 hours
RTE 3826	Clinical Education IV	5 hours
RTE 3528C	Radiographic Procedures I	3 hours
RTE 3549	Radiographic Procedures II	3 hours
RTE 3412C	Principles of Radiographic Exposure I	3 hours
RTE 3457C	Principles of Radiographic Exposure II	2 hours
HSC 4511	Fundamentals of Medicine I	2 hours
RTE 3156	Pathophysiology	2 hours
RTE 3684C	Physics of Image Production	3 hours
RTE 3387C	Medical Physics	2 hours
RTE 4876	Clinical Education V	5 hours
RTE 4843	Clinical Education VI	5 hours
RTE 4569	Imaging in Diagnostic Radiography	2 hours
RTE 4205C	Quality Assurance Management	3 hours
RTE 4932	Radiologic Science Seminar	1 hour
STA 3023	Fundamentals of Probability & Statistics	3 hours
ZOO 3733C	Human Anatomy	4 hours
PCB 3703C	Human Physiology	4 hours
4. Restricted Electives		
Option I—Group A (all courses)		
ACC 2001	Principles of Accounting	3 hours
MAN 3010	Management of Organizations	3 hours
RTE 4207	Quantitative Methods of Radiology Management	2 hours
RTE 4209	Radiologic Administrative Practice	4 hours
Option II*—Group A (all courses)		
EVT 3062	Professional Role of the Vocational Teacher	3 hours
EVT 3371	Essential Teaching Skills in Vocational Education	3 hours
HSC 4055	Curriculum Planning in the Health Professions	2 hours
HSC 4052	Analysis of Instruction in the Health Professions	3 hours
RTE 4256L	Directed Clinical Study in Education	1 hour
*Required for Florida Teaching Certification		
5. Electives: None		
Total Semester Hours Required		130

## PROGRAM IN RESPIRATORY THERAPY

**Director:** J. Stephen Lytle, BL 103, Phone 275-2214

**Associate Director:** S. Douglas

**Faculty:** Acierno, Johnson, Worrell

**Medical Director:** Robert Snyder

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 medicators, humidity therapy, administration of positive pressure breathing, and rehabilitation of patients with chronic respiratory diseases are also among the duties of the respiratory therapist. One of the therapist's most challenging roles involves working with the critically ill patient. With the advent of sophisticated medical research, surgical techniques, and technology, the need for qualified respiratory therapists has grown tremendously. Therapists are also actively involved in the care of premature infants with respiratory diseases.

Acceptance at the University does not constitute admission to the upper division program. Separate application must be made directly to the program office prior to February 1 of the year in which the prerequisites have been met, to be considered an applicant. A minimum grade point average of 2.5 and a minimum grade of a C in the major and prerequisite courses is required for admission and continuation in the upper division. Students must complete the following course work before entering the upper division program in the Fall of the junior year.

The Respiratory Therapy Program is accredited by the American Medical Association in collaboration with the Joint Review Committee for Respiratory Therapy Education.

## BACHELOR OF SCIENCE: RESPIRATORY THERAPY

### Degree Requirements

1. University graduation requirements  
(See pages 43-45)
2. Special college requirements  
(See pages 141 and 148)
3. Required Courses (General education requirements for the lower division A.A. degree or completion of the basic General Education Program requirements at the University of Central Florida.)

#### Prerequisites

BSC 2010C	General Biology	4 hours
MCB 3013	General Microbiology	4 hours
ZOO 3733	Human Anatomy	4 hours
PCB 3703	Human Physiology	4 hours
CHM 1034	General Chemistry	3 hours
CHM 2046L	Chemistry Fundamentals Laboratory	1 hour
PHY 2050C, 2051C	College Physics I & II	8 hours
MAC 1104	College Algebra	3 hours
CAP 3001	Computer Applications for Business I	3 hours
STA 3024	Fundamentals of Probability and Statistics	4 hours
CHM 2205	Organic Biochemistry	5 hours

#### Suggested Program of Study

##### Freshman Year—Fall Semester

Communication Foundations	3 hours
Cultural & Historical Foundations	3 hours

MAC 1104	College Algebra	3 hours
	Social Foundations	3 hours
BSC 1010C	Basic Biology	4 hours
		<hr/> 16 hours

#### Freshman Year—Spring Semester

	Communication Foundations	3 hours
	Cultural and Historical Foundations	3 hours
	Social Foundations	3 hours
MCB 2013C	General Microbiology	4 hours
STA 3023	Fundamentals of Probability and Statistics	4 hours
		<hr/> 17 hours

#### Sophomore Year—Fall Semester

	Communication Foundation	3 hours
	Cultural and Historical Foundations	3 hours
PHY 2050C	College Physics I	4 hours
ZOO 3733C	Human Anatomy	4 hours
CHM 1034	General Chemistry	3 hours
		<hr/> 17 hours

#### Sophomore Year—Spring Semester

PHY 2051C	College Physics II	4 hours
CHM 2046L	Chemistry Fundamentals Laboratory	1 hour
PCB 3703C	Human Physiology	4 hours
	Social Foundations	3 hours
CAP 3001	Computer Applications for Business I	3 hours
		<hr/> 15 hours

#### Junior Year—Fall Semester

CHM 2205	Introduction to Organic and Biochemistry	5 hours
RET 3026C	Introduction to Respiratory Therapy	4 hours
HSC 4511	Fundamentals of Medicine I	2 hours
APB 3263	Pulmonary Physiology	3 hours
APB 4610	Medical Pharmacology I	2 hours
		<hr/> 16 hours

#### Junior Year—Spring Semester

RET 3874	Clinical Practice I	5 hours
RET 3244C	Life Support Systems	1 hour
RET 4714	Pediatric Respiratory Care	2 hours
RET 3264C	Mechanical Ventilation	3 hours
RET 4650	Medical Pharmacology II	2 hours
RET 3328	U.S. Health Care Systems	3 hours
		<hr/> 16 hours

#### Junior Year—Summer Semester

RET 4414C	Pulmonary Function Studies	3 hours
RET 4935	Chest Medicine	4 hours
RET 3442	Cardiopulmonary Instrumentation	1 hour
	Respiratory Elective	2-3 hours
	Respiratory Elective	2-3 hours
		<hr/> 12-14 hours

#### Senior Year—Fall Semester

RET 3875	Clinical Practice II	10 hours
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RET 3483	Respiratory Disease Assessment	1 hour
RET 4934	Selected Topics in Respiratory Therapy	2 hours
	Respiratory Elective	2-3 hours
		<hr/> 15-16 hours

#### Senior Year—Spring Semester

RET 4876	Clinical Practice III	10 hours
RET 4034	Problems in Patient Management	1 hour
	Respiratory Elective	2-3 hours
		<hr/> 13-14 hours

#### 4. Restricted electives

Electives to be selected with the advisor from the following courses.

RET 4284C	Cardiopulmonary Diagnostics	3 hours
RET 4616	Cardiopulmonary Services	2 hours
EVT 3371	Essential Teaching Skills in Vocational Education	3 hours
EVT 3062	Principles of Vocational Technical Education	3 hours
PCB 3233C	Immunology and Serology	4 hours
RET 4262	Neonatal Respiratory Care	3 hours
RET 4104	Respiratory Therapy Education Systems	2 hours
ETE 3208	Electronics in the Health Professions	3 hours
CAP 3002	Business Applications Programming	3 hours
	Research Project	1-6 hours
	Independent Study	1-6 hours

#### 5. Electives: None

Total Semester Hours Required 123-129 hours

## COLLEGE OF EXTENDED STUDIES

Dean: John B. O'Hara, AD 397, Phone 275-2123

Associate Dean: W. Rex Brown, AD 397B, Phone 275-2123

Assistant Dean: Jennie L. Loudermilk, AD 397A, Phone 275-2123

The College of Extended Studies was established to develop, coordinate and implement the University's programs of extension, outreach and continuing education functions. Toward this objective, the primary purpose is to provide educational services to Florida citizens through the several academic colleges of the University. Additionally, a second purpose is to provide lifelong learning opportunities by utilizing University resources to benefit nontraditional as well as traditional learners.

The College of Extended Studies is responsible for noncredit and sponsored credit institute programs. These programs include short courses, inservice training, conferences, seminars, institutes, special training programs and workshops. Educational courses may be conducted in cooperation with outside agencies. Noncredit programs are organized for the general public for which Continuing Education Units (CEU) may be earned and used to recognize the individual's participation in the program. All activities offered are designed to assist the individual in lifelong development and to satisfy the needs of business, professional, government, service, civic organizations and groups.

Nontraditional and diverse methods are utilized in working with adult learners. Nontraditional students are brought together through common experiences, needs and objectives. Through the use of qualified and recognized experts, learning resources and life experiences, acceptable levels of skills and knowledges are taught to enrich the learner's experience and to gain new abilities and professional qualifications. Nontraditional methods may also be used to facilitate individual learning, that is, self-paced instruction on both an individual or group basis. The basic purpose is the acquisition of new abilities and knowledge, on the part of the learner, to gain personal fulfillment and to improve employment status.

Suggestions and recommendations regarding possible program offerings in a



continuing effort to respond to community concerns are welcome. Current program information may be obtained by contacting the College of Extended Studies, Administration Building 397, University of Central Florida, P. O. Box 25,000, Orlando, Florida 32816. Telephone (305) 375-2123.

## **OFFICE OF UNDERGRADUATE STUDIES**

**Dean:** *Charles N. Micarelli*, AD 217, Phone 275-2691

**Associate Dean:** *Paul R. McQuilkin*, AD 215, Phone 275-2691

**Assistant Dean:** *Carol C. Bledsoe*, AD 213, Phone 275-2691

**Acting Assistant Dean:** *Beth Barnes*, AD 214, Phone 275-2691

The office of Undergraduate Studies was established in July, 1980, to assist in the development of University-wide academic programs and to assist undergraduate students in the pursuit of their academic goals.

The activities in which Undergraduate Studies is involved are as follows: recruitment, the general education program, placement examinations, intercollege programs, academic skills services, academic advisement, as well as reviewing student problems in such areas as class schedules and withdrawals, admissions and standards policies through the University Admissions and Standards Committee, improving teaching conditions through the Learning Resource Council, and administering various university scholarships.

The Office of Undergraduate Studies also oversees High School and Community College Relations, the Academic Skills Center, Army and Air Force ROTC programs, and the Office of Minority Student Services. Those programs are described below.

## **ACADEMIC SKILLS CENTER**

*Mary Hartman*, AD 210, Phone 275-2691

The Academic Skills Center offers assistance in English grammar, spelling, English as a second language, speed reading, reading comprehension, arithmetic and algebra skills, and study skills. Each program is conducted as an independent study and meeting time is arranged at the student's convenience. All work is free to any enrolled student. The center will also offer programs for students who are preparing to take examinations for entrance to graduate school.

## **AEROSPACE STUDIES**

**Chairman:** *F. V. Kimberly*, HPH 310, Phone 275-2264

**Faculty:** *Korose, MacArthur, Merritt*

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 program allows community college transfer students and other students with two academic years remaining in either undergraduate or graduate status to earn an Air Force commission while completing their studies. Both programs offer scholarships for selected students. Students are invited to write or visit the Department of Aerospace Studies to obtain additional information.

### **CURRICULUM**

Students enrolled in the Air Force ROTC program may major in any academic discipline and earn a minor in Aerospace Studies. A major is not offered by this department. AFROTC courses are listed under the prefix AFR. The curriculum is divided into two phases:

#### **1. General Military Course (GMC)**

The General Military Course of the freshman and sophomore courses for students in the four-year AFROTC program. These courses deal with the mission, organization, and structure of the U.S. Air Force, and the development of air power into a prime element of American national security.

#### **2. Professional Officer Course (POC)**

The Professional Officer Course consists of Aerospace Studies offered during the junior and senior years. The POC must be completed by all students who seek a

commission through the Air Force ROTC. The curriculum involves the study of concepts of leadership and management in the Air Force and an analysis of the formulation and implementation of American defense policy.

#### **REQUISITE FOR ADMISSION TO THE PROFESSIONAL OFFICER COURSES (POC)**

1. Be at least 17 years of age at the time of acceptance.
2. Be able to complete the Professional Officer Course and complete all degree requirements prior to reaching age 26 years and 6 months if entering Flight Training or before age 30 if entering non-flying Air Force specialty. (Age 35 for individuals with prior military service.)
3. Pass the Air Force Officer Qualifying Test.
4. Pass an Air Force medical examination.
5. Complete the application and examination process, preferably prior to January 15 of the year in which they plan to enroll.
6. Selection by the Professor of Aerospace Studies and acceptance by the University.
7. Successful completion of a summer Field Training Course.
8. Enlistment in the Air Force Reserve certifying agreement to complete the POC and accept an Air Force Commission. This enlistment is terminated upon receipt of a commission.

#### **MONETARY ALLOWANCE**

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

#### **AIR FORCE ROTC SCHOLARSHIP PROGRAM**

Scholarships are available for qualified students in both the four-year and two-year AFROTC programs. These scholarships provide for full tuition, fees and required textbooks. In addition, scholarship recipients receive \$100 per month.

#### **SUMMER TRAINING**

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

#### **FLIGHT INSTRUCTION PROGRAM**

Students enrolled in the Professional Officer Course who have been selected for pilot training in the United States Air Force receive 45 hours of classroom instruction and 25 hours of civilian flight training in light aircraft.

#### **OFFICER COMMISSIONS**

Students who complete the Professional Officer Course are appointed Second Lieutenants in the United States Air Force Reserve. As reserve officers, they incur an obligated active duty tour of four years (non-flying) or six years (navigator) or seven years (pilot). During this period of active service, they are given the opportunity to attain career status and to obtain a regular commission in the United States Air Force.

#### **MINOR**

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

### **ARMY ROTC—MILITARY SCIENCE**

**Chairman:** J. D. Hornaday, Phone 275-2430

**Faculty:** Hill, Fukumitsu, Howard, Jacks, Nash

The University of Central Florida, in cooperation with the Army ROTC Program at Stetson University provides an opportunity to acquire the skills and knowledge necessary for commissioning as a lieutenant in the U.S. Army, U.S. Army Reserve or the National Guard. The program offers both a four-year and two-year option. The two-year option allows students with at least two academic years remaining in either under-

graduate or graduate studies to meet all requirements for commissioning. If you are in the Army National Guard or Army Reserve and continuing your education full time, then you may be eligible for the Army's new Simultaneous Membership Program (SMP). It lets you combine Reserve Forces duty with Army ROTC officer training courses on campus and earn about \$5,000 in two years.

### **CURRICULUM**

The Military Science curriculum is divided into three phases:

#### **1. Basic Military Science**

The Basic Military Science courses are designed for four-year participants and are normally offered during the freshman and sophomore years. These courses address military organization, equipment, weapons, map readings, land navigation, use of a compass, grade structure, the Threat, communications, and leadership.

#### **2. Advanced Military Science**

The Advanced Military Science courses are normally taken during the junior and senior years. These courses specialize in small unit tactics, how to prepare and conduct military training, military justice system, staff procedures, decision making and leadership.

#### **3. Summer Camp**

Prior to commissioning each cadet must successfully complete an evaluation of skills learned. This evaluation is conducted at Ft. Bragg, North Carolina during June and July. Summer Camp requirements apply only to Advanced Military Science students.

### **SUMMER TRAINING**

A summer training program is offered for students who are academic juniors without previous ROTC or military training. Two options are available for summer training:

1. A five week course, on-campus
2. A six week course at Ft. Knox, Kentucky.

Either summer option will qualify a student for entry into the Advanced Course, thus allowing completion of all requirements for commissioning within two years. Students attending the summer course at Ft. Knox will receive approximately \$500 pay for the period.

### **MONETARY ALLOWANCE**

All students enrolled in the Advanced Military Science Course receive a tax free monetary allowance of \$100 per month.

### **SCHOLARSHIPS**

Scholarships are available to qualified ROTC students. These scholarships provide full tuition, fees and required textbooks. Additionally, scholarship recipients receive \$100 (tax free) per month.

### **REQUISITES FOR ADMISSION TO THE BASIC COURSE**

1. Enrollment in a Baccalaureate or Masters degree program.
2. 18 years of age at the time of entry but not more than 30 years of age at the time of graduation.
3. U.S. citizenship.

### **REQUISITES FOR ADMISSION TO THE ADVANCED COURSE**

1. Successful completion of Basic Course or equivalent.
2. Successful completion of an Army officer qualifying test.
3. Successful completion of an Army physical examination.
4. Selection by the professor of military science.
5. Agreement to complete the Advanced Course requirements and serve on active, reserve, or national guard duty as a commissioned officer.

## **CERTIFICATE OF GERONTOLOGY**

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 Office of Undergraduate Studies, ADM 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 hrs)
- HSC 4932 Special Topics: Health Care Needs of the Elderly (3 hrs)
- SOC 4241 Sociology of Aging (3 hrs)
- SOW 4644 Social Services for the Elderly (3 hrs)

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 come to Undergraduate Studies to enroll in the program and see one of the following faculty members for advisement:

Health Sciences - Louis J. Acierno, M.D., Associate Professor of Health Sciences, BIO 103.

Psychology - Richard D. Tucker, Ph.D., Associate Professor and Chairman, Psychology, HPH 317.

Social Work - Eileen M. Abel, M.S.W., Assistant Professor, Sociology, LIB 1114-F.

Sociology - Charles M. Unkovic, Ph.D., Professor of Sociology, LIB 117.

Students whose major does not fall within one of these departments should report to the Office of Undergraduate Studies for advisement.

## **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.

## **SCHOOL AND COMMUNITY COLLEGE RELATIONS**

High School and Community College Relations has the responsibility of monitoring implementation of the Statewide Articulation Agreement, providing pre-transfer information to community college students and their counselors, and serving as liaison with community college deans, presidents, and faculty. The office annually publishes a UCF Transfer Student Counseling Manual that describes in detail lower division course requirements for each major at UCF.

# 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 SOC—000 at a community college, he cannot be required to repeat SOC—000 at the school to which he transfers. Further, credit for any course or its equivalent, as judged by the appropriate faculty task force and published in the course numbering system, which can be used by a native student to satisfy degree requirements at a state university can also be used for that purpose by a transfer student regardless of where the credit was earned.

It should be noted that a receiving institution is not precluded from using *non-equivalent* courses for satisfying certain requirements.

### General Rule for Course Equivalencies

All undergraduate courses bearing the same alpha prefix and last three numbers (and alpha Suffix, if present) have been agreed upon to be equivalent. For example, an introductory course in sociology is offered in over 40 postsecondary institutions in Florida. Since these courses are considered to be equivalent, each one will carry the designator SOC—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 SOC 1000; a school offering the same course in the sophomore year will number it SOC 2000. The variance in first number does *not* affect the equivalency. If the prefix and last three digits are the same, the courses are substantially equivalent.

## Titles

Each institution will retain its own title for each of its courses. The sociology courses mentioned above are titled at different schools "Introductory Sociology," "General Sociology," and "Principles of Sociology." The title does *not* affect the equivalency. The courses all carry the same prefix and last three digits; that is what identifies them as equivalent.

## Lab Indicators

Some courses will carry an alpha suffix indicating a lab. The alpha suffixes "L" and "C" are used as follows to indicate laboratories:

"L" means either (a) a course, the content of which is entirely laboratory or (b) the laboratory component of a lecture-lab sequence in which the lab is offered at a different time/place from the lecture course.

"C" means a combined lecture-lab course in which the lab is offered in conjunction with the lecture at the same time/same place.

Examples: Marine Biology	OCB-013 (lecture only)
	OCB-013L (lab only)
Marine Biology with Lab	OCB-013C (lecture & lab combined)

Therefore, OCB 013C is equivalent to OCB-013 plus OCB-013L.

An alphabetical listing of prefixes:

ACC Accounting  
ADV Advertising  
AFH African History  
AFR Air Force ROTC  
AMH American History  
AML American Literature  
ANT Anthropology  
APB Applied Botany  
ARE Art Education  
ARH Art History  
ART Art  
ASH Asian History  
AST Astronomy  
BCH Biochemistry  
BCN Building Construction  
BOT Botany  
BSC Introductory Biology  
BTE Business Teacher Education  
BUL Business Law  
CAP Computer Applications  
CBH Comparative Psychology & Animal Behavior  
CCJ Criminology & Criminal Justice  
CDA Computer Design/Architecture  
CES Civil Engineering Structure  
CHM Chemistry  
CHS Chemistry-Specialized  
CIS Computer & Information Systems  
CJT Criminal Justice Technology  
CLP Clinical Psychology  
CNM Computational/Numerical Method  
COC Computer Concepts  
COM Communications  
COP Computer Programming  
COT Computer Theory  
CPO Comparative Politics  
CRM Computer Resources/Management  
CRW Creative Writing  
CYP Communicative Psychology  
DAA Dance Activities

DAE Dance Education  
 DEP Development Psychology  
 DHE Demography & Human Ecology  
 EAB Experimental Analysis of Behavior  
 EAS Engineering: Aerospace  
 ECI Engineering: Civil  
 ECM Engineering: Computer Mathematics  
 ECO Economics  
 ECP Economic Problems & Policy  
 ECS Economic Systems & Development  
 EDA Education: Administration  
 EDE Education: Elementary  
 EDF Education: Foundation  
 EDG Education: General  
 EDH Education: Higher  
 EDM Education: Middle School  
 EDP Education: Psychology  
 EDS Education: Supervision  
 EEC Education: Early Childhood  
 EED Education: Emotional Disorders  
 EEL Engineering: Electrical  
 EES Environmental Engineering Science  
 EEX Educational: Exceptional Child-Care Competencies  
 EGC Guidance & Counseling  
 EGM Engineering: Mechanical  
 EGN Engineering: General  
 EIN Engineering: Industrial  
 ELD Education: Specific Learning Disabilities  
 EMA Engineering: Material  
 EME Education: Technology & Media  
 EML Engineering: Mechanical  
 EMR Education: Mental Retardation  
 ENC English Composition  
 ENG English-General  
 ENL English Literature  
 ENU Engineering: Nuclear  
 ENV Engineering: Environmental  
 ENY Entomology  
 ESE Education: Secondary  
 ESI Engineering Systems—Industrial  
 ESL English as a Second Language  
 ETC Engineering Tech: Civil  
 ETE Engineering Tech: Electrical  
 ETG Engineering Tech: General  
 ETI Engineering Tech: Industrial  
 ETM Engineering Tech: Mechanical  
 EUH European History  
 EVI Education: Visually impaired—Blind  
 EVS Environmental Science  
 EVT Education: Vocational/Technical  
 EXP Experimental Psychology  
 FIL Film  
 FIN Finance  
 FOT Foreign & Biblical Languages in Translation  
 FRE French Language  
 FRW French Literature (Writings)  
 GEB General Business  
 GEO Geography

GER German Language  
 GEW German Literature (Writings)  
 GEY Gerontology  
 GLY Geology  
 HLP Health Education  
 HSC Health Science  
 HUM Humanities  
 HUN Human Nutrition  
 INP Industrial & Applied Psychology  
 INR International Relations  
 ITA Italian Language  
 JOU Journalism  
 LAE Language Arts & English Education  
 LAH Latin American History  
 LEA Legal Assistant  
 LEI Leisure  
 LIN Linguistics  
 LIS Library Science  
 LIT Literature  
 MAA Mathematics—Analysis  
 MAC Mathematics—Calculus & Precalculus  
 MAD Mathematics—Discrete  
 MAE Mathematics Education  
 MAF Marriage & Family  
 MAN Management  
 MAP Mathematics—Applied  
 MAR Marketing  
 MAS Mathematics: Algebraic Structures  
 MAT Mathematics  
 MCB Microbiology  
 MET Meteorology  
 MGF Mathematics: General & Finite  
 MHF Mathematics: History & Foundations  
 MIS Military Science  
 MLS Medical Laboratory Science  
 MMC Mass Media Communication  
 MRE Medical Records  
 MTG Mathematics: Topology & Geometry  
 MUC Music: Composition  
 MUE Music: Education  
 MUH Music: History/Musicology  
 MUL Music: Music Literature  
 MUN Music: Musical Ensembles  
 MUS Music  
 MUT Music: Theory  
 MVB Music: Applied—Brasses  
 MVK Music: Applied—Keyboard  
 MVO Music: Applied—Other Instruments  
 MVP Music: Applied—Percussion  
 MVS Music: Applied—Strings  
 MVV Music: Applied—Voice  
 MVW Music: Applied—Woodwinds  
 NUR Nursing  
 NUU Nursing Universals  
 OCE Oceanography  
 ORI Oral Interpretation  
 PAD Public Administration  
 PCB Process Cell Biology  
 PEL Physical Education Acts (GEN)—Object Centr., Land  
 PEM Physical Education Acts (GEN)—Perform Centr., Land



PEN	Physical Education Acts (GEN)—Water, Snow, Ice
PEO	Physical Education Acts (PROFNL)—Object Centr., Land
PEP	Physical Education Acts (PROFNL)—Perfm. Centr., Land
PEQ	Physical Education Acts (PROFNL)—Water, Snow, Ice
PET	Physical Education Theory
PHH	Philosophy, History of
PHI	Philosophy
PHM	Philosophy of Man & Society
PHS	Physics—Specialized
PHY	Physics
POS	Political Science
POT	Political Theory
PPE	Psychology of Personality
PSB	Psychobiology
PSC	Physical Sciences
PSY	Psychology
PUP	Public Policy
PUR	Public Relations
QMB	Quantitative Methods in Business
REA	Reading
RED	Reading Education
REE	Real Estate
REL	Religion
RET	Respiratory Therapy
RMI	Risk Management & Insurance
RTE	Radiological Sciences
RTV	Radio—Television
RUS	Russian Language
SCE	Science Education
SED	Speech Education
SOC	Sociology
SOP	Social Psychology
SOW	Social Work
SPA	Speech Pathology & Audiology
SPC	Speech Communication
SPN	Spanish Language
SPS	School Psychology
SPW	Spanish Literature (Writings)
SSE	Social Studies Education
STA	Statistics
STD	Student Development
SUR	Surveying
THE	Theatre
TPA	Theatre Production & Administration
TPP	Theatre Performance & Performance Training
TTE	Transportation & Traffic Engineering
ZOO	Zoology

### **COURSES NUMBERED 0-999**

Depending upon previous background and test scores earned, individual students may be required to complete more than the minimum number of credits required for graduation in their respective programs. Courses numbered less than 1000 (State-wide 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.

	Undergraduates	Special Grad <sup>1</sup>	Grad & Prof
Directed Independent Studies	3905	4906	5907 6908
Directed Independent Research		4912	5917 6918
Special Topics/Seminars	3930	4932	5937 6938
Internships, Practicums, Clinical Practice	3940	4941	5944 6946
Study Abroad	3955	4956	5957 6958
Thesis		4970	6971
Thesis-Specialist			6973
Doctoral			7000

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

<sup>1</sup> The Special Graduate Courses are primarily for graduate students, but may be taken by advanced seniors with the consent of their deans.

**PR: PREREQUISITE**

A course in which credit must be earned prior to enrollment in the listed course.

**CR: COREQUISITE**

A course which must be taken concurrently with or prior to the listed course.

**CI: CONSENT OF INSTRUCTOR**

**HOURS CODE**

Each course listed is followed by a code which shows hours credit, and contact hours.

Example:

**CHM 3121C**

**AS 5(3,6)**

**Analytical Chemistry I:** CHM 3121C carries 5 hours credit but requires 9 contact hours; 3 in class and 6 in laboratory or field work. It is scheduled to be offered in the College of Arts and Sciences.

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

**AVAILABILITY OF COURSES**

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

**ACC 2001**

**BA 3(3,0)**

**Principles of Accounting I:** PR: Sophomore standing and MAC 1104 or equivalent. Nature of accounting, financial statements, the accounting cycle, assets, current liabilities, and owner's equity.

**ACC 2021**

**BA 3(3,0)**

**Principles of Accounting II:** PR: ACC 2001 and MAC 1104 or equivalent. A continuation of ACC 2001. Partnerships, corporations, long-term debt, statement of changes, departments and branches, cost standards, budgeting, taxes, and analysis of financial statements.

**ACC 3003**

**BA 6(6,0)**

**Principles of Accounting I and II:** PR: Junior standing and MAC 1104 or equivalent. Same as 2001, 2021. Credits may not be earned in both ACC 3003 and the ACC 2001, 2021 sequence.

**ACC 3101**

**BA 3(3,0)**

**Financial Accounting I:** PR: Junior standing and MAC 1104, ECO 2013, ECO 2023; and ACC 2021 or ACC 3003 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.

**ACC 3121**

**BA 3(3,0)**

**Financial Accounting II:** PR: ACC 3101 with a grade of "C" or better. A continuation of ACC 3101.

**ACC 3301**

**BA 3(3,0)**

**Management Accounting:** PR: C.I. and Junior standing. To thoroughly familiarize the student with the various uses of accounting information for planning and control.

**ACC 3401**

**BA 3(3,0)**

**Cost Accounting I:** PR: Junior standing, MAC 1104, ECO 2013, and ECO 2023, and ACC 2021 with a grade of "C" in ACC 2021. Cost concepts, cost of goods manufactured, job order costing, process costing, standard costing, and relevant cost analysis.

**ACC 3509**

**BA 3(3,0)**

**Personal Income Tax:** A study of federal income tax designed to convey basic tax concepts and skills related to the individual taxpayer. Not open to ACC majors.

**ACC 3701**

**BA 3(3,0)**

**Accounting Information Systems I:** PR: ACC 3101 and CAP 3001, ACC 3121 and ACC 3401 with a grade of "C" or better. An introduction to manual and computer-based accounting information systems.

<b>ACC 3812</b>	<b>BA 3(3,0)</b>
<b>Accounting for Engineers:</b> General accounting principles and practice, cost accounting, budgeting and control techniques. Not usable for BSBA degree credit.	
<b>ACC 3861</b>	<b>BA 3(3,0)</b>
<b>Financial Accounting for Governmental and Nonprofit Organizations:</b> PR: ACC 3101 with a grade of "C" or better, or C.I. Accounting for governments and other nonprofit organizations with emphasis on financial reporting issues and problems.	
<b>ACC 4141</b>	<b>BA 3(3,0)</b>
<b>Financial Accounting III:</b> PR: ACC 3121 with a grade of "C" or better. Specialized financial accounting topics.	
<b>ACC 4201</b>	<b>BA 3(3,0)</b>
<b>Financial Accounting IV:</b> PR: ACC 3121 with a grade of "C" or better. Accounting for business combinations, consolidations.	
<b>ACC 4501</b>	<b>BA 3(3,0)</b>
<b>Federal Income Tax I:</b> PR: Junior standing and ACC 3121 with a grade of "C" or better or C.I. Concepts and methods of determining taxable income of individuals, and selected topics.	
<b>ACC 4601</b>	<b>BA 3(3,0)</b>
<b>Auditing:</b> PR: ACC 3121 with a grade of "C" or better. The standards, practices and procedures followed in the audit function.	
<b>ACC 5004</b>	<b>BA 3(3,0)</b>
<b>Financial Accounting Concepts:</b> PR: Acceptance into the graduate program. The conceptual background for financial statements.	
<b>ACC 5231</b>	<b>BA 3(3,0)</b>
<b>Financial Accounting V:</b> PR: ACC 3121 and meet departmental admission requirements. Problems of partnerships, accounting for branches, bankruptcy, installment sales, accounting for estates and trusts, and interim reporting.	
<b>ACC 5275</b>	<b>BA 3(3,0)</b>
<b>International and Multinational Accounting:</b> PR: ACC 3121 with a grade of "C" or better or C.I. and meet departmental admission requirements. An examination of the environmental factors affecting international accounting concepts and standards. Cross-country differences in accounting treatments are compared.	
<b>ACC 5431</b>	<b>BA 3(3,0)</b>
<b>Cost Accounting II:</b> PR: ACC 3401, FIN 3403, ECO 3411 or C.I. and meet departmental admission requirements. Continuation of ACC 3401. Overhead and joint cost allocation, capital budgeting and analysis, EOQ analysis, decentralization, quantitative decision analysis.	
<b>ACC 5531</b>	<b>BA 3(3,0)</b>
<b>Federal Income Tax II:</b> PR: ACC 4501 and meet departmental admission requirements. Concepts and methods of determining taxable income for partnerships and corporations; and selected topics.	
<b>ACC 5612</b>	<b>BA 3(3,0)</b>
<b>Operational Auditing:</b> PR: ACC 4601 with a grade of "C" or better and meet departmental admission requirements. The standards, principles, practices, and procedures followed in the internal audit function.	
<b>ACC 5631</b>	<b>BA 3(3,0)</b>
<b>Advanced Auditing:</b> PR: ACC 3701, ACC 4601, STA 3023, meet departmental admission requirements. Special topics relative to the standards, practices, and procedures followed in the audit function.	
<b>ACC 5865</b>	<b>BA 3(3,0)</b>
<b>Managerial Accounting for Governmental and Nonprofit Organizations:</b> PR: ACC 3861 or C.I. and meet departmental admission requirements. Study of problems and methods of applying managerial accounting concepts in a nonprofit environment.	
<b>ADV 4000</b>	<b>AS 3(3,0)</b>
<b>Principles of Advertising:</b> PR: Junior standing or C.I. Overview of the field of advertising; purposes, techniques, the role of agencies, advertisers and the media.	
<b>ADV 4003</b>	<b>AS 4(2,2)</b>
<b>Advertising Layout and Preparation:</b> PR: ADV 4000. Advertising design and layout for print media; reproduction methods and requirements, art background not required.	
<b>ADV 4101</b>	<b>AS 4(2,2)</b>
<b>Advertising Copy and Campaigns:</b> PR: ADV 4000. Creative copywriting for print, RTV, and other media. Campaign strategies and formulation.	
<b>ADV 4103</b>	<b>AS 3(3,0)</b>
<b>Radio-Television Advertising:</b> PR: ADV 4000 or C.I. Radio and television advertising sales; including interpretation of rate structures, program audiences, and creative approaches to sponsor needs.	
<b>ADV 4300</b>	<b>AS 3(3,0)</b>
<b>Advertising Media:</b> ADV 4000 or C.I. Evaluation of media's ability to serve the advertiser's communication needs and analysis used in determining media success.	

- AFH 3341** AS 3(3,0)  
**Sub-Saharan Africa—Western and Central:** PR: EUH 2000 and 2001 or C.I. Survey of history of Western and Central Africa including trans-Saharan influences, Sudanic Empires, Forest Kingdoms, Equatorial Africa, and colonial and national periods.
- AFH 3404** AS 3(3,0)  
**Sub-Saharan Africa—Eastern and Southern:** PR: EUH 2000 and 2001 or C.I. Survey of history of Eastern and Southern Africa including origins of man, Bantu migrations, Arab and European influences, and colonial and national periods.
- AFR 1101** US 1(1,1)  
**The United States Air Force and Strategic Offensive-Defensive Forces:** PR: Qualification for Air Force ROTC or permission of Professor Aerospace Studies. History, mission, organization and doctrine of the United States Air Force and a study of U.S. Strategic Offensive and Defensive Forces.
- AFR 1111** US 1(1,1)  
**Conventional Military Forces:** PR: AFR 1101 or permission of Professor of Aerospace Studies. A brief review of the Army, Navy, and Marine force. An introduction to special operations and counterinsurgency.
- AFR 2130** US 1(1,1)  
**The Development of Airpower:** AFR 111 or approval of the PAS. A study of the development of airpower from experiments by 18th century balloonists to the achievement of combat airpower capabilities during World War II.
- AFR 2131** US 1(1,1)  
**The Aerospace Age:** PR: AFR 2130 or approval of PAS. A study of the development of aerospace capabilities since World War II, highlighting technological advancements and the role of aerospace power in the contemporary world.
- AFR 3220** US 3(3,1)  
**Air Force Management and Leadership:** PR: GMC or Two-Year Program Selection and/or approval of the PAS. An introductory study of Air Force management fundamentals, communications skills and basic leadership styles.
- AFR 3230** US 3(3,1)  
**Air Force Management and Evaluation:** PR: AFR 3220 or approval of the PAS. A concluding study of Air Force management fundamentals including performance evaluation skills.
- AFR 4201** US 3(3,1)  
**Societal Role and Defense Strategy:** PR: AFR 3230 or approval of PAS. Examination of the military and its role in American society. A study of the framework and formation of defense strategy.
- AFR 4210** US 3(3,1)  
**Implementation of Defense Policy:** PR: AFR 4201 or approval of PAS. An examination of defense implementation and its impact on the decision making process. A study of the military justice system and its protection of individual rights.
- AFR 4240** US 3(3,0)  
**Introduction to Flight (Pilot):** PR: AFR 3220, 3230 and/or permission of the Professor of Aerospace Studies. An academic, introductory study of FAA regulations, weather, navigation and aircraft components, systems and performance.
- AMH 2010** AS 3(3,0)  
**U.S. History: 1492-1877:** Survey of U.S. history from 1492-1877.
- AMH 2020** AS 3(3,0)  
**U.S. History: 1877-Present:** Survey of U.S. history from 1877 to the present. May be taken before AMH 2010.
- AMH 3370** AS 3(3,0)  
**American Economic History:** PR: AMH 2010 and 2020 or C.I. An introduction to the economic development of the U.S. with emphasis on agriculture, labor, industrialization, transportation and banking.
- AMH 3402** AS 3(3,0)  
**History of the South to 1865:** PR: AMH 2010 or 2020 or C.I. Development of the southern colonies, beginning on sectionalism, the cotton economy, slavery. Calhoun's constitutional theories, secession, Civil War and its aftermath.
- AMH 3403** AS 3(3,0)  
**History of the South Since 1865:** PR: AMH 2010 and 2020 or C.I. Reconstruction, the "solid South" and the racial dilemma, progressivism for whites only, southern literature, 20th century economic, political, and social changes, and the new Reconstruction.
- AMH 3421** AS 3(3,0)  
**History of Florida to 1845:** PR: AMH 2010 and 2020 or C.I.
- AMH 3423** AS 3(3,0)  
**Florida History 1845-Present:** PR: AMH 2010 and 2020 or C.I.

- AMH 3441** **AS 3(3,0)**  
**History of the Frontier: Eastern America:** PR: AMH 2010 and 2020 or C.I. The progression of the westward movement from the colonial settlements to the Mississippi considered as an interpretive approach to American history.
- AMH 3442** **AS 3(3,0)**  
**History of the Frontier: Western American:** PR: AMH 2010 and 2020 or C.I. The development of the trans-Mississippi West and its impact upon American history.
- AMH 3445** **AS 3(3,0)**  
**Spanish Borderlands:** PR: AMH 2010 and 2020 or C.I. Survey of Spanish settlement in South and Southwestern U.S. with emphasis upon cultural conflicts found in the imperial rivalries for control of the area.
- AMH 3570** **AS 3(3,0)**  
**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 4110** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**Jeffersonian America:** PR: AMH 2010 and 2020 or C.I. The Confederation era, the Federalists, Jeffersonian Democracy, and the War of 1812.
- AMH 4160** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**Civil War and Reconstruction:** PR: AMH 2010 and 2020 or C.I. Reconstruction, and impact of industrialism.
- AMH 4211** **AS 3(3,0)**  
**Robber Baron Era:** PR: AMH 2010 and 2020 or C.I. The Agrarian Revolt, the Spanish-American War, and the Progressive Era.
- AMH 4231** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**United States History: 1945-Present:** PR: AMH 2010 and 2020 or C.I. Contemporary America from World War II.
- AMH 4311** **AS 3(3,0)**  
**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 4312** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**Rise of the United States to World Power, 1776-1914:** PR: AMH 2010 and 2020 or C.I. The evolution of basic American policies. American expansion, America's major wars, and the emergence of America as a world power.
- AMH 4511** **AS 3(3,0)**  
**United States as a Great Power: 1914-Present:** PR: AMH 2010 and 2020 or C.I. American foreign policy in World War I, the interwar period, World War II, and the Cold War.
- AMH 5116** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**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. **AS 3(3,0)**
- 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. **AS 3(3,0)**
- 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. **AS 3(3,0)**
- 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. **AS 3(3,0)**
- 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. **AS 3(3,0)**
- 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. **AS 3(3,0)**
- 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. **AS 3(3,0)**
- AMH 5515** **Colloquium in U.S. Diplomatic History:** PR: Senior Standing or C.I. A survey of the historical literature of American foreign policy. **AS 3(3,0)**
- AML 2011** **American Literature I:** PR: ENC 1102. Major American writers from beginning through Whitman. **AS 3(3,0)**
- AML 3020** **American Literature II:** PR: ENC 1102. Major American writers from Twain to present. **AS 3(3,0)**
- AML 4101** **American Novel:** PR: ENC 1102. Analysis of major American novelists. **AS 3(3,0)**
- 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. **AS 3(3,0)**
- AML 4321** **Modern American Literature:** PR: ENC 1102. Major writers of modern American literature. **AS 3(3,0)**
- ANT 2003** **General Anthropology:** An introductory survey of the four major subfields of anthropology: Social Anthropology, Physical Anthropology, Linguistics and Archeology. **AS 3(3,0)**
- ANT 3000** **Physical Anthropology and Archaeology:** Survey of man's place among primates, evolution, genetics, and prehistoric cultural development to the earliest civilizations. **AS 3(3,0)**
- ANT 3122** **Archaeological Methods:** PR: ANT 3000 or ANT 3410. A seminar surveying archaeological field and laboratory techniques; i.e., bone preservation, zooarchaeology, ethnobotany, cataloguing, classification, and laboratory analysis. **AS 3(3,0)**
- ANT 3141** **Prehistory of Complex Societies:** An analysis of prehistoric urban systems in Europe, Asia, Africa and the Americas, approached in an evolutionary perspective. **AS 3(3,0)**
- ANT 3142** **Old World Prehistory:** PR: ANT 3000 and ANT 3410. Fundamentals of archaeological discipline and research techniques. Surveys prehistoric record of cultural development from earliest times to rise in civilizations in all areas of Old World. **AS 3(3,0)**
- ANT 3144** **New World Prehistory:** PR: ANT 3000 and ANT 3410. Essentials of New World archaeology, methods, and excavations. Surveys space-time framework of Native American Indian cultures and civilization from earliest times to A.D. 1500. **AS 3(3,0)**
- ANT 3241** **The Anthropology of Religion:** Patterns in religious behavior in various societies with primary emphasis on myth, rite, taboo and festival as social phenomena. **AS 3(3,0)**
- ANT 3312** **Ethnology of North American Indians:** A survey of the aboriginal cultures of North America with emphasis on the pre-contact cultural condition. **AS 3(3,0)**
- ANT 3313** **Plains Indians of North America:** A study of the social and cultural history of the Indians of the North American High Plains. **AS 3(3,0)**

- ANT 3332** **People and Cultures of Latin America:** An overview of the history and society of the peoples of Latin America emphasizing patterns of subsistence and social organization. **AS 3(3,0)**
- ANT 3410** **Cultural Anthropology:** Framework and principles of sociocultural organization as exemplified among various cultures and ethnic groups. **AS 3(3,0)**
- ANT 3422** **Comparative Social Organization:** PR: ANT 3000 and 3410. Introduction to anthropological viewpoints on role of marriage, family, kin groups, and descent in the study of economic, political and ideological aspects of social organization. **AS 3(3,0)**
- ANT 3424** **Culture and Community:** The anthropology of the human community in a cross-cultural context focusing on such aspects as settlement patterns, subsistence activities, social structure and processes of interaction. **AS 3(3,0)**
- ANT 3432** **Culture and Personality:** Theories of the variations in personality in relation to culture and group life. **AS 3(3,0)**
- ANT 3464** **Human Microevolution:** A study of the forces of evolution operating within the contemporary human populations, with particular emphasis upon epidemiological areas of research. **AS 3(3,0)**
- ANT 3511** **Physical Anthropology:** PR: ANT 3000 and 3410. The study of man as a product of the evolutionary process. Study and analysis of diversity among present human populations. **AS 3(3,0)**
- ANT 3512** **Biobehavioral Anthropology:** An introduction to the study of human behavior in terms of mutual interaction between human biology and cultural environments. **AS 3(3,0)**
- ANT 3552** **Primateology:** An introduction to the evolution of non-human primates and to contemporary field and laboratory primatological research. **AS 3(3,0)**
- ANT 4086** **Method and Theory in Anthropology:** PR: ANT 3000 and 3410. Central methodological and theoretical concerns of anthropology in its emergence as a separate discipline and field of study. **AS 3(3,0)**
- ANT 4705** **Applied Anthropology:** The application of social science to problems of directed social and technological change in industrial as well as non-industrial societies. **AS 3(3,0)**
- ANT 5937** **Proseminar in Anthropology:** An intensive introduction to the study of anthropology. Open to all graduate students and undergraduate students with C.I. **AS 3(3,0)**
- APB 3263** **Pulmonary Physiology:** PR: PCB 3703C. Normal ventilation, lung mechanics, pulmonary circulation, diffusion and blood gases. **HLTH 3(3,0)**
- APB 3293** **Respiratory Pathology:** PR: NS ZOO 3733. Cellular pathology with emphasis on pathology of respiratory and cardiovascular systems. **HLTH 3(3,0)**
- APB 3600** **Introduction to Pharmacology:** Regulatory agencies and the regulation concerning the use of drugs. Review of pharmacological mathematics. Drug absorption and distribution in the human body. **HLTH 2(2,0)**
- APB 4610** **Medical Pharmacology I:** 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. **HLTH 2(2,0)**
- APB 4650** **Medical Pharmacology II:** PR: APB 4610. Continuation of APB 4610 **HLTH 2(2,0)**
- APB 5581** **Applied Microbiology:** PR: MCB 3013C or C.I. Microbial biochemistry of industrial processes including: economics, screening, scale up, quality control and applied genetics. **AS 3(3,0)**
- ARE 4143** **Methodology for Teaching K-12 Art Education I:** Methods and curriculum materials for teaching art in elementary and secondary schools. **ED 2(2,0)**
- ARE 4144** **Methodology for Teaching K-12 Art Education II:** Continuation of ARE 4143. **ED 2(2,0)**
- ARE 4313** **Art in the Elementary School:** Basic principles, purposes, scope and sequence; organization for instruction; evaluation of activities; selected art experiences. **ED 3(2,1)**

- ARE 4440** **ED 3(3,0)**  
**Two-Dimensional Instructional Materials:** PR: ARE 4313 or C.I. Application of two-dimensional materials to appropriate levels of instruction; chalk, ink, water color, crayon, tempera, acrylics, paper, fiber, and oils. Lab. TBA.
- ARE 4441** **ED 3(3,0)**  
**Graphic Instructional Materials:** PR: 4313 or C.I. Application of graphic materials to appropriate level of instruction; direct and indirect basis processes of reproduction of mono and multi-printing. Lab. TBA.
- ARE 4443** **ED 3(3,0)**  
**Three-Dimensional Instructional Materials:** PR: ARE 4313 or C.I. Application of three-materials appropriate levels of instruction: wood, paper, plaster, stone, clay, wax fiber, metal, and synthetics. Lab. TBA.
- ARE 5251** **ED 3(2,1)**  
**Art for Exceptionalities:** Concepts, principles, and methods of integrating art processes into the education of the physically, emotionally, and mentally handicapped.
- ARE 5255** **ED 3(2,1)**  
**Arts in Recreation:** Art activities and experiences appropriate for use in playground, leisure services, occupational orientation and other recreational areas.
- ARE 5358** **ED 3(3,0)**  
**Found Arts:** PR: ARE 4440 and ARE 4443 or C.I. Materials available for instruction in the public schools will be explored in depth in relation to their appropriateness and productive qualities.
- ARE 5444** **ED 3(3,0)**  
**Jewelry Making in Schools:** PR: C.I. Jewelry making appropriate for school age children using standard public school equipment.
- ARE 5648** **ED 3(3,0)**  
**Contemporary Visual Arts Education:** PR: ARE 4344 or C.I. Continued study of current programs and innovations in public school Visual Arts Programs.
- ARH 2050** **AS 3(3,0)**  
**The History of Art I:** Painting, sculpture and architecture from the Prehistoric Era through the Renaissance period.
- ARH 2051** **AS 3(3,0)**  
**The History of Art II:** Painting, sculpture and architecture from the Baroque through the 20th century.
- ARH 3118** **AS 3(3,0)**  
**Arts of Pre-Literate Societies:** The visual arts in recent and contemporary primitive societies with emphasis on the cultures of Africa and Oceania.
- ARH 3530** **AS 3(3,0)**  
**Asian Art:** History of visual arts of China, Japan, India and other Eastern cultures.
- ARH 3710** **AS 3(3,0)**  
**History of Photography:** The development of still photography in terms of historical aesthetic, and social content from 1839 to the present.
- ARH 4071** **AS 4(4,0)**  
**Symbolism in the Visual Arts:** A study of the origin, migration, and transmutation of religious signs, symbols and images in art history.
- ARH 4170** **AS 3(3,0)**  
**Greek & Roman Art:** A study of the art and architecture of the ancient civilizations of the Mediterranean, comprising Greece, Etruria, and Rome.
- ARH 4301** **AS 3(3,0)**  
**Renaissance Art:** A study of the art and architecture of Western Europe during the 15th and 16th centuries, with special attention given to Italy, Flanders and Germany.
- ARH 4350** **AS 3(3,0)**  
**Baroque Art:** A study of European Art in the seventeenth and eighteenth centuries.
- ARH 4430** **AS 3(3,0)**  
**19th Century Art:** A survey of the trends and developments in art during the nineteenth century, including the art of America and of Western Europe.
- ARH 4450** **AS 3(3,0)**  
**20th Century Art:** A survey of the art from Fauvism, Futurism, and Cubism to the art of the present.
- ARH 4700** **AS 3(3,0)**  
**Art and Technology:** The impact of technological developments in the visual arts of the 20th Century.
- ARH 4730** **AS 4(4,0)**  
**Environmental Art:** Analysis of aesthetic design factors, related to city planning, architecture, product design, and experimental environmental arts.



<b>ARH 4800</b>	<b>AS 3(3,0)</b>
<b>Theory and Criticism of the Visual Arts:</b> Criteria of criticism, analysis of works, elements of psychology and sociology of art. Developments in the art of the 20th Century.	
<b>ART 2201C</b>	<b>AS 3(2,3)</b>
<b>Design Fundamentals I:</b> Materials, processes, form. Emphasis on two-dimensional design problems, including problems in black and white and basic color theory.	
<b>ART 2202C</b>	<b>AS 3(2,3)</b>
<b>Design Fundamentals II:</b> Continuation of color theory and basic three-dimensional design using the various sculptural media.	
<b>ART 2300C</b>	<b>AS 3(2,3)</b>
<b>Drawing Fundamentals I:</b> Drawing as a means of formal organization. Introduction to problems in drawing methods and media. Emphasis on description techniques.	
<b>ART 2301C</b>	<b>AS 3(2,3)</b>
<b>Drawing Fundamentals II:</b> Continuation of ART 2300.	
<b>ART 3100C</b>	<b>AS 3(2,3)</b>
<b>Three-Dimensional Design:</b> PR: ART 2203, or C.I. Intermediate problems in three-dimensional materials, processes, forms.	
<b>ART 3110C</b>	<b>AS 3(2,3)</b>
<b>Ceramics:</b> PR: ART 2203 or C.I. Basic concepts of ceramic design, experience in processes of forming, decorating, glazing, and firing pottery.	
<b>ART 3230C</b>	<b>AS 3(2,3)</b>
<b>Design in Advertising:</b> PR: ART 2201C. Principles and techniques. Not open to art majors specializing in graphic design. Intended for visual arts education majors and general university elective.	
<b>ART 3232C</b>	<b>AS 3(3,2)</b>
<b>Graphic Design II:</b> PR: ART 3280 or C.I. Methods, materials, and processes related to perceptual studies in graphic design.	
<b>ART 3280C</b>	<b>AS 3(3,2)</b>
<b>Graphic Design I:</b> PR: ART 2201, 2202, or C.I. Study of classical and historic type as graphic design elements.	
<b>ART 3331C</b>	<b>AS 3(2,3)</b>
<b>Intermediate Drawing II:</b> PR: C.I. Continuation of Intermediate Drawing I.	
<b>ART 3400C</b>	<b>AS 3(2,3)</b>
<b>Printmaking:</b> PR: Three quarter hours of Drawing Fundamentals or C.I.	
<b>ART 3510C</b>	<b>AS 3(2,3)</b>
<b>Painting:</b> 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.	
<b>ART 3600C</b>	<b>AS 3(2,3)</b>
<b>Photography:</b> PR: ART 2201. Consideration of basic technical and aesthetic factors in using still photography as a vehicle for visual expression.	
<b>ART 3701C</b>	<b>AS 3(2,3)</b>
<b>Sculpture:</b> PR: Six semester hours in Design Fundamentals, to include three semester hours in three-dimensional work, or C.I.	
<b>ART 4108C</b>	<b>AS 3(2,3)</b>
<b>Advanced Three-Dimensional Design:</b> PR: ART 3100C. May be repeated for credit. Advanced problems in three-dimensional materials, processes, forms.	
<b>ART 4111C</b>	<b>AS 3(2,3)</b>
<b>Advanced Ceramics:</b> PR: ART 3110C. May be repeated for credit.	
<b>ART 4130C</b>	<b>AS 3(2,3)</b>
<b>Fibers, Fabrics, Textiles and Synthetics:</b> Textile design and production, including non-loom weaving processes. May be repeated for credit.	
<b>ART 4166C</b>	<b>ED 3(2,3)</b>
<b>Metals, Woods, Leathers and Stones:</b> Processes and techniques of production.	
<b>ART 4235C</b>	<b>AS 3(3,2)</b>
<b>Advanced Graphic Design I:</b> PR: ART 3232C or C.I. Large scale studio problems involving modern graphic design media.	
<b>ART 4237C</b>	<b>AS 3(3,2)</b>
<b>Advanced Graphic Design II:</b> PR: ART 4235C or C.I. Advanced group problems in Graphic Design.	
<b>ART 4320C</b>	<b>AS 3(2,2)</b>
<b>Advanced Drawing:</b> PR: ART 3331C. May be repeated for credit.	
<b>ART 4402C</b>	<b>AS 3(2,3)</b>
<b>Advanced Printmaking:</b> PR: ART 3400C. May be repeated for credit.	
<b>ART 4530C</b>	<b>AS 3(2,3)</b>
<b>Advanced Painting:</b> PR: ART 3510C. May be repeated for credit.	

<b>ART 4604C</b>	<b>AS 3(2,3)</b>
<b>Advanced Photography:</b> PR: ART 3600C. May be repeated for credit.	
<b>ART 4608C</b>	<b>AS 3(2,3)</b>
<b>Special Problems in Photography:</b> PR: ART 3600C or C.I. A series or directed photographic problems of a research nature. May be repeated for credit.	
<b>ART 4634C</b>	<b>AS 4(3,2)</b>
<b>Special Problems in Film Design:</b> A series of exercises in craft, technique, and design for film production, including animation.	
<b>ART 4703C</b>	<b>AS 3(2,3)</b>
<b>Advanced Sculpture:</b> PR: ART 3701C. May be repeated for credit.	
<b>ART 4965</b>	<b>AS 3(2,3)</b>
<b>Senior Studio and Exhibition:</b> Studies for the preparation of portfolios, resumes, gallery exhibitions, and other professional practices.	
<b>ART 5109C</b>	<b>ED 3(2,1)</b>
<b>Crafts Design:</b> Crafts design and production, including the use of rigid, flexible, and linear materials.	
<b>ASH 3223</b>	<b>AS 3(3,0)</b>
<b>Modern Middle East:</b> PR: EUH 2000 and 2001 or C.I.	
<b>ASH 3300</b>	<b>AS 3(3,0)</b>
<b>Survey of East Asia:</b> 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.	
<b>ASH 3403</b>	<b>AS 3(3,0)</b>
<b>Survey of Chinese History I:</b> PR: EUH 2000 and 2001 or C.I. From antiquity to 1368, a study of the development of Chinese social, political and cultural traditions from their early beginnings to the end of Yuan Dynasty.	
<b>ASH 3405</b>	<b>AS 3(3,0)</b>
<b>Survey of Chinese History II:</b> PR: EUH 2000 and 2001 or C.I. From 1368 to present, a study of the evolution and transformation of Chinese society during late-imperial and modern periods, with special emphasis on China's response to the western impact.	
<b>ASH 4404</b>	<b>AS 3(3,0)</b>
<b>China in 19th and 20th Centuries:</b> PR: EUH 2000 and 2001 or C.I. The Mongols in China; coming of the Europeans; social structure; Communist movement; Japanese aggression.	
<b>ASH 4442</b>	<b>AS 3(3,0)</b>
<b>Modern Japan, 19th and 20th Centuries:</b> 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.	
<b>AST 3005</b>	<b>AS 3(3,0)</b>
<b>Astronomy:</b> 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.	
<b>BCH 4053</b>	<b>AS 3(3,0)</b>
<b>Biochemistry I:</b> PR: CHM 3211. A consideration of proteins, carbohydrates, nucleic acids, enzymes and their effect on biochemical systems, and inter-relationship of intermediary metabolism.	
<b>BCH 4054</b>	<b>AS 3(3,0)</b>
<b>Biochemistry II:</b> PR: BCH 4053. Continuation of BCH 4053.	
<b>BCH 4103L</b>	<b>AS 1(0,3)</b>
<b>Biochemical Methods:</b> PR: BCH 4053 and CHM 3121C. A laboratory course stressing the application of the chemical arts to the separation, identification, and quantification of materials of biological significance.	
<b>BCN 4230</b>	<b>EN 4(3,2)</b>
<b>Construction Methods, Contracts and Specifications:</b> Construction principles, details, materials and methods used. Legal contractual provisions and interrelations of specifications applied to construction.	
<b>BES 3512</b>	<b>AS 2(2,0)</b>
<b>Behavioral Weight Control:</b> Application of behavioral techniques to produce weight loss. Diet, exercise, and behavioral self regulation principles are used in an individual student case study approach.	
<b>BOT 2010C</b>	<b>AS 3(1,4)</b>
<b>General Botany:</b> PR: High school biology or C.I. Introduction to botany; plant structure and function with emphasis on forms and applications important to man.	
<b>BOT 3154</b>	<b>AS 3(1,4)</b>
<b>Local Flora:</b> 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.	

<b>BOT 3223C</b>	<b>AS 3(2,3)</b>
<b>Plant Anatomy:</b> PR: BOT 2010C. A study of development, structure and function of the principal organs and tissue of vascular plants.	
<b>BOT 3303C</b>	<b>AS 4(2,6)</b>
<b>Plant Kingdom:</b> PR: BOT 2010. A survey of the plant kingdom utilizing comparative morphology, structure and functions to demonstrate relationships among extant and extinct forms.	
<b>BOT 3800</b>	<b>AS 3(3,0)</b>
<b>Plants and Man—Ethnobotany:</b> PR: C.I. Man's historical and modern uses of plants economically important in various cultures. Designed for majors and non-majors.	
<b>BOT 3820</b>	<b>AS 3(2,1)</b>
<b>Plants and the Urban Environment:</b> PR: C.I. The selection, placement, propagation and care of ornamental plants in residential and industrial areas. Designed for majors and non-majors.	
<b>BOT 4403C</b>	<b>AS 3(2,3)</b>
<b>Freshwater Algae:</b> PR: BOT 2010C or C.I. A lecture-laboratory course to survey the physiology, diversity and ecology of the freshwater algae.	
<b>BOT 4503C</b>	<b>AS 4(3,3)</b>
<b>Plant Physiology:</b> PR: PCB 3023, or C.I. A study of mechanisms used by plants to cope with the environment.	
<b>BOT 4623</b>	<b>AS 3(3,0)</b>
<b>Plant Geography:</b> 8 hours Botany or C.I. The major climatic plant formations of the world and historical plant geography.	
<b>BOT 4713C</b>	<b>AS 5(3,6)</b>
<b>Plant Taxonomy:</b> PR: BOT 2010C. An introduction to systematic classification and identification of vascular plants with emphasis on the flora of peninsular Florida.	
<b>BOT 5495C</b>	<b>AS 3(2,3)</b>
<b>Bryology:</b> PR: BOT 3303C 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.	
<b>BOT 5705C</b>	<b>AS 4(2,6)</b>
<b>Plant Biosystematics:</b> PR: BOT 4713C or C.I. Evolutionary relationships, plant taxa and populations utilizing cytological, morphological, and biochemical techniques.	
<b>BSC 1020C</b>	<b>AS 4(3,2)</b>
<b>Biological Principles:</b> A study of various biological factors which affect the health and survival of man in modern society. Designed for non-majors.	
<b>BSC 1030C</b>	<b>AS 4(3,2)</b>
<b>Biology and Environment:</b> Biological implications of the interaction among human society, population, and technology in relation to the environment and natural systems. Designed for non-majors.	
<b>BSC 2010C</b>	<b>AS 4(3,2)</b>
<b>General Biology:</b> 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.	
<b>BSC 4034</b>	<b>AS 3(3,0)</b>
<b>Biology and Society:</b> 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. Designed for non-majors.	
<b>BSC 4103</b>	<b>AS 3(3,0)</b>
<b>History of Biology:</b> PR: C.I. People and events involved in the development of major biological concepts and disciplines. Designed for majors and non-majors.	
<b>BTE 1060</b>	<b>ED 3(2,2)</b>
<b>Introductory Typewriting:</b> Instruction in touch control of the typewriter keyboard. Introduction to typing letters, tables, manuscripts, and typing composition.	
<b>BTE 2061</b>	<b>ED 2(2,1)</b>
<b>Typewriting Production:</b> Extend speed and accuracy in touch typewriting. Develop skills for advanced letters, tables, and manuscripts.	
<b>BTE 2063</b>	<b>ED 3(3,1)</b>
<b>Principles of Shorthand I:</b> Introduction to basic theory of Gregg shorthand, vocabulary development, and speed building.	
<b>BTE 3062</b>	<b>ED 3(3,1)</b>
<b>Professional Typewriting Production:</b> PR: BTE 2061 or C.I. Develop professional level speed, accuracy and production skills in the use of the typewriter.	
<b>BTE 3151</b>	<b>ED 3(3,1)</b>
<b>Advanced Shorthand:</b> CR: BTE 2061. PR: BTE 2064 or equivalents. Extend and refine Gregg shorthand dictation, speed and vocabulary; introductory typewritten communication production skills.	
<b>BTE 3266</b>	<b>ED 3(2,1)</b>
<b>Office Technology:</b> PR: BTE 1060 or C.I. Basic operation and function of technological media in modern business offices, including word processing equipment.	

- BTE 3391** **ED 2(2,1)**  
**Business Instructional Analysis I:** PR: EDG 4341. Techniques, materials, and instructional media; psychological principles, evaluation, and current trends in typewriting instruction.
- BTE 3391L** **ED 1(0,4)**  
**Typewriting Laboratory for Instructional Development:** CR: BTE 3391. Practical application of typewriting theory in the competency-based and traditional classroom. For Business Education Majors only.
- BTE 4071** **ED 1(0,4)**  
**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 4152** **ED 3(3,1)**  
**Shorthand Dictation and Transcription:** CR: BTE 3062 and BTE 3151. Professional level shorthand dictation for transcription and refinement of typewritten communications production skills.
- BTE 4265** **ED 3(3,0)**  
**Office Systems and Procedures:** PR: BTE 3152. Study of the responsibilities of the executive secretary and office supervisor, records management, travel services, case studies in human relations in executive level job performance.
- BTE 4366** **ED 3(3,0)**  
**Business Correspondence:** Originating written business correspondence to include letters, memoranda, and business forms. (Typewriting skill recommended.)
- BTE 4392** **ED 2(2,0)**  
**Business Instructional Analysis II:** PR: EDG 4341. Techniques, materials, and instructional media; psychological principles, evaluation and current trends in shorthand and related instruction.
- BTE 4392L** **ED 1(0,4)**  
**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** **ED 2(2,0)**  
**Business Instructional Analysis III:** PR: EDG 4341. Techniques, materials, and instructional media; psychological principles, evaluation, and current trends in accounting and basic business instruction.
- BUL 3111** **BA 3(3,0)**  
**Legal Environment of Business:** PR: Junior standing. Analysis of the law as a dynamic social and political institution in the business environment.
- BUL 3112** **BA 3(3,0)**  
**Business Law I:** PR: BUL 3111. Analysis of statutory and common law principles involved in the formation, operation and termination of recognized business organizations.
- BUL 3121** **BA 3(3,0)**  
**Business Law II:** PR: BUL 3111. Analysis of the law of commercial transactions, including sales, commercial paper, secured transactions and suretyship.
- BUL 3301** **BA 3(3,0)**  
**Property Law:** PR: BUL 3111. An analysis of real and personal property law, bailments, and insurance.
- BUL 5125** **BA 3(3,0)**  
**Legal and Social Environment of Business:** PR: Admission to graduate program. Analysis of the legal and ethical environment of business, the effects of legislation and regulation on business activity, and the role of law and ethics in the decision making process.
- CAP 3001** **AS 3(3,0)**  
**Computer Fundamentals for Business Applications:** Hardware/software for business data processing; survey of business applications programs; study of prewritten programs (batch and interactive); writing programs in high level language. Not open to Computer Science Majors.
- CAP 3002** **AS 3(3,0)**  
**Business Applications Programming:** PR: CAP 3001 or equivalent. Basic programming concepts and techniques, algorithm design, programming for selected business applications using a high level language (e.g. BASIC). Not open to Computer Science Majors.
- CAP 3006** **AS 3(3,0)**  
**Survey of Hardware:** PR: CAP 3002. Assembly programming; survey of hardware available in today's market; techniques of hardware comparison. Not open to Computer Science Majors.
- CAP 3007** **AS 3(3,0)**  
**Survey of Software Systems:** PR: CAP 3006. Introduction to assemblers, loaders, file structure and maintenance, operating systems, utility programs and data base systems. Not open to Computer Science Majors.
- CAP 4401** **AS 3(3,0)**  
**Computerized Health Information Systems:** PR: CAP 3001 or equivalent. Analyses of computerized health information systems with emphasis upon the design and implementation phases. On-site

visitations of several local computerized health information systems. Not open to Computer Science Majors.

**CAP 5101** AS 3(3,0)

**Applications of Computers in Education:** PR: At least Senior standing in College of Education. Computer programming; computer assisted instruction, computer-managed instruction; simulation and games; computerizing teachers' records. Not open to Computer Science Majors.

**CAP 5612** AS 3(3,0)

**Computer Based Educational Systems:** PR: COP 4550 or equivalent. The design and implementation of computer based educational systems. Selected projects using high-level programming languages.

**CAP 5623** AS 3(3,0)

**Heuristic Programming:** PR: COP 4550, COT 4001. An introduction to basic artificial intelligence concepts including problem solving, knowledge based systems, natural language understanding by computer.

**CAP 5670** AS 3(3,0)

**Introduction to Intelligent Systems:** PR: COP 4550 or equivalent. Origin/evolution of machine intelligence; heuristic and epistemological approaches to artificial intelligence; what computers can and cannot do; symbiotic role of human and computers.

**CAP 5722** AS 3(3,0)

**Computer Graphics Systems I:** PR: COP 3404 or equivalent. Architecture of graphics processors; display hardware; principles of programming and display software; problems and applications of graphic systems.

**CAP 5746** AS 3(3,0)

**Simulation/Performance of Computer Systems:** PR: CDA 5106 and COP 5613. Performance measurement of hardware and software systems, simulation techniques, monitoring programs.

**CBH 3003** AS 3(3,0)

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

**CCJ 2020** AS 4(4,0)

**Introduction to Criminal Justice:** A survey of the field of criminal justice including crime, the history and structure of the criminal justice system, and basic steps in the criminal process.

**CCJ 3010** AS 4(4,0)

**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 3260** AS 4(4,0)

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

**CCJ 3290** AS 4(4,0)

**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** AS 4(4,0)

**The Corrections and Penology:** Theories, structures and methods of institutional and non-institutional processing and treatment of convicted criminals and juvenile offenders.

**CCJ 3341** AS 4(4,0)

**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 3430** AS 4(4,0)

**The Criminal Justice Manager:** PR: C.I. Elements of first-line supervision and executive development. Administrative leadership; its nature; methods and traits. Recent theories and research in leadership.

**CCJ 3451** AS 4(4,0)

**Justice System Technology:** Examination of the relevance of scientific and technological developments to justice systems and their applicability to the operations and management of the systems.

**CCJ 3820** AS 3(3,0)

**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.

**CCJ 4440** AS 4(4,0)

**Corrections Administration:** Organizational and administrative theory and its application in various correctional settings. Examines specific problems in management and meeting conflicting needs and expectations.

**CCJ 4450** AS 4(4,0)

**Social Conflict and Justice Policy:** The effects of social conflicts and political decisions on the administration of justice, stressing the law enforcement role in dealing with social problems.

- CCJ 4481** **AS 4(4,0)**  
**Police and the Community:** PR: CCJ 2020. Examination of the dynamics of public expectations of police, the impact of community demographic changes and police alienation from the community.
- CCJ 4540** **AS 4(4,0)**  
**Delinquency Control:** Examination of programs and institutions including juvenile court process, intake services, and remedial procedures and practices.
- CCJ 4630** **AS 4(4,0)**  
**Comparative Justice Systems:** A survey of contemporary foreign criminal justice and differences emerging from various political, cultural and legal systems.
- CCJ 4941** **AS 4-8(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 4(4,0)**  
**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 4012** **AS 3(2,2)**  
**Computer Interfacing for Scientists:** PR: CHM 2046, or PHY 2041, or PHY 2052, or equivalent, or C.I. Hands-on laboratory embracing simple gate, flip flop, decoding and counting circuits, digital logic. Interfacing to a microcomputer for data logging and experimental control.
- CDA 4102** **AS 3(3,0)**  
**Introduction to Computer Architecture:** PR: COP 3404 and EEL 3341C. Survey of machine instructions, processor characteristics, and microprogramming concepts.
- CDA 4142** **AS 3(2,2)**  
**Microcomputer Organization:** PR: COP 3404. An analysis of a microcomputer's organization, and chip set with emphasis on a system programming.
- CDA 4143** **AS 3(2,2)**  
**Microcomputer Interfacing/Software:** PR: CDA 4142. A survey of current peripheral hardware available for microprocessors; how a wide range of devices are interfaced to a microcomputer with an emphasis in software.
- CDA 4144** **AS 3(2,2)**  
**Microcomputer Applications:** PR: CDA 4143. A case study investigation into several commercial available microprocessor based systems.
- CDA 4161** **AS 3(3,0)**  
**Programming for Large Scale Digital Systems:** PR: COP 3404. Programming techniques and instruction sets for large scale digital computers.
- CDA 5106** **AS 3(3,0)**  
**Advanced Computer Architecture I:** PR: CDA 4102. Evolution of computer architecture; memory organization; cache; virtual memory; highspeed processor design; pipeline multi-functional and array machines; special architecture case studies; overview of channel architecture.
- CDA 5182** **AS 3(3,0)**  
**Architecture and Design of VLSI Systems:** PR: CDA 4102 or equivalent. Overview of VLSI technology. Stick diagrams; logical design of basic subsystems; integrated system design tools; design of a VLSI computer system.
- CES 4124** **EN 3(2,2)**  
**Structural Engineering Analysis:** PR: EGN 3331. Topics in structural mechanics, energy methods, indeterminate structures by flexibility, stiffness method, analysis of columns.
- CES 4144** **EN 3(3,0)**  
**Matrix Methods of Structural Analysis:** PR: EGN 3331. Structural analysis of beams, frames, and plates by matrix methods.
- 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 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 5102** **EN 3(3,0)**  
**Intermediate Mechanics of Materials:** PR: EGN 3331 and MAP 3302. Elements of plane elasticity; failure theories; curved beams; columns; bending and torsion of thin-walled structures; theory of thin plates; applications to design.
- CES 5107** **EN 3(3,0)**  
**Matrix Structural Analysis:** PR: CES 4144 or equivalent. Optimization and matrix methods applied to the design of real structures.
- CHM 1034** **AS 3(3,0)**  
**General Chemistry:** PR: MAC 1104 or equivalent. An introductory study of the fundamental concepts of chemistry, primarily oriented toward COH and Biology Education majors.

<b>CHM 2045</b>	<b>AS 4(3,1)</b>
<b>Chemistry Fundamentals I:</b> PR: High School Chemistry or CHM 1034. Basic physical theory of chemical reactivity, atomic structure, chemical bonding, periodicity, stoichiometry, equilibrium, thermodynamics, and kinetics.	
<b>CHM 2046</b>	<b>AS 3(3,0)</b>
<b>Chemistry Fundamentals II:</b> PR: CHM 2045. Continuation of CHM 2045.	
<b>CHM 2046L</b>	<b>AS 1(0,3)</b>
<b>Chemistry Fundamentals Laboratory:</b> PR: CHM 1034 or CR: CHM 2046. Illustration of chemical principles and introduction to the techniques of inorganic and physical chemistry.	
<b>CHM 2205</b>	<b>AS 5(5,0)</b>
<b>Introduction to Organic and Biochemistry:</b> PR: CHM 1034 or equivalent. An introduction to organic chemistry, stressing the chemistry of functional groups and a survey of the biochemistry of proteins, carbohydrates, lipids and nucleic acids.	
<b>CHM 3121C</b>	<b>AS 5(3,6)</b>
<b>Analytical Chemistry:</b> PR: CHM 2046, 2046L. Laboratory practices of classical and instrumental analysis. Choice of preferred analytical methods and techniques is emphasized through applications involving both inorganic and organic systems.	
<b>CHM 3210</b>	<b>AS 3(3,0)</b>
<b>Organic Chemistry I:</b> PR: CHM 2046. Theory and applications of organic chemistry: structure, bonding, kinetics, thermodynamics, reaction mechanisms, synthesis, and stereochemistry. Structure elucidation via spectrometric techniques.	
<b>CHM 3211</b>	<b>AS 3(3,0)</b>
<b>Organic Chemistry II:</b> PR: CHM 3210. Continuation of CHM 3210.	
<b>CHM 3211L</b>	<b>AS 2(0,6)</b>
<b>Organic Laboratory Techniques I:</b> PR: CHM 3210. An introduction to the laboratory techniques of organic chemistry including the preparation, reaction, and analysis of organic compounds.	
<b>CHM 3212L</b>	<b>AS 2(0,6)</b>
<b>Organic Laboratory Techniques II:</b> PR: CHM 3211 and 3211L. Open-end laboratory to develop synthesis techniques and structure elucidation skills.	
<b>CHM 3410</b>	<b>AS 4(3,1)</b>
<b>Physical Chemistry I:</b> PR: CHM 2046, PHY 2041, and MAC 3312. Rigorous treatment of atomic and molecular structure, thermodynamics, kinetics, and chemical bonding.	
<b>CHM 3411</b>	<b>AS 4(3,1)</b>
<b>Physical Chemistry II:</b> PR: CHM 3410. Continuation of CHM 3410.	
<b>CHM 3411L</b>	<b>AS 2(0,6)</b>
<b>Physical Chemistry Laboratory I:</b> PR: CHM 3121C, CHM 3410 and COP 1110 or COP 3215. Classical as well as modern instrumental techniques coupled with computer data processing to measure physical properties and determine atomic and molecular parameters.	
<b>CHM 4130C</b>	<b>AS 4(2,4)</b>
<b>Advanced Analytical Laboratory Technique:</b> PR: CHM 3211, CHM 3121C and CHM 3411. A lecture-laboratory course designed to give in-depth coverage to modern methods of analysis including electrochemistry, spectroscopy, and separation techniques.	
<b>CHM 4220</b>	<b>AS 3(3,0)</b>
<b>Advanced Organic Chemistry I:</b> PR: CHM 3211 and CR: CHM 3410. Theoretical and physical organic concepts of organic systems from the perspective of modern structural theory, thermodynamics and kinetics.	
<b>CHM 4580</b>	<b>AS 3(3,0)</b>
<b>Advanced Physical Chemistry:</b> CR: 3411 and PR: MAC 3313. Selected topics of thermodynamics, kinetics, quantum mechanics, and structure.	
<b>CHM 4610</b>	<b>AS 3(3,0)</b>
<b>Inorganic Chemistry:</b> CR: CHM 3411. A discussion of descriptive inorganic chemistry based on various bonding theories, thermodynamics and kinetics.	
<b>CHM 5710</b>	<b>AS 2(2,0)</b>
<b>Chemical Structure I:</b> PR: CHM 3211, 3121C, and 3411; or equivalent. Concepts in molecular structure and the relationships between structure and the chemical and physical properties of a substance.	
<b>CHM 5711</b>	<b>AS 2(2,0)</b>
<b>Chemical Structure II:</b> PR: CHM 5710. Continuation of CHM 5710.	
<b>CHS 3501</b>	<b>AS 3(3,0)</b>
<b>Introduction to Forensic Science:</b> Intended for non-majors to provide an appreciation for the ways in which forensic science serves the civil and criminal justice system.	
<b>CHS 3511</b>	<b>AS 3(1,6)</b>
<b>Criminalistics I:</b> PR: CHM 2046 or C.I. Examination and evaluation of evidence obtained from suspect criminal actions, including the microscopy of trace evidence.	
<b>CHS 3512</b>	<b>AS 3(1,6)</b>
<b>Criminalistics II:</b> PR: CHS 3511. Continuation of CHS 3511.	

<b>CHS 3531</b>	<b>AS 3(1,6)</b>
<b>Forensic Analysis Techniques:</b> PR: CHM 3121C. Study of separation, purification, quantitative, and instrumental techniques in drug and narcotic analysis toxicology, blood factor, and enzyme identification.	
<b>CHS 4110C</b>	<b>AS 3(2,3)</b>
<b>Nuclear and Radiochemistry:</b> PR: CHM 3121C and CR: CHM 3411. A lecture-laboratory course examining theories of fundamental particles, the chemical effects of nuclear transformations and the special uses of isotopes.	
<b>CHS 4200</b>	<b>AS 3(3,0)</b>
<b>Concepts in Industrial Chemistry:</b> PR: CHM 3410. An introduction to industrial practices emphasizing the application of chemical principles in the development of a commercial process or product.	
<b>CHS 4591</b>	<b>AS 6(0,40)</b>
<b>Forensic Science Internship:</b> PR: C.I. Credit for full-time work (15 weeks; 600 hours) for a professional forensic laboratory. This course may be repeated for credit.	
<b>CHS 5240</b>	<b>AS 2(2,0)</b>
<b>Chemical Dynamics I:</b> PR: CHM 3411 or equivalent. Dynamics of chemical reactions and physical processes including equilibrium systems catalysis, transport processes and physical phenomena at interfaces.	
<b>CHS 5241</b>	<b>AS 2(2,0)</b>
<b>Chemical Dynamics II:</b> PR: CHS 5240. Continuation of CHS 5240.	
<b>CHS 5250</b>	<b>AS 2(2,0)</b>
<b>Chemical Synthesis I:</b> 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.	
<b>CHS 5251</b>	<b>AS 2(2,0)</b>
<b>Chemical Synthesis II:</b> PR: CHS 5250. Continuation of CHS 5250.	
<b>CIS 4112</b>	<b>AS 3(3,0)</b>
<b>Databases:</b> PR: COP 4530. Basic concepts of databases, I/O processing, file organization and access, study of selected data base systems. Database project.	
<b>CIS 4323</b>	<b>AS 3(3,0)</b>
<b>Data Processing Systems Analysis and Design:</b> PR: COP 4530. Data organization; physical storage; data-base system architecture. Students participate in the design of a data processing system.	
<b>CIS 4324</b>	<b>AS 3(3,0)</b>
<b>Data Processing Systems Implementation:</b> PR: CIS 4323. System implementation project. Students experience the task of implementing a large computing system.	
<b>CIS 5012</b>	<b>AS 3(3,0)</b>
<b>Information and File Systems Analysis:</b> PR: COP 4530 or equivalent. Logical and physical information system design. Analysis of file systems. Introduction to data management systems.	
<b>CIS 5041</b>	<b>AS 3(3,0)</b>
<b>Information Organization and Retrieval:</b> PR: CIS 5012. Automatic analysis of information content in natural language text for automatic retrieval. Construction of dictionaries, null, synonym, etc. Recall and precision. Interactive feedback.	
<b>CIS 5234</b>	<b>AS 3(3,0)</b>
<b>Computational Techniques in Management Information Systems:</b> PR: CIS 4112. Computers in management information systems; analysis, design approaches, processing methods and data management; use of state of the art software in design and development.	
<b>CLP 3003</b>	<b>AS 3(3,0)</b>
<b>Psychology of Adjustment:</b> Psychological principles of adjustment; application of psychology to problems in living.	
<b>CLP 3143</b>	<b>AS 3(3,0)</b>
<b>Abnormal Psychology:</b> PR: PSY 2013. Classification, causation, and treatment of deviant patterns of behavior.	
<b>CLP 3302</b>	<b>AS 3(3,0)</b>
<b>Clinical Psychology:</b> PR: PPE 3003 or CLP 3143. An overview of approaches to psychopathology, methods of clinical assessment, and various approaches to individual and group counseling.	
<b>CLP 4440</b>	<b>AS 4(2,2)</b>
<b>Individual Intelligence Testing:</b> PR: PSY 3302. The nature of intelligence and its measurement. Training in Stanford-Binet and Wechsler testing. Lec.-Lab.	
<b>CNM 4110</b>	<b>AS 3(3,0)</b>
<b>Numerical Calculus:</b> PR: COP 2511 or COP 3215 and MAC 3313. Numerical methods for finding roots of nonlinear equations, solutions of systems of linear equations, and ordinary differential equations.	
<b>CNM 5142</b>	<b>AS 3(3,0)</b>
<b>Computational Methods/Linear Systems:</b> PR: CNM 4110 and MAS 3113. Mathematical models for linear systems, linear programming, the simplex method, integer and mixed-integer programming, introduction to non-linear optimization and linearization.	



- CNM 5148** AS 3(3,0)  
**Computational Methods/Applications:** PR: CNM 4110. Computational solution techniques for algebraic equation, ODE and PDE Models of applications selected from science, engineering, applied mathematics, and computer science.
- COC 1100** AS 3(3,0)  
**Introduction to Computer Science:** History, typical computer, number systems, control and data flow, peripheral components, memory devices, effects of computers on society, applications of computers. Not open to Computer Science Majors.
- COC 3024** AS 3(3,0)  
**Personal Computing:** Survey of personal computers on the market; applications for education, entertainment and clerical work; programming in BASIC with exercises. Not open to Computer Science Majors.
- COM 1000** AS 3(3,0)  
**Basic Communication:** Survey of basic factors affecting human interaction through communication; theories and models of communication; contributions of behavioral sciences and related arts; mass media in society.
- COM 3110** AS 3(3,0)  
**Business and Professional Communication:** PR: SPC 1014 or C.I. Theoretical and practical training in effective presentational speaking for business and professions.
- COM 3120** AS 3(3,0)  
**Organizational Communication:** A study of communication functions and problems within the contexts of hierarchies.
- COM 3311** AS 3(3,0)  
**Communication as a Behavioral Science:** PR: English proficiency examination. Basic principles of the behavioral science approach to the study of contemporary communication.
- COM 4020** AS 3(3,0)  
**Informational Communication:** An examination of available communication systems (non-technical) and their utilization within business, educational, entertainment, industrial, medical, and military organization.
- COM 4463** AS 3(2,1)  
**Communication and Court Room Advocacy:** A study of the application of communication theory and practice to the judicial setting.
- COP 1110** AS 3(3,0)  
**Computer Programming:** PR: College Algebra and Trigonometry or equivalent. Problem definitions, algorithms, flow charts, digital computer programming using a higher level language (FORTRAN). Not open to Computer Science Majors.
- COP 2510** AS 3(3,0)  
**Programming I:** PR: College algebra and college trigonometry. Techniques of algorithm development; structured programming concepts; algorithms for searching and sorting procedures; computer experience with a procedure-oriented language.
- COP 2511** AS 3(3,0)  
**Programming II:** PR: COP 2510. Continuation of COP 2510; recursion; simple data structures; program verification; continued experience with a procedure-oriented language.
- COP 3120** AS 3(3,0)  
**Business Programming in COBOL:** PR: CAP 3002 or equivalent. COBOL programming; fundamental concepts of data processing; system design; processing of sequential, indexed, and random files; programming project.
- COP 3215** AS 3(3,0)  
**Programming and Numerical Methods:** CR: MAC 3312. Programming with a high level language (e.g. FORTRAN). I/O, formatting and manipulation of one and two dimensional arrays with emphasis on numerical problems. Not open to Computer Science Majors.
- COP 3402C** AS 3(3,2)  
**Assembly Language:** PR: COP 2511 or equivalent programming experience. Computer structure, number systems, data representation, arithmetic and logic instructions, addressing schemes, looping techniques, sequential input/output, subroutines, macros, and other topics.
- COP 3404** AS 3(3,2)  
**Computer Systems Concepts/Programming:** PR: COP 3402. Linker, loader, assembler design and development. Detailed examinations of one computer's operating system and its associated architecture. Advanced topics in assembly language including file input/output.
- COP 3530** AS 3(3,0)  
**Data Structures:** PR: COP 3402 and COP 2511. Basic concepts of data; linear lists, strings, arrays and orthogonal lists, ordering or sorting techniques; recursion; string and list processing languages.
- COP 4124** AS 3(3,0)  
**Cobol Environment:** PR: Computer science core. Basic and advanced features; creation of user

libraries; system utilities; file processing; sub-program linkage; programming efficiencies; compiler study; assembly interfaces and JCL.

**COP 4550** AS 3(3,0)

**Programming Languages I:** PR: COP 4530. Features of high-level programming languages; introduction to compiling and interpreting techniques; SNOBOL and LISP.

**COP 4620** AS 3(3,0)

**Programming Systems:** PR: COP 3404 and COP 4530. The function and organization of operating systems. Design and implementation considerations regarding operating systems, compilers, assemblers and loaders.

**COP 5554** AS 3(3,0)

**Programming Languages II:** PR: COP 4550 and COT 4001. A formal study of programming language design and specification, BNF grammars, models of semantics, compilers and interpreters.

**COP 5613** AS 3(3,0)

**Operating System Design Principles:** PR: COP 4620 or equivalent. The structure and functions of operating systems, process communications techniques, scheduling algorithms, deadlocks, memory management, virtual systems, protection and security.

**COP 5632** AS 3(3,0)

**Software Engineering:** PR: COP 4550. Study of design techniques for large software systems, modularization, task assignment, management techniques, implementation techniques, testing, quality control, documentation and maintenance.

**COP 5682** AS 3(3,0)

**Software Tools:** PR: COP 4620 and COP 5554. Systems programming languages, concurrent programming, design and implementation of software development/maintenance tools. A large programming project is required.

**COT 3000** AS 3(3,0)

**Introduction to Discrete Structures:** PR: COP 2510 and MCA 3311. Logic, sets, functions, relations, combinatorics, graphs, Boolean algebras, finite-state machines, Turing machines, unsolvability, computational complexity.

**COT 4001** AS 3(3,0)

**Discrete Computational Structures:** PR: COT 3000, MAC 3313. Review of discrete structures, introduction to automata theory, computational complexity, analysis of algorithms, computability theory, and formal languages.

**COT 5127** AS 3(3,0)

**Formal Languages and Automata Theory:** PR: COT 4001. Classes of formal grammars and their relation to automata, normal forms, closure properties, decision problems, LR(k) grammars.

**COT 5305** AS 3(3,0)

**Design and Analysis of Algorithms:** PR: COT 4001. Classifications of algorithms, e.g., recursive, divide-and-conquer, greedy, etc. Data Structures and algorithm design and performance. Time and space complexity analysis.

**COT 5314** AS 3(3,0)

**Computational Complexity:** PR: COT 4001. Properties of algorithms, computational equivalence of machines, time-space complexity measures, examples of algorithms of different complexity, classification of algorithms, classes P and NP.

**COT 5324** AS 3(3,0)

**Computability Theory:** PR: COT 4001. Models of computable procedures. Equivalence of models; unsolvable problems; hierarchies of unsolvability; applications including formal languages, automata theory, operating systems, automated theorem proving program verification.

**CPO 3034** AS 4(4,0)

**Politics of Developing Areas:** Comparative analysis of theories, problems and politics of development in Third World nations.

**CPO 3103** AS 4(4,0)

**Comparative Politics:** Government and politics in selected nations with emphasis upon comparative analysis of contemporary problems, politics, political culture, behavior and institutions.

**CPO 4024** AS 4(4,0)

**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** AS 4(4,0)

**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** AS 4(4,0)

**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.

<b>CPO 4303</b>	<b>AS 4(4,0)</b>
<b>Comparative Latin American Politics:</b> Comparative analysis of politics, society and culture in Latin America and selected countries of the region.	
<b>CPO 4643</b>	<b>AS 4(4,0)</b>
<b>Government and Politics of the Soviet Union:</b> 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.	
<b>CRM 5115</b>	<b>AS 3(3,0)</b>
<b>Economics of Computers:</b> PR: CIS 5012. The computer industry, terms and conditions of sale and rental, cost and effectiveness of computer systems. Determining value, demand and price of computer services.	
<b>CRM 5131</b>	<b>AS 3(3,0)</b>
<b>Managing the Computer Professional:</b> PR: CIS 5012 and MAN 5051; or C.I. The programming group, team and project tasks, personality factors, motivating, training, experience.	
<b>CRW 2000</b>	<b>AS 3(3,0)</b>
<b>Principles of Creative Writing:</b> An exploratory course in the several types of creative writing; group analysis of original writing; critical reading of established authors.	
<b>CRW 2100</b>	<b>AS 3(3,0)</b>
<b>Introduction to Fiction Writing:</b> Practice in writing the short story; group analysis and criticism of work produced by individual students.	
<b>CRW 2300</b>	<b>AS 3(3,0)</b>
<b>Introduction to Verse Writing:</b> Practice in writing poetry; group analysis and criticism of work produced by individual students.	
<b>CRW 3001</b>	<b>AS 3(3,0)</b>
<b>Creative Writing Workshop I:</b> PR: C.I. Practice in established forms: essay, short story and poetry.	
<b>CRW 3002</b>	<b>AS 3(3,0)</b>
<b>Creative Writing Workshop II:</b> PR: CRW 3132 or C.I. Individualized practice in writing in one of the established forms; analytic study of the work of pertinent authors.	
<b>CRW 3310</b>	<b>AS 3(3,0)</b>
<b>Structure of Verse:</b> Intensive study of the structural characteristics of English, poetry, metrical systems, rhyme, scansion, and poetic rhetorical devices.	
<b>CRW 3410</b>	<b>AS 3(3,0)</b>
<b>Writing Scripts:</b> Theory and practice of writing scripts for theatre, film and TV.	
<b>CRW 4940</b>	<b>AS 3(3,0)</b>
<b>Writing Practicum I:</b> PR: C.I. Intensive writing practice in fiction, non-fiction, or verse.	
<b>CRW 4941</b>	<b>AS 3(3,0)</b>
<b>Writing Practicum II:</b> PR: CRW 4940. Continuation of CRW 4940.	
<b>CRW 5932</b>	<b>AS 3(2,1)</b>
<b>Teaching Creative Writing:</b> PR: Senior standing or C.I. Creative writing practicum.	
<b>DAA 3160C</b>	<b>ED 2(2,1)</b>
<b>Movement as an Art Form:</b> Analysis of creative movement techniques that increase body awareness and enhance the communicative potential through the instrument of dance.	
<b>DAA 3200</b>	<b>AS 3(3,0)</b>
<b>Theatre Dance I:</b> Fundamentals of Classical Ballet, includes practical class work as well as Dance History lectures.	
<b>DAA 3510</b>	<b>AS 3(3,0)</b>
<b>Theatre Dance II:</b> Specific focus on American musical theatre dance forms. May be repeated for credit.	
<b>DAE 3301</b>	<b>ED 2(1,1)</b>
<b>Instructional Analysis of Dance and Rhythmics:</b> An analysis of creative movement and rhythmical activity as they relate to teaching physical education in grades K-12.	
<b>DEP 3004</b>	<b>AS 3(3,0)</b>
<b>Developmental Psychology:</b> PR: PSY 2013. The effects of genetic, psychological, maturational and social factors on behavior throughout the life cycle.	
<b>DEP 3202</b>	<b>AS 3(3,0)</b>
<b>Psychology of Exceptional Children:</b> Psychological problems of exceptional children including diagnosis, associated emotional problems, effects of institutionalization, special class placement, attitudes, and appropriate intervention methods.	
<b>DEP 3212</b>	<b>AS 3(3,0)</b>
<b>Psychological Approaches to Mental Retardation:</b> The problems of mentally retarded citizens including diagnosis, environment versus heredity, legal restrictions, institutionalization, as well as methods of behavioral remediation.	

- DEP 3464** **AS 3(3,0)**  
**Psychology of Aging:** PR: PSY 2013. An examination of basic psychological processes related to the aging process with emphasis on the applied implications of changes in perceptual-motor, social-emotional and cognitive-intellectual function.
- DEP 5057** **AS 3(2,2)**  
**Developmental Psychology:** PR: Graduate admission or C.I. Psychological aspects of development including intellectual, social and personality factors.
- DHE 4101** **AS 3(3,0)**  
**Population:** Concerned with the study of human population, its distribution, composition and change.
- EAB 3703** **AS 4(3,2)**  
**Principles of Behavior Modification:** PR: EXP 3404. An examination of the control of behavior through applications of principles and theories of learning. Examples are drawn from clinical and social psychology and from child rearing. Lecture/Practicum.
- EAB 3704** **AS 3(3,0)**  
**Behavioral Self Control:** PR: PSY 2013. Application of behavioral and biofeedback techniques to self-regulation.
- EAB 5765** **AS 3(3,0)**  
**Applied Behavior Analysis with Children and Youth:** PR: DEP 5057 and EXP 5445 or C.I. Advanced survey of principles, procedures and techniques of applied behavior analysis, with special attention to applications with children and youth.
- EAS 4101** **EN 3(3,0)**  
**Introductory Aerodynamics:** PR: EML 4709. Basic aerodynamic analysis of wings and bodies in incompressible and compressible flows including airplane performance, stability and control.
- EAS 4300** **EN 3(3,0)**  
**Propulsion Systems:** PR: EML 4709. Analysis of jet propulsion systems including turbojets, ramjets and rockets.
- ECI 3404** **EN 3(2,3)**  
**Civil Engineering Materials:** PR: C.I. The characterization of materials used in civil engineering works to include concrete, soils, bituminous, polymers and composite materials.
- ECI 3603** **EN 3(2,2)**  
**Engineering and Environmental Geology:** PR: EGN 3704. Principles of physical geology with emphasis on engineering and environmental topics. Study of land forms, geologic maps, geologic structure, weathering, groundweather, mass wasting, and earthquakes.
- ECI 4145** **EN 3(3,0)**  
**Construction Engineering:** PR: C.I. Project specifications, negotiations, contracts, unions, planning, insurance and safety with methods and equipment related to Civil Engineering.
- ECI 4305** **EN 3(3,0)**  
**Geotechnical Engineering I:** PR: EGN 3331 and EGN 3353. Engineering properties and classification of soils. Design considerations for compaction, seepage, consolidation, and settlement analysis.
- ECI 4305L** **EN 1(0,3)**  
**Geotechnical Engineering Laboratory:** PR: ECI 4305 or C.I. Fundamental geotechnical engineering experiments, classification, grain size, atterberg limits, compaction, etc.
- ECI 4315** **EN 3(3,0)**  
**Pavement Design:** PR: ECI 3404. Introduction of pavement types, wheel loads, stresses in pavement components, design factors such as traffic configurations, environmental, economic, drainage, and materials.
- ECI 4323** **EN 2(1,2)**  
**Civil Engineering Systems Design:** PR: GES 4605 or 4704, ECI 4305, TTE 4004 and ENV 4404. Project course on design of foundations, structures, transportation and environmental projects using engineering science and civil engineering design methodologies.
- ECI 5147** **EN 3(3,0)**  
**Construction Management:** PR: C.I. Planning and Management of construction projects: CPM and PERT analysis with preparation of estimates and contract documents. Selection and economics of heavy construction equipment.
- ECI 5215C** **EN 3(2,3)**  
**Hydraulic Engineering:** PR: EGN 3353. Environmental and civil engineering hydraulics application. Pipe and open channel flow, fittings, flow measurements, etc.
- ECI 5306** **EN 3(3,0)**  
**Geotechnical Engineering II:** PR: ECI 4305. Continuation of ECI 4305 with emphasis on shear strength and design factors for earth pressures bearing capacity, and slope stability.
- ECM 4114** **EN 3(3,0)**  
**Engineering Mathematical Analysis:** PR: MAP 3302. The application mathematical methods to engineering problems. Vector and tensor fields, state space, coordinate systems, orthogonal functions.

- ECM 4124** **Mathematical Modeling for Engineers:** PR: MAP 3302. Formulation of mathematical models in engineering—continuous and discrete systems. **EN 3(3,0)**
- ECM 4411** **Discrete Time Systems:** PR: EGN 3703. Discrete time signals, convolution, properties of linear discrete systems, the z-transform, system response, digital filters. **EWN 3(3,0)**
- ECM 4504** **Mini-Computers in Engineering Systems:** PR: COP 3215 or equivalent, EEL 4342 or EEL 3341C. Organization of the computer processor, memory and I/O. Assembly level programming. Input-output using programmed transfer and interrupt type I/O, Mini-computer orientation. **EN 3(2,3)**
- ECM 4804** **Engineering Software Design:** PR: COP 3215; CR: MAP 3302. Design theory and construction of special purpose engineering software, survey of problem oriented languages, data structures and file systems. Case studies. **EN 3(3,0)**
- ECM 4814** **Real Time Computer Systems:** PR: EGN 3703 and ECM 4504. Computer I/O Systems and equipment, sampling, quantization, buffering and Real Time processing. Use of a mini-computer system for data acquisition, display and control. **EN 3(2,3)**
- ECM 5135** **Engineering Math Analysis I:** PR: MAP 3302. Topics in advanced engineering mathematics including systems of differential equations, phase plane, linear algebra and vector differential calculus. **EN 3(3,0)**
- ECM 5505C** **Microcomputer-based Monitoring and Control Systems:** PR: EEL 4342 or equivalent, COP 3215 or equivalent. Machine-language programming; software development aids; interfacing considerations. **EN 3(2,3)**
- ECM 5506C** **Engineering Applications of Computer Graphics:** PR: COP 3215. Introduction to the use of computer graphics with engineering applications. Laboratory program assignments. **EN 3(2,3)**
- ECM 5806** **Software Engineering I:** PR: COP 3215, ECM 4504 or equivalent. Design reliability, testing, and implementation of engineering software. **EN 3(3,0)**
- ECO 2013** **Principle of Economics I:** The study of economic principles that relate human behavior and values to economic trends, including introduction to market analysis, national income accounting, and stabilization policy. **BA 3(3,0)**
- ECO 2023** **Principles of Economics II:** The determination of prices in a market economy; their role in allocating consumer and producer goods in distributing incomes. Efficiency of markets and evaluation of policies. **BA 3(3,0)**
- ECO 3101** **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. **BA 3(3,0)**
- ECO 3203** **Aggregate Economic Conditions Analysis:** PR: ECO 2013 and ECO 2023. A study of the measurement, analysis, and control of aggregate economic activity. **BA 3(3,0)**
- ECO 3411** **Quantitative Methods and Business Decision Analysis:** PR: Junior Standing, ACC 2021, ECO 2013, 2023, and STA 3023. The use of statistical methods as scientific tools in the analysis of economics and business problems. **BA 3(3,0)**
- ECO 3702** **International Economics:** PR: ECO 2023 and ECO 2013. Fundamental principles of international trade and foreign exchange, including the balance of payments and problems of foreign economic policy. **BA 3(3,0)**
- ECO 4224** **Money: Issues and Analysis:** PR: FIN 3233. Study of the supply of and demand for money, emphasizing the role of the Federal Reserve System in contemporary stabilization policy. **BA 3(3,0)**
- ECO 4303** **History of Economic Thought:** PR: ECO 2023 and ECO 2013. A study of the principal ideas of the major contributors to the development of economic thought. **BA 3(3,0)**
- ECO 4412** **Economic Statistics and Econometrics:** PR: ECO 3411. Concepts and methods of developing, analyzing and interpreting measures of economic activity, and business and economic change. **BA 3(3,0)**
- 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. **BA 3(3,0)**

- ECO 5055** **BA 3(3,0)**  
**Economic Concepts:** PR: Acceptance into the graduate program. Introduction to micro and macro economic analysis.
- ECO 5413** **BA 3(3,0)**  
**Statistics for Business and Economics:** PR: Acceptance into the graduate program. Statistical theory and problems relating to business and economics including time series and correlation theory, index number theory and statistical inference.
- ECP 3203** **BA 3(3,0)**  
**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** **BA 3(3,0)**  
**The Economics of Regulated Industries:** PR: ACC 2001, ACC 2021, or ACC 3003, 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** **BA 3(3,0)**  
**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** **BA 3(3,0)**  
**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** **BA 3(3,0)**  
**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** **BA 3(3,0)**  
**Managerial Economics:** PR: Junior standing. ACC 2021 or ACC 3003, ECO 2023, ECO 2013 and ECO 3411. The uses of economic analysis in economic decision making and business policy formulation.
- ECS 4003** **BA 3(3,0)**  
**Comparative Economic Systems:** PR: ECO 2023 and ECO 2013. An analysis of the fundamental institutions of the American economic system with those of socialist and command economies. Emphasis is placed on performance criteria and economic modeling.
- ECS 4013** **BA 3(3,0)**  
**Economic Development:** PR: ECO 2023 and ECO 2013. The study of problems, theories and issues of economic development with reference to the third world.
- EDE 3942** **ED 3(0,14)**  
**Junior Student Teaching—Elementary:** PR: EDG 4341. Half-time student teaching assignment in an elementary school under the supervision of a certified classroom teacher.
- EDE 3943** **ED 3(0,14)**  
**Junior Student Teaching—All K-12 Majors:** PR: EDG 4341. Junior year student teaching under the supervision of a certified teacher. Half in Elementary, half in Secondary.
- EDE 4937** **ED 3(3,0)**  
**Drug Abuse Education:** PR: C.I. Drug abuse in contemporary society. Objectives, content, resources, and techniques of drug abuse education.
- EDE 4943** **ED 7(0,30)**  
**Senior Student Teaching—Elementary:** PR: EDE 3942 or EDE 3943. Senior year student teaching in an elementary school under the supervision of a certified classroom teacher.
- EDE 5541** **ED 3(3,0)**  
**Individualized Instruction in the Elementary School:** PR: Regular Certificate of C.I. Study of basic philosophy, organizational patterns, techniques, materials, and activities related to individualizing instruction in the elementary school classroom.
- EDF 3603** **ED 3(3,0)**  
**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 4003** **ED 3(3,0)**  
**Overview of Education:** A brief analysis of the American educational system; focusing on social, political, economic and intellectual development through an internal atmosphere of interaction and discussion.
- EDF 4214** **ED 3(3,0)**  
**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.

- EDG 4324** **ED 5(5,0)**  
**Teaching in the Schools:** PR: Teaching Strategies or C.I. Selected dimensions of teaching and teaching skills; exceptional children; classroom management; school organization; professional ethics; parent-teacher interaction; reading in the content areas; community resources.
- EDG 4341** **ED 5(5,0)**  
**Teaching Strategies:** Analysis of the learning environment; emphasis on planning for instruction, media, and materials development; measurement and evaluation.
- EDG 4941** **ED 1-8(0,1-8)**  
**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.
- EDP 3004** **AS 3(3,0)**  
**Educational Psychology:** PR: PSY 2013. Application of psychological principles and research methods to classroom behavior and learning.
- EDS 5356** **ED 3(2,1)**  
**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** **ED 3(3,0)**  
**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** **ED 3(3,0)**  
**Programs 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; new curricula. Concurrent laboratory experiences.
- EEC 5206** **ED 3(3,0)**  
**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** **ED 4(4,0)**  
**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 4210** **ED 4(4,0)**  
**Teaching 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** **ED 4(4,0)**  
**Curriculum and Programmatic Adaptations, E.H.:** PR: Senior standing. Development of highly specialized techniques and materials to be used with exceptional students.
- EEL 3122C** **EN 3(3,0)**  
**Electrical Networks:** PR: EGN 3373C and MAP 3302. Analysis and design of linear circuits, transients, network function. Laplace transform.
- EEL 3307C** **EN 4(3,3)**  
**Electronic Engineering:** PR: EGN 3375 and MAP 3302. Electronic devices and circuits design including small signal amplifiers, and switching circuits.
- EEL 3341C** **EN 3(2,3)**  
**Introduction to Digital Circuits:** PR: COP 2510 and PHY 2041. Logic gates, memory devices, combinational and sequential subsystems. Karnaugh Maps. Intended primarily for computer science majors.
- EEL 3470** **EN 3(3,0)**  
**Electromagnetic Fields:** PR: EGN 3373L and MAP 3302. Introduction to electric and magnet fields and electromagnetic waves.
- EEL 3552** **EN 4(3,3)**  
**Signal Analysis & Communications:** PR: EEL 3122C. Signal theory. Fourier series and integral. Design of modulation systems.
- EEL 4308C** **EN 4(3,3)**  
**Semiconductor Devices:** PR: EEL 3307C and EGN 3363. Semiconductors with uniform and non-uniform impurity distributions; impurity diffusion, analysis of the p-n junction. Junction and metal-oxide FET and other devices.
- EEL 4309C** **EN 3(2,3)**  
**Active Circuits:** PR: EEL 3307, CR: EGN 4714. Integrated circuit fabrication and characteristics. Feedback amplifier types, performance and stability. Introduction to operational amplifier design and application.

- EEL 4342C** EN 4(3,3)  
**Introduction to Digital Circuits and Systems:** PR: EGN 3383 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 4343C** EN 3(2,3)  
**Sequential Circuits and Systems:** PR: EEL 4342C or C.I. Synchronous and asynchronous circuits, compatible states, hazards, races, and state equivalence and minimization techniques. Applications to design of synchronous sequential systems.
- EEL 4430C** EN 4(3,3)  
**Microwaves:** PR: EEL 3470. Microwave devices and systems and measurement techniques.
- EEL 4512C** EN 4(3,3)  
**Communication Systems:** PR: STA 3032, EEL 3552 and EEL 3307C. Information transmission, modulation, and noise; design and comparison of communication systems in the presence of noise.
- EEL 4570C** EN 3(2,3)  
**Data Communications Engineering:** PR: EEL 4701 or ECM 4504. Analysis, design and operation of Data Communications Systems. Applications in remote computing networks and process monitoring.
- EEL 4701C** EN 4(3,3)  
**Digital Systems Organization:** PR: EEL 4342C. The study of basic machine organization, operation, and subsystem integration. System investigation and design using a register transfer and control-sequence design language.
- EEL 4702C** EN 4(3,3)  
**Digital Systems Design:** PR: EEL 4701C or C.I. Continuation of EEL 4701C. Microprocessor and LSI based approaches to the design of digital systems. Current topics in the design of control communications, and display systems.
- EEL 4800C** EN 3(2,2)  
**Analog Computers:** PR: EGN 3373 and EGN 3703. Theory and operation of modern analog computer. Analysis and design of systems by simulation.
- EEL 5173** EN 3(3,0)  
**Signal and System Analysis:** PR: EEL 3122 or EEL 4714. Continuous and discrete dynamic models; emphasis on state variable models. Laplace, Z-transform and time domain solutions of dynamic model behavior. Real-time digital simulation. Sampling theory.
- EEL 5260** EN 3(3,0)  
**Electric Power Generation and Distribution:** PR: EGN 3375 or equivalent. Concept of complex power in single and three phase systems. Synchronous machines, power transformer, and transmission lines system design.
- EEL 5365** EN 3(3,0)  
**Introduction to Digital Systems:** PR: EEL 4342 or equivalent. Analysis and synthesis of combinational, synchronous and asynchronous sequential logic circuits. Introduction to controller design using a digital design language.
- EEL 5441** EN 3(3,0)  
**Coherent Optics Applications:** PR: PHY 3421 and EEL 3470 or C.I. Coherent optical radiation and propagation. Design and analysis of optical components and systems.
- EEL 5542** EN 3(3,0)  
**Random Processes:** PR: EEL 3122 and STA 3032. Elements of probability theory; random variables, and stochastic processes.
- EEL 5630** EN 3(3,0)  
**Digital Control Systems:** PR: EEL 5173 and EEL 4342. Real time digital control system analysis and synthesis. Digital compensation of control systems such as high accuracy positional control systems with encoder feedback sensors.
- EES 3104** EN 3(2,3)  
**Environmental Engineering Biology:** PR: EGN 3704. Principles of biology applicable to the engineering design and analysis of wastewater treatment, lake management, energy systems and water treatment.
- EES 4202** EN 3(2,3)  
**Chemical Process Control:** PR: EGN 3703. Engineering design, measurements, and analysis of chemical systems in environmental engineering to control treatment processes such as softening, coagulation, disinfection, scrubbing, neutralization and others.
- EES 4204** EN 3(2,3)  
**Biological Process Control:** PR: EGN 3703. Engineering design, measurements and analysis of biological systems in environmental engineering for water management, bio-energy products, wastewater treatment and others.
- EES 4404** EN 3(2,2)  
**Environmental Health:** PR: EGN 3704. Topics and design examples in industrial hygiene, occupa-



tional and radiological health hazards, and pollution effects, such as those due to air noise, solid wastes, etc.

**EES 5210** **EN 3(2,3)**

**Potable Water Treatment:** PR: EES 4202 and 4204. Engineering application of potable water chemistry involving coagulation, softening, filtration, corrosion, disinfection quality and drinking water.

**EEX 3010** **ED 3(3,0)**

**Orientation to Special Education:** PR: Junior standing. Definition, characteristics, theories, current trends, and controversies in the various categories of exceptional education.

**EEX 3102** **ED 3(3,0)**

**Language Development and Common Disorders:** PR: Junior standing. Interdisciplinary approach to language development, identification and remediation of common disorders.

**EEX 3221** **ED 3(3,0)**

**Assessment of Exceptional Learners:** PR: Junior standing. Diagnosis of learning problems of exceptional students; assessing performance and determining appropriate placement and programming.

**EEX 3241** **ED 4(4,0)**

**Methods for Academic Skills for Exceptional Students:** PR: Junior standing. Teaching strategies, plus types of teacher-made materials that apply to all categories, ages and levels of the exceptional population.

**EEX 3263** **ED 4(4,0)**

**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 4240** **ED 3(3,0)**

**Techniques for the Exceptional Adolescent-Adult:** A study of strategies, skills and alternative procedures when teaching adolescents and adults.

**EEX 4601** **ED 3(3,0)**

**Introduction to Behavioral Management:** PR: Senior standing. Study of management techniques based on behavioral management (applied behavioral analysis) principles for modifying the effective behavior of exceptional students.

**EEX 4933** **ED 3(3,0)**

**Organization and Communication Seminar in Special Education:** Techniques necessary to establish a class, ways to communicate effectively with significant others and time and stress management.

**EEX 5051** **ED 3(3,0)**

**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.

**EEX 5105** **ED 3(3,0)**

**Educational Implications for the Speech and Language Disorders of Exceptional Children:** PR: Regular Certificate or C.I. Identification, evaluation, interpretation, and planning appropriate learning experiences to aid exceptional children with speech, hearing, and language disorders.

**EEX 5215** **ED 3(3,0)**

**Psycho-educational Appraisal of Exceptional Children:** PR: Regular Certificate or C.I. Selection of performance objectives, diagnostic measures, prescriptive teaching programs, and progress evaluation procedures for individualizing instruction.

**EGC 5005** **ED 3**

**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** **ED 3(3,0)**

**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 1111C** **EN 2(1,3)**

**Engineering Graphics:** PR: Trigonometry. Spatial visualization, sketching and graphical presentation as a form of engineering communication. Engineering drawing, descriptive geometry, manipulation of vectors and graphical solution techniques.

**EGN 1380** **EN 4(4,1)**

**Chemical Foundations of Engineering:** PR: Satisfactory performance in one year of high school chemistry; CR: MAC 2154. Engineering applications of basic chemical concepts. Atomic and molecular structure, states of matter and their energies, chemical equilibria and reaction rates, organic compounds and industrial processes.

**EGN 1510** **EN 2(2,0)**

**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.

<b>EGN 2382</b>	<b>EN 3(3,1)</b>
<b>Engineering Concepts:</b> PR: MAC 3311. Introduction to the basic phenomena essential to understanding of engineering structures, machines, processes and systems. Primary emphasis on mechanics, materials behavior, and thermofluid mechanics phenomena.	
<b>EGN 3210</b>	<b>EN 3(3,0)</b>
<b>Engineering Analysis and Computation:</b> PR: MAC 3311. Engineering analysis and computation with structured constructs. Subscripted variables, subprograms, input/output. Batch processing and timesharing. Engineering applications will be emphasized.	
<b>EGN 3311</b>	<b>EN 3(3,0)</b>
<b>Engineering Analysis-Statics:</b> PR: EGN 2382 and MAC 3312. Fundamental concepts of mechanics including resultants of force systems, free-body diagrams, equilibrium of rigid bodies and analyses of structures.	
<b>EGN 3321</b>	<b>EN 3(3,0)</b>
<b>Engineering Analysis-Dynamics:</b> PR: EGN 3311 and MAC 3313. Kinematics and kinetics of particles and rigid bodies; mass and acceleration, work and energy and impulse and momentum.	
<b>EGN 3331C</b>	<b>EN 3(2,2)</b>
<b>Mechanics of Materials:</b> PR: EGN 3311; CR: MAP 3302. Concepts of stress and strain, Hooke's Law; strength and deflection of axial force members, shafts in torsion and beams in flexure; combined stress; stability of columns.	
<b>EGN 3343</b>	<b>EN 3(3,0)</b>
<b>Thermodynamics:</b> PR: EGN 3321 and MAP 3302. Work, heat and energy transformations. Relation of properties. Laws, concepts and modes of analysis common to all applications of thermodynamics in engineering.	
<b>EGN 3353C</b>	<b>EN 3(2,2)</b>
<b>Fluid Mechanics:</b> PR: MAP 3302; CR: EGN 3343. Basic principles of continuum fluid mechanics and transport concepts.	
<b>EGN 3363C</b>	<b>EN 3(2,2)</b>
<b>Structure and Properties of Materials:</b> PR: EGN 1380 and MAC 3312. Electrons and bonding, crystalline and non-crystalline solids, phase diagrams, phase transformations, plastic deformation, electrical and magnetic properties of materials.	
<b>EGN 3373</b>	<b>EN 3(3,0)</b>
<b>Principles of Electrical Engineering:</b> PR: EGN 3383; CR: MAP 3302. Fundamental laws of electrical circuits and circuit analysis fundamentals of electronics.	
<b>EGN 3375C</b>	<b>EN 3(2,3)</b>
<b>Electrical Devices and Systems:</b> PR: EGN 3373. Continuation of EGN 3373. Electronic circuits, devices, and systems.	
<b>EGN 3383</b>	<b>EN 3(3,1)</b>
<b>Electrical Science:</b> PR: EGN 2382; CR: MAC 3313. General concepts of electricity and magnetism; the development of fundamental laws of electrical engineering; the introduction of the basic circuit elements.	
<b>EGN 3613</b>	<b>EN 2(2,0)</b>
<b>Engineering Economic Analysis:</b> PR: ECO 2013 or C.I. Economic evaluation of engineering alternatives and design. Time value of money and economic impact of taxes, risk, depreciation.	
<b>EGN 3703</b>	<b>EN 3(2,2)</b>
<b>Systems Analysis:</b> PR: MAP 3302. Introduction to mathematical analysis of linear systems. Behavior of linear systems as manifested by characteristic functions. Introduction to Laplace transforms, matrices, and state variable techniques.	
<b>EGN 3704</b>	<b>EN 2(2,0)</b>
<b>Engineering and the Environment:</b> PR: EGN 1380 and MAC 3312. Process engineering for air, energy, water and land environment and the role of engineering in control of these environments.	
<b>EGN 4032</b>	<b>EN 2(2,0)</b>
<b>Professionalism, Practice and Ethics:</b> 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.	
<b>EGN 4033</b>	<b>EN 3(3,0)</b>
<b>Technology and Social Change:</b> 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.	
<b>EGN 4624</b>	<b>EN 3(3,0)</b>
<b>Engineering Administration:</b> 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.	
<b>EGN 4634</b>	<b>EN 2(2,0)</b>
<b>Operations Research:</b> PR: STA 3032. Mathematical methods of operations research; linear programming, techniques of optimization.	

- EGN 4714** **EN 3(3,0)**  
**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 4813** **EN 3(3,0)**  
**Science in History:** Examination of the reciprocal relations of science and society from ancient to recent times.
- EGN 4814** **EN 3(3,0)**  
**Engineering and Technology in History:** Important developments in engineering and technology and their effect on society and our socio-economic processes.
- EGN 4815** **EN 3(3,0)**  
**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 4823** **EN 3(3,0)**  
**Topics in Urban Development:** Production, distribution and consumption of various commodities. Engineering relationships to distribution, internal structure, function of urban developments. Inter-relationships of engineering, social, economic and cultural phenomena.
- EGN 4824** **EN 3(3,0)**  
**Energy and Society:** Investigation of available energy forms; energy resources versus requirements in an increasingly complex technological society; possible solutions and future predictions.
- EGN 4825** **EN 3(3,0)**  
**Environment and Society:** PR: C.I. Environmental factors of importance to people's interaction with the environment; engineering and non-engineering measures to insure improvement and maintenance of environmental quality. Not for Engineering students.
- EGN 4832** **EN 3(3,0)**  
**Computers, Cybernetics and Society:** The effects of computers and the cybernetic revolution of the individual and society. Effects of positive and negative feedback on biological, technological and social systems. Computers and their interactions with the human system.
- EGN 4843** **EN 3(3,0)**  
**Systems Modeling:** PR: COC 1100 or equivalent. Representation of man/machine systems through analytic and computer-based models. Case studies in the analysis and improvement of systems in industry, education and government.
- EGN 4844** **EN 3(3,0)**  
**Man and Machine:** The influence and interrelationship of invention and technical progress on the evolution of social forms and institutions.
- EGN 5034** **EN 3(3,0)**  
**Engineering and Public Works:** PR: C.I. The purposes, function, and role of engineering within public works.
- EGN 5035** **EN 2(2,0)**  
**Topics in Technological Development:** PR: C.I. Case studies of selected topics in the engineering and technological development of western civilization. The weight-driven clock, steam engine, electric power, radar, electronics, etc.
- EGN 5036** **EN 2(2,0)**  
**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.
- EIN 3106** **EN 3(3,0)**  
**Engineering Law:** PR: Junior standing. Influence of contract, property and tort law, upon engineering activities; contracts, agency, partnerships, corporations, liens and expert testimony. Patents and licensing.
- EIN 3315C** **EN 3(2,2)**  
**Work Measurement & Design:** CR: EGN 3613 or equivalent. Management standards for evaluation and control of man and man-machine systems. Flow and operations analysis, work measurement, job evaluations. Laboratory assignments.
- EIN 4116** **EN 3(3,0)**  
**Industrial Information Systems:** PR: COP 3215, EIN 4332. Study of computerized information systems applied in industrial environment. Emphasis on development of automated information systems for control of men, materials and equipment.
- EIN 4118** **EN 3(2,3)**  
**Industrial Engineering Applications of Computers:** PR: COP 3215. Survey of computer methods in industrial engineering practice. Topics include simulation, information systems, dedicated processors systems control. Lab exercises.
- EIN 4142** **EN 2(2,0)**  
**Industrial Engineering Senior Project Design:** PR: Senior standing. Capstone design course, application of IEMS techniques to real problems via case studies.

- EIN 4214** **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. **EN 3(3,0)**
- EIN 4243** **Human Engineering:** PR: Senior standing. Man-machine systems; design and conduct of human engineering studies. **EN 3(2,2)**
- EIN 4251C** **Automation:** PR: Senior standing in Engineering. Introduction to automation through mechanization, numerical control and computer assisted manufacturing. **EN 3(2,2)**
- EIN 4264** **Industrial Hygiene and Occupational Health:** Identification and analysis of health hazards in the industrial environment. occupational hazard control via engineering design and safety programs. **EN 3(3,0)**
- EIN 4332** **Industrial Control Systems:** PR: STA 3032, EGN 4634. Decision rules in industrial environment including forecasting, scheduling, ordering, quality and inventory control. **EN 3(2,3)**
- EIN 4364C** **Industrial Facilities Planning and Design:** PR: EIN 3315. Comprehensive design of industrial production systems including interrelationships of plant location, process design, and materials handling. Laboratory assignments. **EN 3(2,2)**
- EIN 4383** **Network Analysis:** PR: EGN 4634. Development, application and computerized analysis of networks for systems and control. Applications of CPM, PERT, GERT and maximal flow concepts. **EN 3(3,0)**
- EIN 4391C** **Manufacturing Engineering:** PR: EGN 3363, EGN 3331. Introduction to manufacturing engineering materials and processes with emphasis on broad spectrum of processes including casting, forming, joining, machining of metals, and non-metals and the design to manufacture relationship. **EN 3(2,2)**
- EIN 5117** **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. **EN 3(3,0)**
- ELD 4240** **Teaching the Learning Disabled:** 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)**
- ELD 4242** **Program Planning for Specific Learning Disabilities.** PR: Senior standing. Development of highly specialized techniques and materials to be used with exceptional students. **ED 4(4,0)**
- EMA 4413** **Electronic Properties of Materials:** PR: EGN 3363 and PSY 3101. Electronic processes in solids. Electrical, magnetic and optical properties of solids. Electron energies in solids. Superconducting materials. **EN 3(3,0)**
- EME 4006** **Utilizing Media and Library Resources:** PR: Junior standing, completion of Basic General Education requirements. Planning, producing, and utilizing media for effective presentation. Use of the library, resources, and services. Research methods and bibliographic skills. **ED 3(3,0)**
- EME 5208** **Media and Methods in Teaching:** PR: Regular Certificate or C.I. Practicum on various media in the classroom with emphasis on student film making and production. **ED 3(2,0)**
- EML 3106** **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)**
- EML 3234** **Mechanical Properties of Materials:** PR: EGN 3363. Microscopic treatment of the mechanical behavior of engineering materials, strengthening mechanisms, fracture, fatigue and creep. **EN 3(3,0)**
- EML 3236** **Structure and Properties of Alloys:** PR: EGN 3363. Relation of properties to microstructure of major ferrous engineering alloys. **EN 3(3,0)**
- EML 3262** **Kinematics of Mechanisms:** PR: EGN 3321. Graphical, mathematical, and computer-aided kinematics, analysis, and synthesis of basic mechanisms. **EN 3(2,3)**
- EML 3303** **Measurement Systems:** PR: EGN 3331, 3373. Application of system design concepts to measurement. Fundamental theory of static and dynamic measurements. Transducer principles and validation of experimental data. **EN 1(0,3)**

- EML 3502** **EN 3(3,0)**  
**Machine Design and Analysis:** PR: EGN 3331, EML 3262. Application of the principles of mechanics of materials to the design of mechanical elements.
- EML 4142** **EN 3(3,0)**  
**Heat Transfer:** PR: EGN 3353. Conduction, radiation, and convection heat transfer. Basic energy balances emphasized. Steady state and transient problems, analysis and design of simple heat exchangers.
- EML 4222** **EN 3(3,0)**  
**Vibration Analysis:** PR: EGN 3321, 3331. Undamped and damped vibration of single degree freedom systems. Forced vibration. Transient response. Multiple degree of freedom systems. Normal modes.
- EML 4272** **EN 3(3,0)**  
**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.
- EML 4411** **EN 3(3,0)**  
**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.
- EML 4412L** **EN 1(0,3,)**  
**Mechanical Engineering Laboratory:** PR: EML 3303; CR: EML 4142. Experimental studies of phenomena and performance of fluid flow, heat transfer, thermodynamic and mechanical power systems.
- EML 4505** **EN 3(2,3)**  
**Engineering Design:** PR: EML 3106, 3502. Application of the design process in the solution of a state of the art problem. Fluid, thermal or mechanical problems are considered.
- EML 4535** **EN 3(2,3)**  
**Computer-Aided Design:** PR: EML 3106, 3502. Introduction to computational methods in mechanical and thermal systems design.
- EML 4709** **EN 3(3,0)**  
**Intermediate Fluid Mechanics:** PR: EGN 3353, Continuation of EGN 3353. Application of fundamentals to boundary layers, compressible flows, potential flow theory, submerged bodies, and measurements.
- EML 5105** **EN 3(3,0)**  
**Statistical Thermodynamics:** PR: EGN 3343, PHY 3101. Statistical approach to thermodynamic concepts, laws, and methods of analysis. Generalized p-v-T data. Special systems.
- EML 5228** **EN 3(3,0)**  
**Acoustics:** PR: MAP 3302, PHY 3421. 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.
- EML 5271** **EN 3(3,0)**  
**Intermediate Dynamics:** PR: EGN 3321, 3331. Dynamics of particles, distributed mass systems, and rigid bodies from an advanced viewpoint. Virtual work. Lagrange's and Euler's equations. Hamilton's principle.
- EML 5416** **EN 3(3,0)**  
**Solar Energy Systems:** PR: EML 4142. Principles of solar energy thermal processes. Analysis and design of solar collectors and solar heating and cooling systems.
- EML 5451** **EN 3(3,0)**  
**Energy Conversion:** PR: EGN 3343 and PHY 3101. Unconventional methods of energy conversion; particular emphasis on fuel cells, thermoelectrics, thermionics, solar energy, photovoltaics and magnetohydrodynamics.
- EML 5453** **EN 3(3,0)**  
**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.
- EML 5455** **EN 3(3,0)**  
**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.
- EML 5609** **EN 3(3,0)**  
**Environmental Thermodynamics:** PR: EML 3106. Thermodynamics of the environment emphasizing analysis and design of thermal systems. Building heating and cooling load calculations and energy conservation technologies analyzed.
- EMR 4311** **ED 4(4,0)**  
**Teaching the Intellectually Disabled:** 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 4371** **ED 4(4,0)**  
**Curriculum Method and Materials for Retarded Persons:** PR: Senior standing. Development of highly specialized techniques and materials to be used with exceptional students.
- EMR 5051** **ED 3(3,0)**  
**Fundamental Concepts and Educational Procedures Related to Mental Retardation:** PR: Regular Certificate or C.I. A study of retardation groupings, educational and community provisions, history of services, and learning characteristics of EMR, PMR, TMR.
- ENC 1001** **AS 3(3,0)**  
**Basic Writing:** PR: C.I. A course in basic English writing to provide intensive practice in writing effective sentences and paragraphs. Students who fail to demonstrate proficiency in writing skills must successfully complete ENC 1001 before enrolling in ENC 1101.
- ENC 1010** **AS 3(3,0)**  
**Vocabulary Study:** Planned expansion of work skills joined with contextual practice.
- ENC 1101** **AS 3(3,0)**  
**Composition I:** Expository writing with emphasis on effective communication. Writing topics to be based on selected readings.
- ENC 1102** **AS 3(3,0)**  
**Composition II:** PR: ENC 1101. Frequent writing based on the analysis of short stories, dramas, poems, and a novel.
- Note on Freshman English Program:**  
ENC 1101 and 1102 must be taken before enrolling in any English course numbered above 1102.
- ENC 2290** **AS 1(1,0)**  
**Careers in Writing:** An examination of career opportunities in technical writing, emphasizing industrial, commercial, and governmental opportunities.
- ENC 3210** **AS 3(3,0)**  
**Professional Report Writing I:** PR: ENC 1102. Emphasis on clear expository writing of memoranda, reports and articles in the student's particular field.
- ENC 3241** **AS 3(3,0)**  
**Professional Report Writing II:** PR: ENC 1102. Instruction and practice in scientific writing including preparation of scientific reports in the student's particular field.
- ENC 3310** **AS 3(3,0)**  
**Writing Skills:** PR: ENC 1102. Intensive practice in description narration, exposition and argumentation; control of tone, mood, viewpoint, and level of diction. Applicable to article, essay, and short story writing.
- ENC 3311** **AS 3(3,0)**  
**Expository Writing:** PR: ENC 1102. Practice of expository writing directed to general reader.
- ENC 3341** **AS 3(3,0)**  
**Magazine Writing I:** PR: ENC 3310 or C.I. Structure and organization of articles, essays, profiles, and reviews, market analysis; data gathering—may be repeated for credit.
- ENC 4215** **AS 3(3,0)**  
**Techniques of Technical Publications:** Study of new publishing technology, stressing composition and printing; word processing, automated text processing, methods of reproduction. Introduction of graphics; style, format, layout, and boardwork. Should be taken concurrently with ENC 4294.
- ENC 4245** **AS 3(3,0)**  
**Writing from Engineering Documents:** Introduction to reading and interpretation of basic engineering charts: specs, vocabulary, design and the writing techniques necessary for clear translation.
- ENC 4280** **AS 1(1,0)**  
**Technical Vocabulary:** Review of dictionaries, articles, and in various technical fields. Recognition of specialized vocabulary. Familiarity with reading level indexes and standards.
- ENC 4293** **AS 3(3,0)**  
**Technical Documentation I:** Practice in translating highly technical information to organized documentation: hardware, software, military specifications. Theory of designing and organizing technical manuals. Preparation of proposals. Interview skills.
- ENC 4294** **AS 3(3,0)**  
**Technical Documentation II:** Practical application of editing theory to large ongoing projects from the student's particular field. Should be taken concurrently with ENC 4415.
- ENC 4295** **AS 3(3,0)**  
**Technical Documentation III:** Designing, writing, and illustrating manuals, e.g., repairs, maintenance or users. Project supervised by a member of a student's major department or technical editor of a corporation.
- ENG 3010** **AS 3(3,0)**  
**Practical Criticism:** PR: ENC 1102. Student evaluation of selected fiction, poetry and drama through practical exercises in literary criticism.
- ENG 5018** **AS 3(3,0)**  
**Literary Criticism:** PR: Graduate standing or C.I. Historical survey of major critics from classical antiquity to the modern era.

<b>ENG 5028</b>	<b>Rhetoric and Literature:</b> PR: Graduate standing or C.I. Investigates the development of written strategies of persuasion. Traces their relation to practical and imaginative literature. Applications to classroom teaching of literature and composition.	<b>AS 3(3,0)</b>
<b>ENL 2010</b>	<b>English Literature I:</b> PR: ENC 1102. Beowulf to 1660.	<b>AS 3(3,0)</b>
<b>ENL 3021</b>	<b>English Literature II:</b> PR: ENC 1102. From 1660 to 1870.	<b>AS 3(3,0)</b>
<b>ENL 3273</b>	<b>Survey of British Literature Since 1914.</b> PR: ENC 1102.	<b>AS 3(3,0)</b>
<b>ENL 3334</b>	<b>Shakespeare Texts and Film:</b> ENC 1102. An introduction to the art of William Shakespeare through comparative analysis of selected plays and their representation in film.	<b>AS 3(3,0)</b>
<b>ENL 4101</b>	<b>English Novel:</b> PR: ENC 1102. Analysis of major English novelists.	<b>AS 3(3,0)</b>
<b>ENL 4311</b>	<b>Chaucer:</b> PR: ENC 1102. The Canterbury Tales, Troilus and Criseyde, and other works.	<b>AS 3(3,0)</b>
<b>ENL 4330</b>	<b>Shakespeare Studies:</b> PR: ENC 1102. Reading, analysis, and discussion of Shakespeare's plays. May be repeated for credit.	<b>AS 3(3,0)</b>
<b>ENL 4341</b>	<b>Milton:</b> PR: ENC 1102. Paradise Lost, Paradise Regained, Samson Agonistes, shorter poems and selected prose.	<b>AS 3(3,0)</b>
<b>ENL 4353</b>	<b>18th Century Studies:</b> PR: ENC 1102. Reading, analysis and discussion of literature in English: 1660-1880. May be repeated for credit.	<b>AS 3(3,0)</b>
<b>ENL 4373</b>	<b>Modern British Literature:</b> PR: ENC 1102. Major writers of modern British literature.	<b>AS 3(3,0)</b>
<b>ENL 5176</b>	<b>Restoration and 18th Century English Drama.</b> PR: Senior standing or C.I.	<b>AS 3(3,0)</b>
<b>ENL 5226</b>	<b>Studies in Renaissance Non-Dramatic Literature:</b> PR: Senior standing or C.I. The Renaissance by an examination of the poetry and prose of its major figures.	<b>AS 3(3,0)</b>
<b>ENL 5236</b>	<b>The Age of Dryden and Pope:</b> PR: Senior standing or C.I. Prose, poetry, drama and literary traditions of British neoclassicism.	<b>AS 3(3,0)</b>
<b>ENL 5335</b>	<b>Studies in Shakespeare:</b> PR: Senior standing or C.I. A selection of representative plays with emphasis on Shakespeare's development as an artist: aesthetics of dramatic literature.	<b>AS 3(3,0)</b>
<b>ENL 5347</b>	<b>The Age of Milton:</b> PR: Senior standing or C.I. Emphasis on the non-dramatic works of John Milton. Selections from the non-dramatic works of other 17th Century figures.	<b>AS 3(3,0)</b>
<b>ENU 4005</b>	<b>Nuclear Reactor Engineering:</b> PR: ENU 4103. Nuclear concepts, and plant cycles for energy conversion. Application of thermodynamics, fluid mechanics, heat transfer, control theory and materials to nuclear reactor design.	<b>EN 3(3,0)</b>
<b>ENU 4103</b>	<b>Nuclear Engineering:</b> PR: EGN 3343 and PHY 3101. Introduction to the principles of nuclear engineering, nuclear chain reactions, reactor systems and control, health physics, radiation shielding and applications of nuclear energy.	<b>EN 3(3,0)</b>
<b>ENV 4119</b>	<b>Air Pollution:</b> PR: EGN 3704. Sources, causes, and effects of air pollution. Engineering standards, analysis, and design considerations.	<b>EN 3(2,2)</b>
<b>ENV 4355</b>	<b>Solid and Hazardous Wastes:</b> PR: EGN 3704 or C.I. Engineering design, planning, and analysis problems associated with storage, collection, processing, and disposal of solid and hazardous wastes.	<b>EN 3(3,0)</b>
<b>ENV 4404</b>	<b>Hydrology and Hydraulics:</b> CR: EGN 3353. Water resources, hydrologic cycle, runoff predictions, pipe flow, open channel flow, flow measurements, pumps, storage, and engineering design applications.	<b>EN 4(4,0)</b>
<b>ENV 4434</b>	<b>Environmental Engineering Systems Design:</b> PR: ENV 4404 and 4504 or C.I. Planning capacity and design of water distribution systems, sanitary sewerage, storm drainage systems, water and waste-water treatment plants, solid waste and atmospheric controls.	<b>EN 2(1,2)</b>

- ENV 4504** **Environmental Engineering—Process Design:** PR: ENV 4404. CR: ENV 4404. Water treatment and wastewater treatment design considerations with effluent and sludge handling, treatment and disposal. **EN 4(4,0)**
- ENV 4651** **Urban Systems Engineering:** PR: C.I. Theories and history of city development with administrative, planning, management and maintenance of municipal services. **EN 3(3,0)**
- ENV 5615** **Environmental Impact Assessment:** PR: C.I. Evaluation, estimating, and predicting the effects of structures, processes, and systems upon the environment and the effects of environmental changes upon human populations. **EN 3(3,0)**
- ENV 5625** **Water Resources Engineering:** PR: ENV 4404. Systems identification and solution to complex water allocation problems, and other hydraulic engineering designs and operations using economic analysis and operations research techniques. **EN 3(3,0)**
- ENY 4004C** **General Entomology:** PR: ZOO 2010C. Introduction to insects; their identification, biology and ecology. **AS 3(2,4)**
- ESE 3940** **Junior Student Teaching—Secondary Level:** PR: EDG 4341. Junior year student teaching in a secondary school under the supervision of a certified classroom teacher. **ED 3(0,14)**
- ESE 4943** **Senior Student Teaching—Secondary Level:** PR: ESE 3940 or EDE 3942. Senior year student teaching in a secondary school under the direction of a certified classroom teacher. **ED 7(0,30)**
- ESE 5214** **Secondary School Curriculum Improvement:** PR: Regular Certificate or C.I. Secondary School self studies for curriculum projects, accreditation reports, or staff development. **ED 3(3,0)**
- ESE 5335** **Teaching the Non-English Student:** PR: FLE 3063 or Bilingual and nonlinguistic instruction in curriculum areas and in English as a second language. **ED 3(3,0)**
- ESI 4144** **Engineering Applications of Computer Methods:** PR: COP 3215 CR: MAP 3302. Matrix algebra, matrix inversion, eigenvalue problem, numerical methods for solving simultaneous equations, differential equations, root solving and integration. **EN 3(3,0)**
- ESI 4234** **Engineering Reliability and Quality Assurance:** PR: STA 3032 or C.I. Design and management of reliability programs and quality assurance systems; mathematics of reliability. **EN 3(3,0)**
- ESI 4314** **Quantitative Techniques in Industrial Engineering:** PR: EGN 4634 and STA 3032. Extension of EGN 4634 and STA 3032 with primary emphasis on O.R. and statistical applications to industrial engineering problems. **EN 3(3,0)**
- ESI 4524** **System Simulation with Digital Computers:** PR: COP 3215 or equivalent. Methods and procedures for simulating large scale systems with digital computers. FORTRAN, CSMP and GPSS programming languages are used. **EN 3(3,0)**
- ESI 5575** **Mathematical Systems Theory II:** PR: C.I. Introduction to nonlinear analysis. Approximation methods of numerical solutions. Stability of non-linear systems. Systems examples to be taken from engineering, environmental science, and economics. **EN 3(3,0)**
- ESL 1141** **Basic Writing:** PR: C.I. A course in basic English writing, designed primarily for the international student, to provide intensive practice in writing effective sentences and paragraphs. **AS 3(3,0)**
- ETC 4410C** **Applied Structural Design I:** PR: ETG 4530. Design of mechanical and structural elements. Strength, fatigue, safety factors and code requirements. **EN 3(2,2)**
- ETC 4415** **Applied Structural Design II:** PR: ETC 4410. Design applications of continuous beams, single span frames, and tapered members. **EN 3(2,2)**
- ETE 3208** **Electronics in the Health Professions:** To provide students in the health professions with basic knowledge of electronic equipment associated with hospitals and laboratory use. **EN 2(2,0)**
- ETE 3422** **Electronic Communication:** PR: 10 hours solid state electronics. The study of active RF circuits and modulation/demodulation systems. Introduction to computer-aided design. **EN 4(3,2)**



<b>ETE 3632</b>	<b>EN 3(2,2)</b>
<b>Digital Circuits:</b> PR: 10 hours solid state electronics. Design of digital circuits using integrated circuits. Laboratory.	
<b>ETE 3663C</b>	<b>EN 4(2,4)</b>
<b>Microprocessor Electronics:</b> PR: ETE 4111 or equivalent. Introduction to the Electronics of Basic Microprocessing.	
<b>ETE 4111</b>	<b>EN 4(3,2)</b>
<b>Electricity and Electronics:</b> Basic principles of electric circuits and electronic amplifiers. Introduction to integrated circuits.	
<b>ETE 4122C</b>	<b>EN 3(2,2)</b>
<b>Linear Integrated Circuits:</b> PR: 10 hours of solid state electronics. Study of linear integrated circuits and design of electronic systems.	
<b>ETE 4161L</b>	<b>EN 2(0,4)</b>
<b>Senior Systems Laboratory:</b> PR: Senior standing and C.I. Experiments covering topics in electronics module. Use of latest integrated circuit function blocks.	
<b>ETE 4210C</b>	<b>EN 3(2,2)</b>
<b>Servomechanisms:</b> PR: ETE 4111. Analysis and design of servo devices and systems.	
<b>ETE 4326</b>	<b>EN 4(4,0)</b>
<b>Feedback Control:</b> PR: MAC 3253 or equivalent. Feedback control system analysis and design techniques, control system components, and applications to practical control systems.	
<b>ETE 4423C</b>	<b>EN 3(2,2)</b>
<b>Communication Systems II:</b> PR: ETE 3422 or equivalent. Analysis and design of advanced electronic communication systems.	
<b>ETE 4432</b>	<b>EN 3(2,2)</b>
<b>Antennas and Propagation:</b> PR: Differential and Integral Calculus. Basic theory and technology used in high frequency transmission lines and waveguides, propagation and radiation, antennas.	
<b>ETE 4541</b>	<b>EN 3(3,0)</b>
<b>Power Transmission:</b> PR: C.I. Analysis of transmission systems and components. Control, stability, fault and protection in power systems.	
<b>ETE 4562</b>	<b>EN 3(3,0)</b>
<b>Power Utilization:</b> PR: C.I. Analysis of the economic aspects of distribution and use of power in industry. Analysis of motors and generators.	
<b>ETE 4650</b>	<b>EN 4(3,2)</b>
<b>Microcomputer Electronics:</b> PR: ETE 3632 and a programming course or equivalent. Hardware analysis and design of solid state electronic microcomputers. Applications.	
<b>ETE 4661</b>	<b>EN 4(3,2)</b>
<b>Computer Systems:</b> PR: ETE 3632 or equivalent. Design and analysis of computational circuitry, memory, computer interfaces, displays, and I/O devices.	
<b>ETE 4735C</b>	<b>EN 3(2,2)</b>
<b>Electro-Mechanical Design:</b> PR: ETE 4111. Introduction to mechanical and electromechanical devices and their applications in industry.	
<b>ETG 3510</b>	<b>EN 4(4,0)</b>
<b>Applied Mechanics:</b> PR: MAC 1104 and 1114 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.	
<b>ETG 4530</b>	<b>EN 3(3,0)</b>
<b>Strength of Materials:</b> PR: ETG 3510 or C.I. Relationship between external forces and action of members of a structure. Topics include stress and strain, torsion, beams, columns, stress concentrations and fatigue.	
<b>ETI 3421C</b>	<b>EN 3(3,0)</b>
<b>Materials and Processes:</b> PR: MAC 1104 and 1114 or equivalent. Relation between structure and properties of metals, wood, ceramics and polymers. Testing and inspection, casting, forming and working of metals, heat treatment, and joining.	
<b>ETI 3440</b>	<b>EN 3(2,2)</b>
<b>Product Design:</b> Principles of layout and dimensions for production. Consideration of design factors, standards, specifications and codes with emphasis on productivity.	
<b>ETI 3651</b>	<b>EN 3(2,2)</b>
<b>Computer Methods in Industry:</b> PR: COP 1110 or equivalent. Industrial application of a high level (Fortran) language to various static, dynamic, electrical and economic problems.	
<b>ETI 3671</b>	<b>EN 2(2,0)</b>
<b>Technical Economic Analysis:</b> PR: Junior standing. Analysis of cost elements in technical operations. Basis for comparison of alternatives.	
<b>ETI 3690</b>	<b>EN 2(2,0)</b>
<b>Technical Sales:</b> Application of technical knowledge in sales and service. Relationship of technical sales organization to production, customers, and competitors.	

- ETI 4110** **Industrial Quality Control:** Fundamentals of industrial quality control. Technical specifications, measurements standards, inspection, and gaging. Process control techniques. **EN 3(3,0)**
- ETI 4611** **Plant Layout, Material Handling & Work Analysis:** Covers plant layout, material handling, space allocations, work simplification and methods. Improvements in manufacturing operations. **EN 3(2,2)**
- ETI 4650** **Process Planning and Estimating:** Estimating manufacturing and construction costs, materials and services, planning and control of operations with applications of CPM concepts. **EN 4(4,0)**
- ETI 4700** **Occupational Safety:** Accident prevention and the operation of an industrial safety program. Basic requirements of the Occupational Safety and Health Act standards. **EN 3(3,0)**
- ETM 3314** **Hydraulics and Hydrology:** PR: Junior standing. Applied hydraulics and hydrology including design of closed and open channel flow, rainfall, runoff, seepage, ground water, storage and impoundments, wells, etc. **EN 2(2,0)**
- ETM 4220** **Applied Energy Systems:** Introduction to solar energy systems, thermal and photovoltaic, bio-gas-methane gas systems. Applications to be stressed. **EN 2(2,0)**
- ETM 4310** **Applied Thermodynamics and Fluid Mechanics:** PR: MAC 3253 or equivalent. College Physics. Introduction to energy, work and thermal systems and processes. Flow through pipes, orifices and nozzles. **EN 4(4,0)**
- ETM 4403C** **Applied Kinematics:** PR: ETG 3510. Masses, motions, kinematics and dynamics of mechanisms. **EN 3(2,2)**
- ETM 4512C** **Applied Design of Machine Elements:** PR: ETG 3510 and 4530. Design of basic machine elements including cams, gears, bearings and coupling taking into account loads, stresses, and strength of materials. **EN 3(2,2)**
- ETM 4590** **Design Integration:** PR: ETI 3440. Project design involving planning, control, prototype construction, testing and evaluation. **EN 2(2,0)**
- ETM 4750** **Applied Air Conditioning:** PR: C.I. Analysis of body comfort, psychometrics, heat sources, cooling load, air distribution, duct sizing, control systems, and balancing. **EN 3(3,0)**
- EUH 2000** **Western Civilization I:** A survey of western civilization from ancient to 1648. **AS 3(3,0)**
- EUH 2001** **Western Civilization II:** A survey of western civilization from 1648 to present. May be taken before EUH 2000. **AS 3(3,0)**
- EUH 2545** **Introduction to Anglo-American Law:** PR: EUH 2000 and 2001 or C.I. A historical survey of the development of the principles and processes of the American law from its origins in English common law to the present. **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 3202** **Enlightenment and Religious Revival:** PR: EUH 2000 and 2001 or C.I. Science and political absolutism; the Enlightenment and the philosophies; secularism, cosmopolitanism and humanitarianism; the French Revolution; religious revival, and the beginning of romanticism. **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** **The Emergence of Modern Society, 1870-1930:** PR: EUH 2000 and 2001 or C.I. Europe in the era of modern technology, militarism, the First World War, Paris Peace Conference, popular culture, and new democratic institution east of the Rhine. **AS 3(3,0)**

- EUH 3281** **Second World War and Rebirth of Europe:** PR: EUH 2000 and 2001 or C.I. Origins of World War II; Hitler's "New Order," and resistance movements; Cold War; de-Stalinization of Russia; Sovietization of East Central Europe; Western reconstruction, and prosperity. **AS 3(3,0)**
- EUH 3401** **Ancient Greece:** PR: EUH 2000 and 2001 or C.I. Greek foundations of Western Civilization from Minoans and Mycenaeans to the Age of Alexander. Emphasis on achievements of Classical Age. **AS 3(3,0)**
- EUH 3412** **Ancient Rome:** PR: EUH 2000 and 2001 or C.I. Romans and their contributions to Western Civilization. Covers traditions of Roman Republic, Carthaginian Wars, Imperial Period. **AS 3(3,0)**
- EUH 3453** **Age of Revolution and Napoleon:** PR: EUH 2000 and 2001 or C.I. Cause and course of the revolution; the rise and fall of Napoleon; impact on the thought and action of Western Europe. **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 4462** **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 4464** **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 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 4503** **English History to 1485:** PR: EUH 2000 and 2001 or C.I. **AS 3(3,0)**
- EUH 4511** **British History: Tudor-Stuart Period:** PR: EUH 2000 and 2001 or C.I. A study of the Tudor-Stuart period, with particular emphasis on the civil/religious conflicts of the time. **AS 3(3,0)**
- EUH 4530** **British Empire and Commonwealth:** PR: EUH 2000 and 2001 or C.I. Development of the British Empire and Commonwealth since the American Revolution. **AS 3(3,0)**
- EUH 4571** **History of Russia to 1801:** PR: EUH 2000 and 2001 or C.I. Kievan 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)**
- EUH 4572** **History of Russia: 1801-1917:** PR: EUH 2000 and 2001 or C.I. Alexander I; Napoleonic Invasion, Revolutionary Movement; Russian Policy toward Central Asia and China; Great Reforms; Russo-Japanese War; Revolution of 1905; Constitutional Period; Triple Entente. **AS 3(3,0)**
- EUH 4573** **History of the Soviet Union: 1917-Present:** PR: EUH 2000 and 2001 or C.I. First War; 1917 Revolutions; Civil War; New Economic Policy; Stalin-Trotsky Struggle; Collectivization; Stalinist Purges; Second War; Post-Stalin Russia; Khrushchev; Sino-Soviet Relations. **AS 3(3,0)**
- EUH 4620** **European Great Powers: 1815-1914:** PR: EUH 2000 and 2001 or C.I. Congress of Vienna, Metternich's system Crimean War, unifications of Italy & Germany, the Bismarckian era, the alliance systems, & the outbreak of World War I. **AS 3(3,0)**
- EUH 4621** **War and International Politics in Europe, 1914 to Present:** PR: EUH 2000 and 2001 or C.I. The relationship of the European Great Power from the outbreak of WWI to the present. **AS 3(3,0)**
- EUH 5237** **Colloquium Europe from 1815-1848:** PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics in European history from 1815-1848. **AS 3(3,0)**
- EUH 5238** **Colloquium Europe from 1848-1914:** PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics in European history from 1848-1914. **AS 3(3,0)**

- EUH 5247** **Colloquium in Europe, 1919-1939:** PR: Senior standing or C.I. Selected topics in the historical literature of Europe from the Paris Peace Conference to the outbreak of the Second World War. **AS 3(3,0)**
- EUH 5285** **Colloquium in Europe since WW II:** PR: Senior standing or C.I. Selected topics in the historical literature of Europe from the end of WW II and the beginning of the Cold War to the present. **AS 3(3,0)**
- EUH 5517** **Colloquium in Tudor-Stuart England:** PR: Senior standing or C.I. Intensive reading and class discussion on selected topics during the Tudor-Stuart era. **AS 3(3,0)**
- EUH 5527** **Colloquium in 18th Century England:** PR: Senior standing or C.I. An examination of the literature of selected topics in Hanoverian Britain. **AS 3(3,0)**
- EUH 5579** **Colloquium in Soviet Russia:** PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics in Russian history, 1911-present. **AS 3(3,0)**
- EUH 5595** **Colloquium in Czarist Russia:** PR: Senior standing or graduate status. Selected topics on the literature of Russia under the Czars prior to 1917. **AS 3(3,0)**
- EUH 5608** **Colloquium European Intellectual History:** PR: Senior standing or C.I. Reading and class discussion of the literature on selected topics of European intellectual history. **AS 3(3,0)**
- EVS 3240** **Water Supply Systems:** Techniques applicable to technical projects dealing with resources, hydrology, treatment, transmission and distribution. **EN 3(3,0)**
- EVS 4110** **Remote Sensing of the Environment:** PR: GEO 1200 or C.I. Interpretation and application of remote sensor imagery to physical, economic and urban analysis. **EN 3(2,2)**
- EVS 4220** **Wastewater & Treatment Plant Analysis and Control:** PR: None. Techniques applicable to collection and distribution of wastewater, effluent and sludge. Lab analysis, control measure, and operation of water and wastewater treatment plants. **EN 4(3,2)**
- EVS 4362** **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. **EN 3(2,2)**
- EVS 4682** **Solid Waste Management:** Techniques applicable to solid waste composition, collection and disposal. Solid wastes programs, laws, rules and regulations. **EN 3(3,0)**
- EVT 3062** **Professional Role of the Vocational Teacher:** PR: EVT 3371 or C.I. **ED 3(3,0)**
- EVT 3311** **Preparation for Clinical Teaching in Vocational Education:** PR: EVT 3063 or C.I. Teacher competencies in planning for clinical instruction preparing self, students, and agency for clinical instructional activities. **ED 3(3,0)**
- EVT 3365** **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. **ED 4(4,0)**
- EVT 3367** **Evaluation of Vocational Instruction:** PR: EVT 3371 or C.I. Study, practice and achievement of competency in assessing student cognitive, affective, and psychomotor performance in vocational education. **ED 2(2,0)**
- EVT 3371** **Essential Teaching Skills in Vocational Education:** Study, practice, and achievement in selected essential teaching skills for beginning vocational instructors. **ED 3(3,0)**
- EVT 3562** **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. **ED 3(3,0)**
- EVT 3815** **Management of the Vocational Classroom and Laboratory:** PR: EVT 3371 or C.I. Organization and management of school facilities for instructional purposes and skill in providing for student health and safety. **ED 3(3,0)**
- EVT 4066** **Principles and Practices of Vocational Education:** PR: Regular Certification or C.I. Study of the history, structure, and current status of vocational education. Achievement of competency in applying principles of vocational education to contemporary instructional programs. **ED 2-4(2-4,0)**

- EVT 4368** **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. **ED 2-4(2-4,0)**
- EVT 5260** **Cooperative Programs in Vocational Education:** PR: Regular Certificate or C.I. Study of cooperative vocational programs, and achievement of competencies needed to establish, manage, and coordinate co-op program activities in all vocational areas. **ED 2-4(2-4,0)**
- EVT 5315** **Applied Clinical Teaching Techniques in Vocational Education:** PR: Regular Certificate or C.I. Study and practice of clinical teaching methods, development of student performance assessment instruments, planning clinical learning experiences, and record keeping. **ED 2-3(2-3,0)**
- EVT 5316** **Clinical Coordination for the Health Occupations Teacher:** PR: Regular Certificate or C.I. Development of clinical guidelines, resources, student schedules, and risk-management programs. Includes negotiating clinical contractual agreements and planning field supervision. **ED 2-3(2-3,0)**
- EVT 5561** **Student Guidance in the Vocational Program:** PR: Regular Certificate or C.I. Achievement of skills used by teachers as they gather student data, confer with students, and help students plan for employment or further education. **ED 2-3(2-3,0)**
- EVT 5564** **Student Vocational Organizations:** PR: Regular Certificate or C.I. Competencies needed by vocational teachers as they establish and supervise student vocational organizations in secondary and post-secondary schools. **ED 2-3(2-3,0)**
- EVT 5685** **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. **ED 2-4(2-4,0)**
- EVT 5817** **Management of Vocational Programs:** PR: Rank III Certificate or C.I. Study and achievement of selected competencies needed by vocational teachers, supervisors, and local administrators in the management of vocational education programs in the schools. **ED 2-4(2-4,0)**
- EXP 3204C** **Perception:** PR: PSY 3013, PSY 3214. Consideration of physical and psychological variables in perceptual phenomena. Lec.-Lab. **AS 4(2,2)**
- EXP 3304** **Motivation:** PR: PSY 2013. Psychological and physiological aspects of human motivation. **AS 3(3,0)**
- EXP 3404** **Basic Learning Processes:** PR: PSY 2013 and PSY 3214. Theories and research findings from basic laboratory investigation of learning phenomena. Lec.-Lab. **AS 4(2,2)**
- EXP 3513C** **Complex Human Learning:** PR: PSY 2013 and PSY 3214. Selected topics from theories and research on complex human learning and problem solving. Lec.-Lab. **AS 4(2,2)**
- EXP 5445** **Psychology of Learning and Motivation:** PR: DEP 5057 or C.I. Examination of theories and research concerning the acquisition and retention of behavior as well as motivational factors which influence learning and behavior. **AS 3(3,0)**
- FIL 3200** **Film Production:** Pre-production planning, shooting, and editing of film. **AS 4(2,2)**
- FIL 3300** **Film Documentary:** The uses and analysis of the non-fiction film. **AS 4(2,2)**
- FIL 4201** **Film Production II:** Advanced pre- and post-production techniques including sound mixing and dubbing. **AS 4(2,2)**
- FIN 3100** **Personal Finance and Investments:** PR: Junior standing. Fundamentals of managing and investing one's money and of acquiring, safeguarding and disposing of one's assets. Not usable for BSBA Degree credit. **BA 3(3,0)**
- FIN 3233** **Money and Banking:** PR: Junior standing and ECO 2013. Nature of money, commercial banking system, monetary theory and their relationship to the level of economic activity, and activities of the Federal Reserve and U.S. Treasury. **BA 3(3,0)**
- 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. **BA 3(3,0)**

- 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. **BA 3(3,0)**
- FIN 3403** **Business Finance:** PR: ACC 2021 or ACC 3003 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. **BA 3(3,0)**
- FIN 3453** **Financial Models:** PR: FIN 3403, ECO 3411. Mathematical models applied specifically to financial problems, including those models suitable for representation and solution on computers. **BA 3(3,0)**
- 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. **BA 3(3,0)**
- FIN 4430** **Asset Selection Management:** PR: FIN 3403. Decisions related to use of funds for working capital and fixed assets. **BA 3(3,0)**
- FIN 4431** **Financial Structure Management:** PR: FIN 3403. Funding decisions and the effects of these decisions on the value of the firm. **BA 3(3,0)**
- 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. **BA 3(3,0)**
- FIN 5405** **Financial Concepts:** PR: Acceptance into the graduate program, ACC 5004 and ECO 5055 and ECO 5413 or equivalents. Effects of financial decisions upon the firm, interrelationships of these effects and alternatives available to financial managers in making these financial decisions. **BV 3(3,0)**
- FLE 3063** **Foreign Language as Human Behavior:** PR: Or CR: LIN 3010 or C.I. Nature of language, language learning and teaching basic skills. Weekly laboratory. **ED 2(2,1)**
- FLE 3333** **Foreign Language Instructional Analysis:** EDG 4341. Objectives for a school curriculum and of methods and materials for teaching foreign language. **ED 4(3,2)**
- 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. **AS 1(1,0)**
- FRE 1100** **Elementary French Language and Civilization:** Designed to initiate the student to the major language skills; listening, speaking, reading and writing. **AS 3(3,1)**
- FRE 1101** **Elementary French Language and Civilization:** PR: FRE 1100 or equivalent. Continuation of FRE 1100. **AS 3(3,1)**
- FRE 1170** **Elementary French Study Abroad:** Elementary French language and civilization taught in the native environment. **AS 8(16,10)**
- FRE 2200** **Intermediate French Language and Civilization:** PR: FRE 1102 or equivalent. Development of language skills at the intermediate level, review of grammar, study of syntax, idiomatic expressions, study of French culture. **AS 3(3,1)**
- FRE 2201** **Intermediate French Language and Civilization:** PR: FRE 2200 or equivalent. Continuation of FRE 2200 with emphasis on French civilization. **AS 3(3,1)**
- FRE 2210** **Intensive French Conversation:** PR: One year of French or equivalent. Practical use of the language leading toward fluency and correctness in speaking. **AS 3(3,0)**
- FRE 2270** **Intermediate French Study Abroad:** PR: Elementary French. Intermediate French language and civilization taught in the native environment. **AS 8(16,10)**
- FRE 3240** **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. **AS 3(3,1)**

- FRE 3420** **AS 3(3,0)**  
**French Composition:** PR: FRE 2201 or equivalent. Development of skills in composition. This course may be repeated for credit. When repeated, credit will apply to general electives only.
- FRE 4421** **AS 3(3,0)**  
**Advanced French Conversation:** PR: FRE 3240. Advanced conversation on directed topics from various disciplines. Literature, art, psychology, philosophy, music, business and the sciences.
- FRE 4422** **AS 3(3,0)**  
**Advanced French Composition:** PR: FRE 3420. Readings and written limitations of modern literary styles in the form of themes, sketches, poems and original stories.
- FRE 4500** **AS 3(3,0)**  
**French Civilization and Culture:** PR: FRE 3240 or FRE 3420. A survey analyzing development of key elements of French life: its historical, artistic, intellectual, scientific, spiritual contributions to the world via readings, lectures, films and other media. Conducted in French.
- FRE 4780** **AS 3(3,0)**  
**French Phonetics and Diction:** PR: FRE 3240 or equivalent. French phonology with emphasis on phonic groupings.
- FRW 3100** **AS 3(3,0)**  
**Survey of French Literature I:** PR: FRE 2201 or equivalent. Main literary currents and works from the Middle Ages through the eighteenth century.
- FRW 3101** **AS 3(3,0)**  
**Survey of French Literature II:** PR: FRE 2201 or equivalent. Main literary currents and works of the nineteenth and twentieth centuries.
- FRW 3370** **AS 3(3,0)**  
**Short Stories of 18th, 19th and 20th Centuries:** PR: FRE 2201 or equivalent. Selected readings designed to increase reading speed and develop analytical abilities. Authors include: Voltaire, Maupassant, Flaubert, Camus and others.
- FRW 4310** **AS 3(3,0)**  
**Seventeenth Century French Theatre:** PR: FRW 3100. Corneille, Racine, and Moliere. A study of the lives and principal works of the authors.
- FRW 4440** **AS 3(3,0)**  
**French Literature of the Eighteenth Century:** PR: FRW 3100. The philosophical movement: Montesquieu, Vauvenargues, Voltaire, Diderot, Buffon.
- FRW 4460** **AS 3(3,0)**  
**French Romanticism:** PR: FRW 3100. Great poets and dramatists of the Romantic Movement: Hugo, Lamartine, Vigny, Musset and others.
- FRW 4462** **AS 3(3,0)**  
**Nineteenth Century French Literature:** PR: FRW 3101. Realism and naturalism.
- FRW 4480** **AS 3(3,0)**  
**20th Century French Literature:** PR: FRW 3101. Contemporary French drama. Authors: A. Jarry, Jules Romains, J. Giraudoux, J. P. Sartre, A. Camus, E. Ionesco, Samuel Beckett.
- FRW 4481** **AS 3(3,0)**  
**Twentieth Century French Literature:** PR: FRW 3101. Contemporary French novel.
- FRW 4820** **AS 3(3,0)**  
**Stylistics:** PR: FRE 3420 or equivalent. An intense study of textual criticism. An examination of the relationship between language and literature; explications and linguistic analysis of literary texts.
- GEB 3004** **BA 3(3,0)**  
**Management:** PR: Junior standing. The interdisciplinary application of the managerial functions of planning, organizing, leading and controlling. For Non-Business Majors ONLY.
- GEB 4351** **BA 3(3,0)**  
**Business in the International Environment:** PR: ECO 2013, 2023, ACC 2021 or 3003, FIN 3403, MAR 3023, MAN 3010. Provides an overall understanding of the nature, magnitude, and importance of the international business sector.
- GEO 1200** **EN 3(3,0)**  
**Physical Geography:** Basic physical elements of geography including climate, landforms, soils, natural vegetation, minerals and their integrated patterns of world distribution.
- GEO 3370** **EN 3(3,0)**  
**Resources Geography:** Analysis of basic principles and problems associated with development, use, conservation, and management of natural resources with special emphasis on the United States.
- GEO 3470** **AS 4(4,0)**  
**World Political Geography:** Analysis of factors which affect power relations among nations including area, location, political styles, ethnic divisions, and the politics of energy.
- GEO 3602** **AS 4(4,0)**  
**Urban Geography:** The city as a geographical phenomenon created by human effort, its historical development; patterns of land use as related to economic, sociological and political influences.

<b>GER 1005</b>	<b>AS 1(0,1)</b>
<b>German Diction:</b> This course is especially designed for music and voice students with an emphasis on musical terms, German songs and opera libretti.	
<b>GER 1100</b>	<b>AS 3(3,1)</b>
<b>Elementary German Language and Civilization:</b> Designed to initiate the student to the major language skills: listening, speaking, reading, and writing.	
<b>GER 1101</b>	<b>AS 3(3,1)</b>
<b>Elementary German Language and Civilization:</b> PR: GER 1100 or equivalent. Continuation of GER 1100.	
<b>GER 2200</b>	<b>AS 3(3,1)</b>
<b>Intermediate German Language and Civilization:</b> PR: GER 1101 or equivalent. Designed to continue development of language skills at the intermediate level, together with a review of grammar.	
<b>GER 2201</b>	<b>AS 3(3,1)</b>
<b>Intermediate German Language and Civilization:</b> PR: GER 2200 or equivalent. Continuation of GER 2200 with emphasis on German civilization.	
<b>GER 2210</b>	<b>AS 3(3,0)</b>
<b>Intensive German Conversation:</b> PR: One year of German or equivalent. Practical use of the language leading toward fluency and correctness in speaking.	
<b>GER 3240</b>	<b>AS 3(3,0)</b>
<b>German Conversation:</b> PR: GER 2201 or equivalent. Development of skills in conversation and comprehension through practice.	
<b>GER 3420</b>	<b>AS 3(3,0)</b>
<b>German Composition:</b> PR: GER 2201 or equivalent. Development of skills in composition.	
<b>GEW 3100</b>	<b>AS 3(3,0)</b>
<b>Survey of German Literature I:</b> PR: GER 2201 or equivalent. Main literary currents and works from the Middle Ages through the Nineteenth Century Romanticism.	
<b>GEW 3101</b>	<b>AS 3(3,0)</b>
<b>Survey of German Literature II:</b> PR: GER 2201 or equivalent. Main literary currents and works from Nineteenth Century Realism to the present.	
<b>GEW 3370</b>	<b>AS 3(3,0)</b>
<b>Short Story:</b> PR: GER 2201 or equivalent. German short prose works of the 19th and 20th centuries.	
<b>GLY 1000</b>	<b>AS 3(3,0)</b>
<b>Geology and its Applications:</b> Geologic applications and hazards including: gemstones, geothermal energy, fossil fuels, groundwater, sinkhole, beach erosion, landslides, earthquakes, "tidal" waves, volcanism.	
<b>GLY 1100</b>	<b>AS 3(3,0)</b>
<b>Historical Geology:</b> Lunar and planetary histories, evolution of earth's crust including drifting continents and mountain building, evolution of life as reconstructed from fossils.	
<b>GLY 4005</b>	<b>AS 3(2,2)</b>
<b>Rocks and Minerals:</b> PR: GLY 1000 or GLY 4006. Their identification and significance as indicators of geologic processes.	
<b>GLY 4006</b>	<b>AS 3(3,0)</b>
<b>Geology of Our National Parks and Monuments:</b> Unique geologic features preserved in our national park system and the processes that gave rise to these features.	
<b>HIS 4150</b>	<b>AS 3(3,0)</b>
<b>History and Historians:</b> PR: C.I. A study of European and/or American historiography. May be repeated once for credit.	
<b>HIS 4970</b>	<b>AS 3</b>
<b>Senior Thesis:</b> Original research paper available to advanced history majors, topics to be selected in consultation with a directing professor.	
<b>HLP 4460</b>	<b>ED 3(2,1)</b>
<b>Teaching Elementary School Health and Physical Education:</b> 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.	
<b>HSC 3081</b>	<b>HLTH 3(3,0)</b>
<b>Medical Self Assessment:</b> Development of clinical skills and understanding of one's health to encourage active participation of the individual in his own health care.	
<b>HSC 3152</b>	<b>HLTH 2(2,0)</b>
<b>Health Law:</b> Principles of law as applied to the health field with special reference to health practices.	
<b>HSC 3328</b>	<b>HLTH 3(3,0)</b>
<b>U.S. Health Care Systems.</b> 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.	
<b>HSC 3501</b>	<b>HLTH 2(2,0)</b>
<b>Interpretation of Clinical Tests:</b> PR: BCN 1023 and PCB 3703 or C.I. Introduction to laboratory tests emphasizing those relating to gas transport and enzymology.	



- HSC 3531** **Medical Terminology:** A study of the language of medicine and allied health specialties, including work construction, definitions and application of terms. **HLTH 3(3,0)**
- HSC 4024** **Health Care Needs of the Elderly:** Overview of the physical and emotional needs of the elderly including the institutional health care available. **HLTH 3(3,0)**
- HSC 4052** **Analysis of Instruction in Health Professions.** Development of teaching aids, audiovisuals, learning packets. Course development, questioning strategies, evaluation of didactic and clinical performance. **HLTH 3(3,0)**
- HSC 4055** **Curriculum Planning in the Health Professions:** Curriculum design and approval process for Health Science program. Curriculum design for professional, patient and consumer education. **HLTH 2(2,0)**
- HSC 4101** **Organization and Management for Health Agencies:** PR: Major or Minor in College of Health or C.I. Organization and management of health agency organizations and management procedures. **HLTH 3(3,0)**
- HSC 4302** **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. **HLTH 3(3,0)**
- HSC 4393** **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. **HLTH 3(3,0)**
- HSC 4411** **Epidemiology:** PR: STA 2014 or C.I. General concepts and scope; distribution of selected diseases; factors influencing health and disease in a population. **HLTH 3(3,0)**
- HSC 4511** **Fundamentals of Medicine I:** PR: ZOO 3733 and PCB 3703, or C.I. A study of the pathophysiology and treatment of specific human diseases. **HLTH 2(2,0)**
- HSC 4512** **Fundamentals of Medicine II:** PR: MRE 3000, C.I. A study of the nature, causes, and treatment of specific diseases. **HLTH 4(4,0)**
- 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. **AS 3(3,0)**
- HUM 2230** **Western Humanities II:** Continuation of HUM 2211, from the Renaissance through the Modern World. **AS 3(3,0)**
- HUM 3431** **The Classical World: Greece:** History and culture of Greece from the Minoan-Mycenaean to the Hellenistic age, with emphasis on contribution in art, literature and philosophy. **AS 3(3,0)**
- HUM 3432** **The Classical 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. **AS 3(3,0)**
- HUM 4302** **The Romantic Ideal in the Arts:** 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. **AS 4(4,0)**
- HUM 4303** **The Spiritual Ideal in the Arts:** 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. **AS 4(4,0)**
- 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. **AS 4-10**
- HUN 3011** **Human Nutrition:** Essentials of nutrition related to the life cycle, including the physiological, psychosocial and cultural aspects of nutrition and the inter-relationship with disease is emphasized. **HLTH 3(3,0)**
- INP 3004** **Industrial/Organizational Psychology:** PR: PSY 2013 and PSY 3204. Psychological principles of personnel selection, training, and administration; motivational methods for individuals and groups in organizations; use of behavioral science in helping organizations become more effective. **SS 3(3,0)**
- INP 3102** **Applied Psychology:** Applications of principles of psychology to personal adjustment, industry, and education. **AS 3(3,0)**

- INR 3002** **AS 4(4,0)**  
**International Relations—Theory and Practice:** Analysis of the fundamental principles and factors affecting interstate relations and their application to contemporary global developments.
- INR 3024** **AS 4(4,0)**  
**Nationalism: A Systematic Approach:** Theory and practice of modern nationalism as a world-wide political phenomenon including forms of political agitation, rebellions, and secessionist movements.
- INR 4035** **AS 4(4,0)**  
**International Political Economy:** The international politics of regional and global economic interdependence with emphasis upon North-South relations, the New International Economic Order, OPEC and multinational corporations.
- INR 4104** **AS 4(4,0)**  
**American Foreign and Defense Policy:** Development of American foreign and defense policy with emphasis on the role and policies of the United States in the contemporary world.
- INR 4224** **AS 4(4,0)**  
**Contemporary International Politics of Asia:** Examinations of the foreign policies of major and secondary powers in Asia, with particular attention to China and Japan.
- INR 4243** **AS 4(4,0)**  
**Contemporary 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.
- INR 4274** **AS 4(4,0)**  
**International Politics of the Middle East:** The external politics of the Middle East from a regional-global perspective with particular attention to the region's impact upon the relations of major powers.
- INR 4335** **AS 4(4,0)**  
**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.
- INR 4401** **AS 4(4,0)**  
**International Law I:** Introduction to the nature, solution, and sources of international law and such subareas as recognition of states and governments, expropriation, nationality, and aliens.
- INR 4402** **AS 4(4,0)**  
**International Law II:** PR: INR 4401 or C.I. Examination of various subareas of international law including maritime law, laws of the sea and seabed, air law, outer space, neutrality, and laws of war.
- ITA 1005** **HFA 1(1,0)**  
**Italian Diction:** This course is especially designed for music and voice students with an emphasis on musical terms, Italian songs and opera libretti.
- ITA 1100** **AS 3(3,1)**  
**Elementary Italian Language and Civilization:** Designed to initiate the student to the major language skills: listening, speaking, reading, and writing, in addition to an introduction to Italian culture.
- ITA 1101** **AS 3(3,1)**  
**Elementary Italian Language and Civilization:** PR: ITA 1100 or equivalent. Continuation of ITA 1100.
- ITA 1170** **AS 8(16,10)**  
**Elementary Italian Study Abroad:** Elementary Italian language and civilization taught in the native environment.
- ITA 2200** **AS 3(3,0)**  
**Intermediate Italian Language and Civilization:** PR: ITA 1101 or equivalent. Designed to continue development of language skills at intermediate level, plus a review of grammar, study of syntax, idiomatic expression, extensive readings and further study of Italian culture.
- ITA 2201** **AS 3(3,0)**  
**Intermediate Italian Language and Civilization:** PR: ITA 2200 or equivalent. Designed to continue development of language skills at intermediate level, plus a review of grammar and study of syntax with emphasis on Italian civilization.
- ITA 2210** **AS 3(3,0)**  
**Intensive Italian Conversation:** PR: One year of Italian or equivalent. Practical use of the language leading toward fluency and correctness in speaking.
- ITA 2270** **AS 8(16,10)**  
**Intermediate Italian Study Abroad.** PR: Elementary Italian. Intermediate Italian language and civilization taught in the native environment.
- JOU 3003** **AS 3(3,0)**  
**History of American Journalism:** Development of mass media, leading innovators and the media's role in the nation's history.

- JOU 3100** AS 4(2,2)  
**News Reporting:** PR: English proficiency examination and ability to type 30 wpm. Development of skills in newsgathering and writing for the mass media. Students must have minimum ability to type and pass the department language proficiency exam.
- JOU 3200** AS 4(2,2)  
**News Editing:** PR: English proficiency examination; minimum grade of C in JOU 3100; ability to type 30 wpm. Fundamentals of copy editing for printed media, including selection, processing and display of news.
- JOU 3600** AS 4(2,2)  
**Photojournalism:** PR: VIC 3001. Learning darkroom procedures in 35mm black-and-white photography.
- JOU 4104** AS 4(2,2)  
**Public Affairs Reporting:** PR: English proficiency examination and minimum grade of C in JOU 3100 and ability to type 30 wpm. Reporting on the activities of city, county and state government, courts and schools.
- JOU 4300** AS 4(2,2)  
**Feature Writing:** PR: English proficiency examination and a minimum grade of C in JOU 3100 and ability to type 30 wpm. Writing of feature articles for newspapers and magazines.
- JOU 4302** AS 3(1,2)  
**Editorial and Column Writing:** PR: English proficiency examination and a minimum grade of C in JOU 3100 and ability to type 30 wpm. Building the editorial page, backgrounding and interpreting the news.
- JOU 4305** AS 3(1,2)  
**Technical and Scientific Writing:** PR: English proficiency examination and a minimum grade of C in JOU 3100 and ability to type 30 wpm. Practice in gathering of materials for technical and scientific articles; digesting of technical information into more readable forms.
- JOU 4306** AS 3(1,2)  
**Critical Writing:** PR: English proficiency examination and a minimum grade of C in JOU 3100 and ability to type 30 wpm. Writing reviews of movies, plays, television program, concert, books and other cultural works.
- JOU 4310** AS 4(2,2)  
**Freelance Writing:** PR: English proficiency and evidence of satisfactory writing skills and ability to type 30 wpm. A study of the techniques and procedures of freelance writing, including the preparation of several manuscripts.
- JOU 4602** AS 4(2,2)  
**Color Photography for the Mass Media:** PR: JOU 3600. Taking pictures, photo essays in color; developing and printing via the Cibachrome process.
- JOU 4802** AS 3(3,0)  
**The Newspaper in the Classroom:** Study of the use of the newspaper as a teaching aid in the classroom. Designed for persons currently teaching or majoring in education.
- LAE 3335** ED 4(3,2)  
**English Instructional Analysis:** PR: EDG 4341. Course objectives for a school curriculum and methods and materials which have special application for teaching English.
- LAE 3414** ED 3(3,0)  
**Literature for Children:** PR: Phase I or C.I. General survey of books and materials; criteria for analysis and evaluation; types of books available considered in terms of interests, needs, and abilities of children.
- LAE 4314** ED 3(3,0)  
**Language Arts in the Elementary School:** PR: Phase I or C.I. Content, principles, materials and techniques involved in teaching, speaking, listening, writing, and spelling in the elementary school; organizing for instruction.
- LAE 4342** ED 3(3,0)  
**Teaching Language and Composition:** PR: EDG 4341. Techniques and methods in teaching of dialects, semantics, the various grammars. A survey of composition and rhetorical methods of selected authors.
- LAE 5464** ED 3(3,0)  
**Literature for Adolescents:** PR: Senior standing or C.I. Selecting and evaluating books for adolescents with emphasis on the use of literature in the development of young people.
- LAH 3021** AS 3(3,0)  
**Latin American History I:** PR: EUH 2000 and 2001 or C.I. The Colonial period.
- LAH 3022** HFA 3(3,0)  
**Latin American History II:** PR: EUH 2000 and 2001 or C.I. The national period.
- LAT 1100** AS 3(3,1)  
**Elementary Latin Languages and Civilization:** Designed to develop Latin language skills at the elementary level: listening, speaking, reading, and writing, in addition to an introduction to Roman culture.

<b>LAT 1101</b>	<b>AS 3(3,1)</b>
<b>Elementary Latin Language and Civilization:</b> PR: LAT 1100 or equivalent. Continuation of LAT 1100.	
<b>LEA 3001</b>	<b>AS 4(4,0)</b>
<b>Law and the Legal System:</b> A survey course designed to familiarize the student with the American legal system, ethical considerations, terminology, legal reasoning, and the role of the legal assistant.	
<b>LEA 3011</b>	<b>AS 4(4,0)</b>
<b>Legal Research and Writing:</b> PR: LEA 3001 or C.I. The student learns how to find and use material in a law library and how to write a legal memorandum and brief.	
<b>LEA 3101</b>	<b>AS 4(4,0)</b>
<b>Civil Practice and Procedure:</b> PR: LEA 3001 or C.I. The student becomes familiar with the Florida civil procedure before trial and acquires the ability to prepare basic pleadings.	
<b>LEA 3151</b>	<b>AS 4(4,0)</b>
<b>Compensation for Injuries (Torts):</b> PR: LEA 3001 or C.I. Theories governing liability for civil injuries not arising from contractual obligations; systems and procedures used in preparation, trial and appeal of Torts cases.	
<b>LEA 3201</b>	<b>AS 4(4,0)</b>
<b>Property and Real Estate Law:</b> PR: LEA 3001. Study of the law of real and personal property; real estate transactions and conveyances; closing procedures and title problems.	
<b>LEA 3601</b>	<b>AS 4(4,0)</b>
<b>Criminal Procedure:</b> PR: LEA 3001 or CCJ 2020 or C.I. Rules of criminal procedure with emphasis on Florida rules, including right to counsel, bail, search and seizure, arrest, identification, trial, and post-trial proceedings.	
<b>LEA 4106</b>	<b>AS 4(4,0)</b>
<b>Evidence:</b> PR: LEA 3001 and 3101 or C.I. An examination of statutes and cases that define rules of evidence for trial courts. Primary emphasis is on the Florida Evidence Code.	
<b>LEA 4204</b>	<b>AS 4(4,0)</b>
<b>Land Use and Environmental Law:</b> PR: LEA 3001, 3201. Study of the law relating to private and public restraints on land use, including planning, zoning, subdivision and building regulations, with emphasis on recent interpretations by judiciary for environmental protection.	
<b>LEA 4211</b>	<b>AS 4(4,0)</b>
<b>Estates and Trusts:</b> 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.	
<b>LEA 4301</b>	<b>AS 4(4,0)</b>
<b>Contracts and Agency:</b> 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.	
<b>LEA 4312</b>	<b>AS 4(4,0)</b>
<b>Florida Partnerships and Corporations:</b> Statutory requirements of Florida partnerships and corporations; creation and dissolution of business organizations, responsibilities of officers and basic rights of stockholders.	
<b>LEA 4315</b>	<b>AS 3(3,0)</b>
<b>Law and Procedure-Bureaucracy:</b> The study of public and quasi-public bureaucracies and of the functions and structure of the component units, particularly those units responsible for agency conformity with legal obligations and procedures.	
<b>LEA 4501</b>	<b>AS 4(4,0)</b>
<b>Domestic Relations Law:</b> 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.	
<b>LEA 4801</b>	<b>AS 4(4,0)</b>
<b>Administrative Law:</b> PR: LEA 3001 or PAD 3003 or MMC 4200. The law regarding governmental administrative agencies with emphasis on the administrative process, the administrative procedure act, and special problems of state administrative law.	
<b>LEA 5008</b>	<b>AS 3(1,2)</b>
<b>Legal Institutions:</b> PR: C.I. Overview of the American legal system including the court system, major areas of substantive law and principles of procedure.	
<b>LEA 5825</b>	<b>AS 3(1,2)</b>
<b>Consumer Rights and the Law:</b> PR: C.I. The development of the modern law of consumer rights and remedies available to today's consumer.	
<b>LEA 5937</b>	<b>AS 3(1,2)</b>
<b>Seminar in Contemporary Legal Problems:</b> PR: C.I. Analysis of current trends in legislation and court decisions and their significance to American society.	
<b>LEI 3434</b>	<b>ED 2(1,1)</b>
<b>Recreation and Intramurals:</b> Principles and techniques of general and school recreation programs.	
<b>LIN 1340</b>	<b>AS 3(3,0)</b>
<b>Grammar Review:</b> A systematic review of basic English grammar to improve clarity and accuracy in writing.	

- LIN 2701** **Psychology of Oral Communication:** Psychological principles involved in the communicative process with application to individuals and groups. **HLTH 3(3,0)**
- LIN 3010** **Principles of Linguistics:** An overview of the modern linguist's approach to language. Analytic methods of phonology, morphology, syntax. Brief systematic survey of dialectology, language acquisition and semantics. **AS 3(3,0)**
- LIN 3200** **English Phonetics and American Dialects:** Physiological description and visual notation of speech sounds; regional dialects of American English. **AS 4(3,1)**
- LIN 3710** **Foundations of Language:** This course is designed to explore contributions to language from disciplines of Biology, Neurology, Psychology & Sociology. **HLTH 3(3,0)**
- LIN 3710L** **Foundations of Language:** Students will have practical experience in analyzing children's language samples. **HLTH 1(0,2)**
- LIN 4020** **Anthropological Linguistics:** PR: ANT 3000 or ANT 3410. Survey of anthropological linguistic field techniques in non-native cultures and application of linguistic theories to study of socio-cultural systems. **AS 3(3,0)**
- LIN 4100** **History of the English Language:** PR: Sophomore standing. Study of the English language and its development from Anglo-Saxon to Modern. **AS 3(3,0)**
- LIN 4202** **Phonetics:** Study of the sounds of language from an articulatory perspective. **AS 3(3,0)**
- LIN 4341** **Modern English Grammar:** PR: Sophomore standing. Emphasis upon the analysis and comparison of traditional, structural and transformational grammar. **AS 3(3,0)**
- LIN 4612** **Black English:** PR: Sophomore standing. A study of the phonology, morphology and syntax of Black English. Provides an understanding of the implications of Black English in contemporary society. **AS 3(3,0)**
- 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. **HLTH 3(3,0)**
- LIN 4801** **Language and Meaning:** PR: Sophomore standing. A linguistic study of the nature of language, meaning, and the ways in which man uses language in various social, cultural, institutional, and professional settings. **AS 3(3,0)**
- 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 paralinguistics. **AS 3(3,0)**
- LIN 5705** **Psycholinguistics:** Foundations of language in affective consciousness and the human nervous system. Pragmatic analysis of word meaning and its precise scientific measurement. Implications for Communicative Disorders. **HLTH 3(3,2)**
- LIS 3016** **Introduction to Media Services:** Role and scope of media center. Major concepts, standards, trends, and media specialist functions emphasizes. **ED 3(3,0)**
- 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. **ED 3(3,0)**
- 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. **ED 3(3,0)**
- 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. **ED 3(3,0)**
- LIS 4428** **Utilization of Educational Media:** PR: C.I. Principles and practices of communication theory and its application in the classroom. Emphasis on utilization and operation of the various classroom media. **ED 3(3,0)**
- LIS 4453** **School Media Services:** PR: C.I. Planning activities and programs to assist teachers and students in **ED 3(3,0)**

utilizing the Media Center. Includes skills development, R/L/V guidance, promotion and inservice techniques. Lab TBA.

LIS 4510 ED 3(3,0)

**Development of Media Collections:** PR: C.I. Selection of policy and collection building of book and non-book media. Use of reviewing aids and media sources.

LIS 4540 ED 3(3,0)

**Interaction Techniques in Media Services:** PR: C.I. Interpretation skills and communication processes applied to working with administrators, teachers, parents, and students in the media program.

LIS 4601 ED 3(3,0)

**Reference Sources and Services:** PR: C.I. Development of skills in locating information and providing reference services.

LIS 4731 ED 3(3,0)

**Organization of Media and Information:** PR: C.I. Principles of informational science and bibliography. Methods of organizing and non-print media, with instruction in cataloging and classification using standard bibliographic tools.

LIS 5262 ED 3(3,0)

**Computer Applications in Instructional Technology:** Emphasis on the applications of the computer for the media specialist and instructional technologist.

LIS 5312 ED 3(3,0)

**Advanced Production Techniques:** Advanced skills in graphic, photographic, and audio production. Integration of media into instructional packages.

LIS 5454 ED 3(3,0)

**Administrative Principles in Media Centers:** Planning, organizing, directing, supervising and budgeting in school media center. Personnel, public relations, facilities design, and evaluation.

LIT 2110 AS 3(3,0)

**World Literature I:** PR: ENC 1102. Poetry, prose, and drama selected from ancient Hebrew, Greek, and Oriental literature and from that of Renaissance Europe.

LIT 3000 AS 3(3,0)

**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 AS 3(3,0)

**Literature of Modern Man:** PR: ENC 1102. Reading and discussion of types and forms of modern literature.

LIT 3082 AS 3(3,0)

**Continental European Fiction Since 1900:** PR: ENC 1102. A selection of significant works of fiction written in various languages during the present century, read in translation.

LIT 3120 AS 3(3,0)

**World Literature II:** PR: ENC 1102. Readings from Moller, Voltaire, Goethe, Pushkin, Balzac, Tolstoy, Ibsen, Mann, Kafka, Camus, and others.

LIT 3313 AS 3(3,0)

**Science Fiction:** PR: ENC 1102. An investigation of science fiction as a literary form, together with selected readings.

LIT 3383 AS 3(3,0)

**Women in Literature:** PR: ENC 1102. An investigation of attitudes toward women in literature. Selections from Shakespeare, Eliot, Flaubert, Ibsen, Freud, Lawrence, Hemingway, Albee, Freiden, Millet, Greer, and Steinem.

LIT 4312 AS 3(3,0)

**Fantasy:** PR: ENC 1102. A survey of the literature of fantasy with emphasis on such figures as C.S. Lewis.

LIT 4354 AS 3(3,0)

**Ethnic Literature in America:** Contributions of linguistic and ethnic groups of non-English origin to the literature of the United States.

LIT 4373 AS 3(3,0)

**Literature of the Bible:** PR: ENC 1102 or LIT 3000 or C.I. Literary forms in the Bible—narrative, poetic, and dramatic—and their reflection in modern literature.

LIT 5097 AS 3(3,0)

**Studies in Contemporary Fiction:** PR: Senior standing or C.I. Fiction in the last 20 years in the United States and Britain.

LIT 5366 AS 3(3,0)

**The Romantic Revolt (19th Century Literature):** PR: Senior standing or C.I. The romantic revolt in poetry and prose; English, American and Continental literature. 1798-1832.

LIT 5367 AS 3(3,0)

**The Experience of Realism:** PR: Senior standing or C.I. The development of realism in 19th Century British literature.

- MAA 4226** **AS 3(3,0)**  
**Introduction to Analysis I:** PR: MHF 2300 and MAC 3313 or C.I. Limits, sequences and continuity; differentiation and integration. Derivatives of integrals. Infinite series and convergence. The Balzano-Weierstrass Theorem and the Heine-Borel Theorem. Extensions in Euclidian n-space.
- MAA 4227** **AS 3(3,0)**  
**Introduction to Analysis II:** PR: MAA 4226 or C.I. Continuation of MAA 4226.
- MAA 5211** **AS 4(4,0)**  
**Advanced Calculus:** PR: MAC 3313 or C.I. Differential and integral calculus of functions of several variables. Vector differential calculus. Two and three dimensional theory of vector integral calculus. Infinite series. Emphasis on applications.
- MAA 5405** **AS 3(3,0)**  
**Techniques of Complex Variables:** PR: MAC 3313 or C.I. Analytic functions. Integration in the complex plane. Laurent series and residue calculus. Inversion of Laplace transformations. Conformal mappings. Applications in engineering and the physical sciences.
- MAC 1104** **AS 3(3,0)**  
**College Algebra:** PR: MAT 1033 or 2 years of high school algebra or C.I. Algebraic equations and inequalities in one variable. Functions and graphs. Polynomial, rational, exponential and logarithmic functions. Systems of equations.
- MAC 1114** **AS 3(3,0)**  
**College Trigonometry:** PR: MAT 1033 or 2 years of high school algebra or C.I. The circle arc length, circular functions, identities, inverse functions, applications to simple harmonic motion, function of angles, complete development of triangle solving.
- MAC 3233** **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 4(4,0)**  
**Applied Calculus:** PR: MAC 1104 and MAC 1114 or C.I. The differential and integral calculus with analytic geometry for rational, exponential, logarithmic and trigonometric functions with applications to engineering technology. Not open to students with credit in MAC 3233 or MAC 3311.
- 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.
- 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 4341. Study of course objectives for the high school curriculum and survey of methods and materials which have special application for teaching mathematics.
- MAE 3817** **AS 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 & concepts of number, geometry, and measurement; instructional materials. (Meets Elementary Education certification requirements.)
- MAE 5395** **ED 3(3,0)**  
**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** **ED 3(2,1)**  
**Laboratory Programs in Mathematics:** PR: Regular Certificate or C.I. Design and development of special materials and projects for mathematics independent study. Emphasis teaching and applying the metric system. (Meets certification requirements for secondary mathematics.)
- MAF 4501** **AS 3(3,0)**  
**The Family:** PR: SOC 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.
- MAN 3010** **BA 3(3,0)**  
**Management of Organizations:** PR: Junior standing, ACC 2021 or 3003, 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(3,0)**  
**Personnel Management:** PR: Junior standing, MAN 3010 or C.I. Systematic analysis of personnel functions in organizations.
- MAN 3504** **BA 3(3,0)**  
**Production/Operations Management:** PR: Junior standing, STA 3023. Introduction to the management of systems for the creation, distribution and maintenance of goods and services required for modern society.
- MAN 3705** **BA 3(3,0)**  
**Business Concepts:** PR: Junior standing. An introductory course in concepts, techniques, opportunities, decisions, and problems in American business. Not usable for BSBA credit.
- MAN 4120** **BA 3(3,0)**  
**Business and Society:** PR: MAR 3023, FIN 3403, MAN 3010. A study of the interrelationship between the institution of business and other institutions of our society.
- MAN 4150** **BA 3(3,0)**  
**Human Relations in Management:** PR: MAN 3010. The study of individual, interpersonal, group and intergroup problems in business organizations through the use of cases and experimental exercises.
- MAN 4201** **BA 3(3,0)**  
**Organization Theory:** PR: MAN 3010. Introduces the basic theoretical concepts of integrating both micro and macro approaches to effective management of organizations.
- MAN 4310** **BA 3(3,0)**  
**Personnel Management Issues:** PR: Junior standing, MAN 3301. An application-oriented course to give students in the area experiences generally reserved for practitioners in the field of personnel and labor relations.
- MAN 4401** **BA 3(3,0)**  
**Labor Relations Management:** PR: Junior standing, MAN 3301. The impact of employee organizations on labor relations, current problems, conflicts and trends; the development of managerial approaches to achieve labor-management cooperation.
- MAN 4420** **BA 3(3,0)**  
**Service Organization Management:** PR: MAN 3010 and MAN 3504. Study of the special characteristics, problems, and methods for managing service-oriented organizations.
- MAN 4590** **BA 3(3,0)**  
**Procurement Management:** PR: MAN 3010 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(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(3,0)**  
**Information Systems Analysis:** PR: Junior standing, MAN 3010, CAP 3001. Introduction to the fundamentals of management information systems development, needs analysis and systems requirements.
- MAN 4724** **BA 3(3,0)**  
**Implementing Information Systems:** PR: MAN 4722 and CAP 3001. Study of organizational information needs and systems for planning and control.



<b>MAN 4854</b>	<b>BA 3(3,0)</b>
<b>Management Science:</b> PR: MAN 3010 and MAN 3504 and ECO 3411 and CAP 3001. Study of the application of quantitative models and use of simulation in organizational systems.	
<b>MAN 5051</b>	<b>BA 2(2,0)</b>
<b>Management Concepts:</b> PR: Acceptance in MBA program. Theory and practice of managing organizations to include planning, organizational theory, human behavior and control.	
<b>MAN 5501</b>	<b>BA 2(2,0)</b>
<b>Introduction to Production/Operations Management:</b> PR: Acceptance into the graduate program and ECO 5413 or equivalent. Introduction to the fundamental concepts, processes and institutions involved in the production of goods and services required by modern society.	
<b>MAN 5830</b>	<b>BA 2(2,0)</b>
<b>Introduction to Management Information Systems:</b> 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.	
<b>MAP 3302</b>	<b>AS 3(3,0)</b>
<b>Differential Equations:</b> PR: MAC 3313 or C.I. Methods of solution for first order equations. Linear equations. Laplace transforms. Series solutions. Selected applications.	
<b>MAP 3401</b>	<b>EN 3(2,2)</b>
<b>Problem Analysis:</b> PR: MAC 1104 and MAC 1114 or equivalent. Applications of computational techniques to selected problems in the practice of engineering technology. Problems relating to specific option areas.	
<b>MAP 4363</b>	<b>AS 4(4,0)</b>
<b>Applied Boundary Value Problems I:</b> PR: MAP 3302 or C.I. Systems of linear equations. Fourier series. The eigenvalue problem of Sturm-Liouville. The method of Green's functions.	
<b>MAP 4364</b>	<b>AS 3(3,0)</b>
<b>Applied Boundary Value Problems II:</b> 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.	
<b>MAP 4411</b>	<b>AS 3(3,0)</b>
<b>Laplace Transforms:</b> PR: MAP 3302 or C.I. Laplace and Z transforms; solutions of ordinary and partial differential equations; application to circuit analysis and difference equations.	
<b>MAP 5426</b>	<b>AS 3(3,0)</b>
<b>Special Functions:</b> 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.	
<b>MAR 3023</b>	<b>BA 3(3,0)</b>
<b>Marketing:</b> PR: Junior standing. Study of functions, institutions and basic problems in marketing of goods and services in our domestic economy and abroad.	
<b>MAR 3303</b>	<b>BA 3(3,0)</b>
<b>Advertising Management:</b> PR: MAR 3023. Analysis of field of advertising; techniques, media, organization, and role or research; economic and social aspects of advertising.	
<b>MAR 3403</b>	<b>BA 3(3,0)</b>
<b>Sales Management:</b> PR: MAR 3023. An overview of the sales management process. Emphasis on sales program formulation and implementation.	
<b>MAR 3503</b>	<b>BA 3(3,0)</b>
<b>Consumer Behavior:</b> PR: MAR 3023. Analysis of the buying process, the psychological, social, and economic influences affecting consumer choice.	
<b>MAR 3613</b>	<b>BA 3(3,0)</b>
<b>Marketing Research:</b> PR: MAR 3023, ECO 3411. Study of research procedures and techniques for problem solving in marketing. Concepts are explored and the incorporation of information resources into the management function demonstrated.	
<b>MAR 4123</b>	<b>BA 3(3,0)</b>
<b>Product Management:</b> PR: MAR 3023. Components of product management including analysis, strategy formulation and implementation are examined.	
<b>MAR 4153</b>	<b>BA 3(3,0)</b>
<b>Retailing Management:</b> PR: MAR 3023. Analysis of the field of retailing. Emphasis on planning for profit through management, inventory control, etc.	
<b>MAR 4203</b>	<b>BA 3(3,0)</b>
<b>Marketing Channel Systems:</b> PR: MAR 3023. Marketing functions and relationships within marketing channel systems, primary focus on the needs for interorganizational cooperation and coordination between channel organizations.	
<b>MAR 4243</b>	<b>BA 3(3,0)</b>
<b>International Marketing:</b> PR: MAR 3023, GEB 4351, or C.I. Investigates strategy, policy and the variables in international marketing decisions.	

- MAR 4703** **Contemporary Marketing Issues:** PR: Senior standing, marketing major, C.I. Cultural, social, political, economic, and competitive developments and their effects upon marketing activities. **BA 3(3,0)**
- MAR 4713** **Marketing Strategy:** PR: Senior standing and marketing courses completed or C.I. Marketing problems are explored with emphasis on strategy formulation and integrative marketing decision making. **BA 3(3,0)**
- MAR 4722** **Marketing Management:** PR: MAR 3023 and any one additional MAR course or C.I. Operational framework exploring the analysis, planning and control activities of marketing. **BA 3(3,0)**
- MAR 5055** **Marketing Concepts:** PR: Acceptance into the graduate program. Study of functions, institutions and basic marketing of goods in the U.S. economy. **BA 3(3,0)**
- MAR 5941** **Small Business Consulting:** PR: ACC 2001, 2021, ECO 2023, 2013, MAN 3010, MAR 3023, or graduate status. Provides students opportunity to apply knowledge learned in classroom to real business situations. Open undergraduate majors in the College of Business Administration with approval of the department chairman. **BA 3(3,0)**
- MAS 3103** **Linear Algebra:** PR: MHF 2300 or C.I. A study of finite dimensional vector spaces and linear transformations. **AS 4(4,0)**
- MAS 3113** **Matrices:** PR: MAC 3312 or C.I. Properties of real and complex matrices. Solutions of systems of equations. Linear transformations including a discussion of range and eigenvectors. Matrix functions. Quadratic forms. **AS 4(4,0)**
- 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. **AS 3(3,0)**
- MAS 4153** **Vector and Tensor Analysis:** PR: MAC 3313 or C.I. Vector calculus. The theorems of Green, Gauss and Stokes. Introduction to tensors. Application in engineering and physical sciences. **AS 3(3,0)**
- MAS 4301** **Algebraic Structures:** PR: MHF 2300 or C.I. An introduction to groups, rings and fields. **AS 3(3,0)**
- MAT 1033** **Intermediate Algebra:** PR: MAT 1024 or one year of high school algebra or C.I. Linear and quadratic equations, systems of equations, inequalities, exponents, radicals and logarithms. **AS 3(3,0)**
- MCB 3013C** **General Microbiology:** PR: A college course in chemistry and in basic biological sciences. Fundamentals of microbiology, including microbial structure and function, metabolism, growth, genetics, virology environmental control, ecology, pathogenicity; and laboratory techniques. **AS 4(3,4)**
- MCB 3203C** **Pathogenic Microbiology:** PR: MCB 3013C or C.I. Microorganisms producing disease in man and other animals; means of transmission: Protection against disease. **AS 4(3,4)**
- MCB 4114C** **Microbial Systematics and Diagnosis:** PR: MCB 3013C, MCB 3203C. Microbial classification, rules of taxonomy, and nomenclature. Techniques for identifying non-pathogens and bacteria pathogenic to man. **AS 4(3,3)**
- MCB 4404C** **Microbial Metabolism:** PR: MCB 3013C and BCH 4054. Interrelationship between cellular structure function and genetic traits in microorganisms. The interaction between microorganisms and their nutritional environment. **AS 4(3,3)**
- MCB 4603C** **Environmental Microbiology:** PR: PCB 3043 and MCB 3013C. Interrelationships between the biological activities of microorganisms and their terrestrial and aquatic environments. **AS 4(3,3)**
- MCB 5205** **Infectious Process:** PR: MCB 3013C or C.I. Discussion of current theories of the infectious process and the response of host cells and tissue to infection. **AS 3(3,0)**
- MCB 5505C** **Virology:** PR: MCB 3013C and BCH 4054. Nature of viruses and Rickettsiae, including their structure, propagation, isolation and identification. **AS 3(2,3)**
- MET 3002** **Fundamentals of Meteorology and Climatology:** PR: MAT 1033 or C.I. Studies of the physical processes that determine the climate of a region. The methods of measurement and use of meteorological parameters. **EN 3(3,0)**

- MET 5710** **Meteorology for Engineers:** PR: MAC 3313. Studies of the atmospheric processes from physical thermodynamics and synoptic viewpoints. **EN 3(3,0)**
- MGF 1124** **Principles of Mathematics:** PR: Two years of high school mathematics or C.I. Selected topics in mathematics with primary emphasis on developing conceptual understanding and broadening insight into mathematics. Not intended for students in business, engineering or science. **AS 3(3,0)**
- MGF 1202** **Finite Mathematics:** PR: MAT 1033 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. **AS 3(3,0)**
- MHF 2300** **Logic and Proof in Mathematics:** PR: Two years of high school algebra and one year of geometry or C.I. Basic mathematical logic. Methods of proof in mathematics. Application of proofs to elementary mathematical structures. **AS 3(3,0)**
- MHF 3104** **Boolean Algebra:** PR: MAC 3312 or C.I. Axiomatic development of Boolean algebra. The algebras of sets, logic and circuits as Boolean algebras. **AS 3(3,0)**
- MHF 4404** **History of Mathematics:** PR: MAC 3312 or C.I. A chronological study of the evolution of mathematical thought from primitive counting through modern ideas of the twentieth century. Recommended for prospective teachers in mathematics. **AS 3(3,0)**
- MHF 5306** **LOGIC:** PR: COT 4001 or MAS 3103 or MAS 4301 or C.I. Propositional and predicate calculus; completeness and compactness; undecidability of arithmetic. **AS 3(3,0)**
- MIS 1031** **Basic Military Science:** Organization of the Army and ROTC. Career opportunities, significance of military courtesy, discipline, customs, and traditions. Analysis of weapons, equipment and historical growth of Army. **US 2(2,1)**
- MIS 1400** **Fundamentals of Leadership Development:** Development of leadership abilities through practical exercises. Fundamentals of Land navigation will be discussed. Field training exercises will allow student practical application of leadership techniques. **US 2(2,1)**
- MIS 2120** **The Threat:** Comparison of the United States Army with foreign armies. To include current threat and potential use of nuclear, biological and chemical warfare. Introduction to Communications. **US 2(2,1)**
- MIS 2300** **Small Unit Tactics:** Small Unit tactics with emphasis on patrolling. Advanced map reading, including military geography, land navigation, use of the compass, and military symbols will be discussed. **US 2(2,1)**
- MIS 3301** **The Small Unit Leader:** Analysis of the leader's role in directing and coordinating efforts of small units in tactical operations. Includes geography, weapon systems, intelligence, and internal defense. **US 4(4,1)**
- MIS 3410** **Leadership Responsibilities:** A description of the role and responsibility of the small unit leader. Case studies in leadership and management. Principles of military instruction. **US 4(4,1)**
- MIS 4421** **Military Law:** A study of military law; the Army's maintenance management system; and a study of the obligations and responsibilities of the newly commissioned officer. **US 4(4,1)**
- MIS 4430** **Advanced Military Science:** Study of the decision-making process; staff organization, estimating process, and staff studies. Analysis of administration, personnel and Army supply system. **US 4(4,1)**
- MLS 3220C** **Techniques in Clinical Microscopy:** Analysis of human urine and other body specimens, chemically and microscopically; interpretation of abnormal results and their correlation to disease included. **HLTH 2(1,3)**
- MLS 3305** **Hematology:** PR: PCB 3703, CHM 2047 or C.I. Diagnostic procedures and morphologic interpretation; correlation of this data to disease. **HLTH 4(2,6)**
- MLS 4405** **Clinical Pathogenic Microbiology:** PR or CR: MCB 3203 C and admission to the professional phase of the MLS program. Isolation & pathogenic bacteria & serological methods; interpretation of abnormal results, with correlation to disease. **HLTH 4(2,6)**

- MLS 4420C** **HLTH 1(1,2)**  
**Clinical Mycology:** PR: Admission to the professional phase of the MLS program with C.I. Instruction and laboratory practice in the isolation and identification of fungi associated with mycotic infections of man.
- MLS 4431C** **HLTH 2(1,3)**  
**Clinical Parasitology:** PR: Admission to the professional phase of the MLS program or C.I. Instruction and laboratory practice in the examination and study of clinical material for the detection and identification of animal parasites.
- MLS 4550** **HLTH 4(2,6)**  
**Clinical Immunohematology:** PR: MLS 3549. Continuation of MLS 3549. Investigation of incompatible crossmatches; antibody identification, leukocyte antigens and identification procedures, problem solving.
- MLS 4625C** **HLTH 4(2,6)**  
**Advanced Clinical Chemistry I:** PR or CR: BCH 3313 and admission to the professional phase of the MLS program. Theory and practice in clinical chemistry techniques; carbohydrates, protein, electrophoresis, enzymes.
- MLS 4630C** **HLTH 4(2,6)**  
**Advanced Clinical Chemistry II:** PR: MLS 4625C. Autoanalyzer, flame photometry, blood gases, RIA.
- MLS 4830C** **HLTH 4(0,13)**  
**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.
- MLS 4831C** **HLTH 4(0,13)**  
**Clinical Practice II:** PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4830C.
- MLS 4832C** **HLTH 4(0,13)**  
**Clinical Practice III:** PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4831C.
- MLS 4833C** **HLTH 4(0,13)**  
**Clinical Practice IV:** PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4832C.
- MLS 4834C** **HLTH 4(0,13)**  
**Clinical Practice V:** PR: Admission to the professional phase of the MLS program or C.I. Continuation of MLS 4833C.
- MLS 4910** **HLTH 2(0,10)**  
**Clinical Research Projects:** PR: Admission to professional phase of Medical Technology Program or C.I. Individual projects, requiring library research and laboratory investigation, culminating in a written report and presentation.
- MMC 2000** **AS 3(3,0)**  
**Introduction to the Mass Media:** A description of the various media, their roles, responsibilities, and functions.
- MMC 4200** **AS 3(3,0)**  
**Mass Communication Law:** The legal rights and responsibilities of the mass media.
- MMC 4300** **AS 3(3,0)**  
**International Communication and the Foreign Press:** A study of the news communicating systems of the world.
- MMC 4602** **AS 3(3,0)**  
**Contemporary Media Issues:** Relationships between the mass media and society; examination of social and ethical issues and responsibilities of the media, including the media's relationship with government.
- MMC 4609** **AS 4(4,0)**  
**Opinion and the Mass Media:** Role of the media in influencing public attitudes on both the domestic and international levels.
- MMC 4700** **AS 3(3,0)**  
**Mass Media and Popular Culture:** An impact of mass media upon American culture past to present.
- MMC 4945** **AS 1-8(0,1-8)**  
**Communication Internship:** PR: C.I. Internship in radio, television, film, journalism, public relations, advertising and speech involving practicum at selected communication organizations for one quarter.
- MRE 3000** **HLTH 3(2,2)**  
**Medical Record Administration I:** PR: Acceptance into upper division limited access MRA program. An introduction to the profession.
- MRE 3110C** **HLTH 3(2,2)**  
**Medical Record Administration II:** PR: MRE 3000C or C.I. Problems oriented medical record; accreditation and certification; release of information, medical staff committees; record analysis.

- MRE 3202C** **HLTH 3(2,2)**  
**Coding Procedures:** PR: HSC 3531. Nomenclature and classification systems for health information retrieval.
- MRE 3800** **HLTH 1(0,4)**  
**Directed Practice I:** PR: MRE 3000. Interdepartmental experience in selected health care facilities. Quantitative and qualitative record analysis numbering and filing, etc. in the laboratory and selected health care facilities.
- MRE 4210C** **HLTH 3(2,2)**  
**Health Information Retrieval Systems:** PR: MRE 3000 or C.I. The development of health statistics, registers and indices and their application for quality assurance, research and management.
- MRE 4304** **HLTH 3(2,2)**  
**Medical Record Department Management:** PR: MRE 4210. Analysis of management functions in health care setting; in-service education; equipment demonstrations; problem-solving techniques; comprehensive exams.
- MRE 4312** **HLTH 2(2,0)**  
**Analysis of Medical Record Department Operations:** PR: MRE 4210. Forms analysis, design and control; budgeting; work distribution and simplification; other evaluation techniques.
- MRE 4400** **HLTH 4(2,4)**  
**Health Care Delivery Systems:** PR: MRE 3110. Medical record standards and procedures for long-term care; ambulatory care; home health care; HMO's and psychiatric facilities. Principles of consulting. Labs and field trips.
- MRE 4420** **HLTH 2(2,0)**  
**Health Legislation:** PR: MRE 4410C. Risk management, HSA certificate of need, utilization review principles, legislative update, quality assurance principles.
- MRE 4830** **HLTH 1(0,4)**  
**Directed Practice II:** PR: MRE 3800. Quantitative and qualitative analysis, census, microfilming, release of information, coding, indexing and abstracting, committees, performed in a health care facility.
- MRE 4831** **HLTH 1(0,4)**  
**Directed Practice III:** PR: MRE 4830, MRE 4400. Management of activities in DP I, II. Budget; audit; statistics; utilization review; computer applications. Assignment to a hospital and other health care facilities.
- MRE 4832** **HLTH 1(0,4)**  
**Directed Practice IV:** PR: MRE 4830 and HSC 3531. Laboratory experience in medical transcription. Basic principles and concepts of word processing.
- MRE 4835** **HLT 5(0,15)**  
**Management Affiliation:** PR: MRE 4831. Assignment to a selected health care facility serving in an administrative capacity under the direction of a Registered Record Administrator; lab exercises.
- MRE 4841** **HLTH 3(2,2)**  
**Health Data Processing:** PR: MRE 3000 and COC 1100. Analysis of systems for medical record data collection, retrieval, and interpretation. Hands-on experience.
- MRE 4850** **HLTH 2(2,0)**  
**Medical Record Research:** PR: MRE 4210, ENC 3210, COM 3110. Basic research topic design; completion of research project; oral presentations, grantsmanship.
- MTG 4212** **AS 4(4,0)**  
**Modern Geometrics:** PR: MAC 3311 or C.I. Sets of axioms and finite geometries, groups of transformations, Euclidian motions of 2-space and 3-space, convexity in 2-space and 3-space. Euclidean geometry of polygon and circle, constructible numbers, constructions and non-Euclidean geometry.
- MTG 4302** **AS 3(3,0)**  
**Introduction to Topology:** PR: MHF 2300 or C.I. Metric spaces, topological spaces, limit points, continuity, compactness, and connectedness.
- MUC 1101** **AS 1(1,1)**  
**Composition I:** Private and/or class instruction. Creative work in small forms. Open to non-music majors. May be repeated for credit.
- MUC 3203** **AS 1(1,0)**  
**Composition II:** PR: C.I. by audition. Creative work in large and small forms in the area of choral, instrumental and keyboard media. May be repeated for credit.
- MUE 3401** **ED 3(2,1)**  
**Music in the Elementary School:** Fundamental procedures for teaching elementary school music, stressing appropriate music materials and activities for different age groups; selected experience in music.
- MUE 4330** **ED 2(2,0)**  
**Elementary School Music Instructional Analysis:** PR: Junior standing. Organization & administra-

tion of instruction for comprehensive music education, K-6; instructional planning, techniques, & materials for elementary music education.

**MUE 4350** ED 2(2,0)

**Secondary School Music Instructional Analysis:** PR: MUE 4330 or C.I. Instructional planning, techniques and materials in middle junior high school classrooms; consideration of general music education program; evaluation materials and procedures.

**MUE 4480** AS 1(1,1)

**Marching Band Techniques:** PR: C.I. Principles of organizing and training marching bands: Planning, charting football shows, rehearsal problems. Guided observations. May be repeated for credit.

**MUE 5611** ED 3(3,0)

**Trends in Elementary School Music Education:** PR: MUE 3401 or equivalent, or C.I. Advanced study of instructional strategies and materials; integration of music education experiences with classroom activities; personal musical skill development; current research and new curricula.

**MUG 3101** AS 2(1,1)

**Basic Conducting:** Fundamental techniques and practice in conducting.

**MUG 3201** AS 2(1,1)

**Choral Conducting:** PR: MUG 3101. Fundamental principles of choral conducting and rehearsal techniques. May be repeated for credit.

**MUG 3301** AS 2(1,1)

**Instrumental Conducting:** PR: MUG 3101. Fundamental principles of instrumental conducting and rehearsal techniques. May be repeated for credit.

**MUG 4102** AS 2(1,1)

**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** AS 3(3,0)

**History and Literature:** PR: MUT 2112. In depth study of the development of Western musical styles from antiquity to present.

**MUH 4212** AS 3(3,0)

**History and Literature:** PR: MUT 3116. Continuation of MUH 4211.

**MUH 4218** AS 1(1,0)

**Review of Music History:** PR: C.I. A review of music history from Ancient Greece to the present.

**MUH 4340** AS 2(2,0)

**Seminar: Music to Bach:** PR: Satisfactory music history placement exam. Study of selected music from Dunstable through Bach and Handel. Emphasis on stylistic development and performance practices.

**MUH 4361** AS 2(2,0)

**Seminar: Music Since Bach:** PR: Satisfactory music history placement exam. Selected topics from the origins of Classicism through the nineteenth century. Emphasis on stylistic development and formal analysis.

**MUL 2011** AS 3(2,1)

**Enjoyment of Music:** Only non-music majors. Designed to develop an understanding of musical principles and techniques for listening to music.

**MUL 3401** AS 2(1,1)

**Piano Literature:** PR: Major in Music or C.I. Survey of stringed keyboard literature from the sixteenth century to the present with emphasis on technical, formal and performance problems.

**MUL 3402** AS 2(1,1)

**Piano Literature:** PR: MUL 3401. Continuation of MUL 3401.

**MUL 3622** AS 1(1,0)

**Song Literature:** PR: Major in Music or C.I. Survey of the development of the art song from the Middle Ages to the present with emphasis on technical, formal and performance problems.

**MUL 3624** AS 1(1,0)

**Song Literature:** PR: MUL 3622. Continuation of MUL 3622.

**MUL 3640** AS 1(0,2)

**Reading Chorus:** Open to all students. A survey of junior and senior high school choral literature.

**MUL 3670** AS 3(0,3)

**Opera Workshop:** PR: C.I. Study of expressive emotion in relation to musical theatre; staging and performance of prepared studies.

**MUN 3110** AS 2(0,3)

**Major Performing Organizations—Marching Band:** PR: Admission by audition. Preparation for appearance at football games and special occasions.

**MUN 3120** AS 1(0,3)

**Major Performing Organizations—Concert Band:** Open to all students with audition. Study and performance of music for large ensembles. May be repeated for credit.

- MUN 3140** **AS 1(0,3)**  
**Major Performing Organizations—Wind Ensemble:** Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.
- MUN 3280** **AS 1(0,3)**  
**Major Performing Organizations—Community Orchestra:** PR: C.I. Open to all students. Study and performance of music for large ensembles. May be repeated for credit.
- MUN 3310** **AS 1(0,3)**  
**Music Performing Organizations—Mixed Chorus:** Open to all students. Study and performance of music for large ensembles. May be repeated for credit.
- MUN 3340** **AS 1(0,3)**  
**Chamber Music Ensembles—Chorus:** Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.
- MUN 3341** **AS 1(0,3)**  
**Chamber Music Ensembles—Chorus:** Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit.
- MUN 3410** **AS 1(0,3)**  
**Chamber Music Ensembles—String:** PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.
- MUN 3420** **AS 1(0,3)**  
**Chamber Music Ensembles—Woodwind:** Open to all students. Study and performance of music for small ensembles. May be repeated for credit.
- MUN 3430** **AS 1(0,3)**  
**Chamber Music Ensembles—Brass:** Open to all students. Study and performance of music for small ensembles. May be repeated for credit.
- MUN 3440** **AS 1(0,3)**  
**Chamber Music Ensembles—Percussion:** 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)**  
**Chamber Music Ensembles—Piano:** 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,)**  
**Chamber Music Ensembles—Jazz/Pop:** PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.
- MUN 3711** **AS 1(0,3)**  
**Chamber Music Ensembles—Jazz/Pop:** PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit.
- MUS 1011** **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 3420** **AS 2(1,1)**  
**Music Calligraphy:** PR: MUT 3116. Materials and techniques of music copying. Practical application in preparing scores and parts for performance.
- MUS 3670** **AS 3(3,0)**  
**Music in Society:** Open to all students. Social functions of music and its relationship with other arts.
- MUS 4401** **AS 2(1,1)**  
**Studio Teaching:** PR: C.I. Management of the music studio; responsibilities and techniques of private instruction for the studio teacher; principles of psychology of music. May be repeated for credit.
- MUS 4905** **AS 1-4(0-4)**  
**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 1210** **AS 1(1,1)**  
**Ear Training I:** PR: MUT 2111 or C.I. Aural comprehension of elements of music-rhythm, melody, harmony, form. May be repeated for credit.
- MUT 1211** **AS 1(1,1)**  
**Ear Training II:** PR: MUT 1210 or C.I. Continuation of MUT 1210. May be repeated for credit.
- MUT 1221** **AS 1(1,1)**  
**Sight Singing I:** PR: MUT 2111 or C.I. Visual/oral comprehension of elements of music-rhythm, melody, harmony, form. May be repeated for credit.
- MUT 1222** **AS 1(1,1)**  
**Sight Singing II:** PR: MUT 1221 or C.I. Continuation of MUT 1221. May be repeated for credit.
- MUT 2111** **AS 3(3,0)**  
**Music Theory:** Open to all students. Writing, performance, analysis of music of various stylistic periods.

<b>MUT 2112</b>	<b>AS 3(3,0)</b>
<b>Music Theory:</b> PR: MUT 2111. Continuation of MUT 2111.	
<b>MUT 3011</b>	<b>AS 3(3,0)</b>
<b>Music Theory for Non-Majors:</b> Not open to students majoring or minoring in music. Develops fundamental skills in reading and writing music.	
<b>MUT 3116</b>	<b>AS 3(3,0)</b>
<b>Music Theory:</b> PR: MUT 2112. Continuation of MUT 2111-2112; writing, performance, and analysis of music or various stylistic periods.	
<b>MUT 3117</b>	<b>AS 3(3,0)</b>
<b>Music Theory:</b> PR: MUT 3116. Continuation of MUT 3116.	
<b>MUT 3311</b>	<b>AS 2(1,1)</b>
<b>Orchestration:</b> PR: MUT 3117. Characteristics of orchestral instruments. Orchestration studies of selected works. Original transcriptions for small and large ensembles.	
<b>MUT 4031</b>	<b>AS 1(1,0)</b>
<b>Review of Music Theory:</b> PR: C.I. A comprehensive review of harmonic and analytic skills. May be repeated for credit.	
<b>MUT 4275</b>	<b>AS 2(2,0)</b>
<b>Review of Sight-Singing and Ear Training:</b> An intensive review of aural skills. May be repeated for credit.	
<b>MUT 4344</b>	<b>AS 2(1,1)</b>
<b>Seminar in Music Arranging:</b> PR: MUT 3311. Scoring for choral and instrumental ensembles.	
<b>MUT 4431</b>	<b>AS 3(3,0)</b>
<b>Music Theory:</b> PR: MUT 3117. Continuation of MUT 3116-3117; writing, performance, and analysis of music of various stylistic periods.	
<b>MUT 5325</b>	<b>AS 2(2,0)</b>
<b>Arranging and Composing Music:</b> PR: Satisfactory placement tests in theory, sight-singing, and ear training. Arranging and composing music for instrumental and vocal ensembles. Some emphasis on compositional techniques of the 20th century.	
<b>MVB 1210</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Brass Class:</b> Private and/or class instruction in beginning brass playing.	
<b>MVB 1211</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Brasses (Trumpet):</b> Private and/or class instruction in beginning trumpet playing.	
<b>MVB 1212</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Brasses (Horn):</b> PR: MVB 1211 and MVB 1213 or MVB 1214 or MVB 1215. Private and/or class instruction in beginning horn playing.	
<b>MVB 1213</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Brasses (Trombone):</b> Private and/or class instruction in beginning trombone playing.	
<b>MVB 1214</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Brasses (Baritone Horn):</b> Private and/or class instruction in beginning baritone playing.	
<b>MVB 1215</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Brasses (Tuba):</b> Private and/or class instruction in beginning tuba playing.	
<b>MVB 2311</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Brasses (Trumpet):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVB 2312</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Brasses (Horn):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVB 2313</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Brasses (Trombone):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVB 2314</b>	<b>AS 2(1,1)</b>
<b>Principal Performance—Brasses (Baritone Horn):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVB 2315</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Brasses (Tuba):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVB 3321</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Brasses (Trumpet):</b> PR: MVB 2311 and competence determined by faculty jury. Continuation of MVB 2311. May be repeated for credit.	



<b>MVB 3322</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Brasses (Horn):</b> PR: MVB 2312 and competence determined by faculty jury. Continuation of MVB 2312. May be repeated for credit.	
<b>MVB 3323</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Brasses (Trombone):</b> PR: MVB 2312 and competence determined by faculty jury. Continuation of MVB 2313. May be repeated for credit.	
<b>MVB 3324</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Brasses (Baritone Horn):</b> PR: MVB 2314 and competence determined by faculty jury. Continuation of MVB 2314. May be repeated for credit.	
<b>MVB 3325</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Brasses (Tuba):</b> PR: MVB 2315 and competence determined by faculty jury. Continuation of MVB 2315. May be repeated for credit.	
<b>MVB 4331</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Brasses (Trumpet):</b> PR: MVB 3321 and competence determined by faculty jury. Continuation of MVB 3321. May be repeated for credit.	
<b>MVB 4332</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Brasses (Horn):</b> PR: MVB 3322 and competence determined by faculty jury. Continuation of MVB 3322. May be repeated for credit.	
<b>MVB 4333</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Brasses (Trombone):</b> PR: MVB 3323 and competence determined by faculty jury. Continuation of MVB 3323. May be repeated for credit.	
<b>MVB 4334</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Brasses (Baritone Horn):</b> PR: MVB 3324 and competence determined by faculty jury. Continuation of MVB 3324. May be repeated for credit.	
<b>MVB 4335</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Brasses (Tuba):</b> PR: MVB 3325 and competence determined by faculty jury. Continuation of MVB 3325. May be repeated for credit.	
<b>MVB 4341</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Brasses (Trumpet):</b> PR: MVB 4331 and competence determined by faculty jury. Continuation of MVB 4331. May be repeated for credit.	
<b>MVB 4342</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Brasses (Horn):</b> PR: MVB 4332 and competence determined by faculty jury. Continuation of MVB 4332. May be repeated for credit.	
<b>MVB 4343</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Brasses (Trombone):</b> PR: MVB 4333 and competence determined by faculty jury. Continuation of MVB 4333. May be repeated for credit.	
<b>MVB 4344</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Brasses (Baritone Horn):</b> PR: MVB 4334 and competence determined by faculty jury. Continuation of MVB 4334. May be repeated for credit.	
<b>MVB 4345</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Brasses (Tuba):</b> PR: MVB 4335 and competence determined by faculty jury. Continuation of MVB 4335. May be repeated for credit.	
<b>MVB 5251</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Brasses (Trumpet):</b> PR: C.I.	
<b>MVB 5252</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Brasses (Horn):</b> PR: C.I.	
<b>MVB 5253</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Brasses (Trombone):</b> PR: C.I.	
<b>MVB 5254</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Brasses (Baritone Horn):</b> PR: C.I.	
<b>MVB 5255</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Brasses (Tuba):</b> PR: C.I.	
<b>MVB 5351</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Brasses (Trumpet):</b> PR: C.I.	
<b>MVB 5352</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Brasses (Horn):</b> PR: C.I.	
<b>MVB 5353</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Brasses (Trombone):</b> PR: C.I.	
<b>MVB 5354</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Brasses (Baritone Horn):</b> PR: C.I.	
<b>MVB 5355</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Brasses (Tuba):</b> PR: C.I.	
<b>MVK 1111</b>	<b>AS 1(0,2)</b>
<b>Class Piano I:</b> Class instruction for beginning piano students. Not open to music majors whose major performing medium is piano. May be repeated for credit.	

<b>MVK 1121</b>	<b>AS 1(0,2)</b>
<b>Class Piano II:</b> PR: MVK 1111 or C.I. Not open to mus:c majors whose major performing medium is piano. May be repeated for credit.	
<b>MVK 1131</b>	<b>AS 1(0,2)</b>
<b>Class Piano III:</b> PR: MVK 1121 or C.I. Preparation for the piano proficiency examination. May be repeated for credit.	
<b>MVK 1141</b>	<b>AS 1(1,1)</b>
<b>Class Piano IV:</b> PR: Satisfactory piano proficiency examination and C.I. Individualized instruction. Open to non-music majors. May be repeated for credit.	
<b>MVK 1211</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Piano:</b> Private and/or class instruction in beginning piano playing.	
<b>MVK 1213</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Organ:</b> Private and/or class instruction in beginning organ playing.	
<b>MVK 2311</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Piano:</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVK 2313</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Organ:</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVK 3321</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Piano:</b> PR: MVK 2311 and competence determined by faculty jury. Continuation of MVK 2311. May be repeated for credit.	
<b>MVK 3323</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Organ:</b> PR: MVK 2313 and competence determined by faculty jury. Continuation of MVK 2313. May be repeated for credit.	
<b>MVK 4331</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Piano:</b> PR: MVK 3321 and competence determined by faculty jury. Continuation of MVK 3321. May be repeated for credit.	
<b>MVK 4333</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Organ:</b> PR: MVK 3323 and competence determined by faculty jury. Continuation of MVK 3323. May be repeated for credit.	
<b>MVK 4341</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Piano:</b> PR: MVK 4331 and competence determined by faculty jury. Continuation of MVK 4331. May be repeated for credit.	
<b>MVK 4343</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Organ:</b> PR: MVK 4333 and competence determined by faculty jury. Continuation of MVK 4333. May be repeated for credit.	
<b>MVK 4640</b>	<b>AS 1(1,0)</b>
<b>Piano Pedagogy I:</b> 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.	
<b>MVK 4641</b>	<b>AS 1(1,0)</b>
<b>Piano Pedagogy II:</b> PR: C.I. Continuation of MVK 4640. Emphasis on intermediate through advanced levels. May be repeated for credit.	
<b>MVK 5251</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Piano:</b> PR: C.I.	
<b>MVK 5253</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Organ:</b> PR: C.I.	
<b>MVK 5351</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Piano:</b> PR: C.I.	
<b>MVO 1214</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Recorder:</b> Private and/or class instruction in beginning recorder playing.	
<b>MVO 3114</b>	<b>AS 3(2,1)</b>
<b>Recorder I:</b> Open to non-music majors. Class instruction in beginning recorder playing.	
<b>MVO 3124</b>	<b>AS 2(1,1)</b>
<b>Recorder II:</b> Class instruction in advanced recorder solo and ensemble playing. PR: C.I. Open to music students and non-music students who have taken MVO 3114.	
<b>MVP 1211</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Percussion:</b> Private and/or class instruction in beginning percussion playing.	
<b>MVP 2311</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Percussion:</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	

<b>MVP 3321</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Percussion:</b> PR: MVP 2311 and competence determined by faculty jury. Continuation of MVP 2311. May be repeated for credit.	
<b>MVP 4331</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Percussion:</b> PR: MVP 3321 and competence determined by faculty jury. Continuation of MVP 3321. May be repeated for credit.	
<b>MVP 4341</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Percussion:</b> PR: MVP 4331 and competence determined by faculty jury. Continuation of MVP 4331. May be repeated for credit.	
<b>MVP 5251</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Percussion:</b> PR: C.I.	
<b>MVP 5351</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Percussion:</b> PR: C.I.	
<b>MVS 1210</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—String Class:</b> Private and/or class instruction in beginning string playing.	
<b>MVS 1211</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Strings (Violin):</b> Private and/or class instruction in beginning violin playing.	
<b>MVS 1212</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Strings (Viola):</b> Private and/or class instruction in beginning viola playing.	
<b>MVS 1213</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Strings (Cello):</b> Private and/or class instruction in beginning cello playing.	
<b>MVS 1214</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Strings (Bass):</b> Private and/or class instruction in beginning bass playing.	
<b>MVS 1216</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Guitar:</b> Private and/or class instruction in beginning guitar playing.	
<b>MVS 1876</b>	<b>AS 1(0,1)</b>
<b>Guitar I:</b> Open only to non-music majors. Class instruction in beginning guitar playing.	
<b>MVS 2311</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Strings (Violin):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVS 2312</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Strings (Viola):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVS 2313</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Strings (Cello):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVS 2314</b>	<b>AS 2(1,1)</b>
<b>Principle Performance I—Strings (Bass):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVS 2326</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Guitar:</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVS 2826</b>	<b>AS 1(0,1)</b>
<b>Guitar II:</b> Open to music students on non-music students who have taken Guitar I or C.I. Class instruction in advanced guitar solo and ensemble playing.	
<b>MVS 3321</b>	<b>AS 2(1,1)</b>
<b>Principal performance II—Strings (Violin):</b> PR: MVS 2311 and competence determined by faculty jury. Continuation of MVS 2311. May be repeated for credit.	
<b>MVS 3322</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Strings (Viola):</b> PR: MVS 2312 and competence determined by faculty jury. Continuation of MVS 2312. May be repeated for credit.	
<b>MVS 3323</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Strings (Cello):</b> PR: MVS 2313 and competence determined by faculty jury. Continuation of MVS 2313. May be repeated for credit.	
<b>MVS 3324</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Strings (Bass):</b> PR: MVS 2314 and competence determined by faculty jury. Continuation of MVS 2314 May be repeated for credit.	
<b>MVS 3326</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Guitar:</b> PR: MVS 2326 and competence determined by faculty jury. Continuation of MVS 2326. May be repeated for credit.	

<b>MVS 4331</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Strings (Violin):</b> PR: MVS 3321 and competence determined by faculty jury. Continuation of MVS 3321. May be repeated for credit.	
<b>MVS 4332</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Strings (Viola):</b> PR: MVS 3322 and competence determined by faculty jury. Continuation of MVS 3322. May be repeated for credit.	
<b>MVS 4333</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Strings (Cello):</b> PR: MVS 3323 and competence determined by faculty jury. Continuation of MVS 3323. May be repeated for credit.	
<b>MVS 4334</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Strings (Bass):</b> PR: MVS 3324 and competence determined by faculty jury. Continuation of MVS 3324. May be repeated for credit.	
<b>MVS 4336</b>	<b>AS 2(1,1)</b>
<b>Principle Performance III—Guitar:</b> PR: MVS 3326 and competence determined by faculty jury. Continuation of MVS 3326. May be repeated for credit.	
<b>MVS 4341</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Strings (Violin):</b> PR: MVS 4331 and competence determined by faculty jury. Continuation of MVS 4331. May be repeated for credit.	
<b>MVS 4342</b>	<b>AS 2(1,1)</b>
<b>Principle Performance IV—Strings (Viola):</b> PR: MVS 4332 and competence determined by faculty jury. Continuation of MVS 4332. May be repeated for credit.	
<b>MVS 4343</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Strings (Cello):</b> PR: MVS 4333 and competence determined by faculty jury. Continuation of MVS 4333. May be repeated for credit.	
<b>MVS 4344</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Strings (Bass):</b> PR: MVS 4334 and competence determined by faculty jury. Continuation of MVS 4334. May be repeated for credit.	
<b>MVS 4346</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Guitar:</b> PR: MVS 4336 and competence determined by faculty jury. Continuation of MVS 4336. May be repeated for credit.	
<b>MVS 5251</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Strings (Violin):</b> PR: C.I.	
<b>MVS 5252</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Strings (Viola):</b> PR: C.I.	
<b>MVS 5253</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Strings (Cello):</b> PR: C.I.	
<b>MVS 5254</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Strings (Bass):</b> PR: C.I.	
<b>MVS 5351</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Strings (Violin):</b> PR: C.I.	
<b>MVS 5352</b>	<b>AS 2(1,1)</b>
<b>Principle Graduate Performance—Strings (Viola):</b> PR: C.I.	
<b>MVS 5353</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Strings (Cello):</b> PR: C.I.	
<b>MVS 5354</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Strings (Bass):</b> PR: C.I.	
<b>MVV 1211</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Voice:</b> Private and/or class instruction in beginning voice. May be repeated for credit.	
<b>MVV 2311</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Voice:</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVV 3321</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Voice:</b> PR: MVV 2311 and competence determined by faculty jury. Continuation of MVV 2311. Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVV 4331</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Voice:</b> PR: MVV 3321 and competence determined by faculty jury. Continuation of MVV 3321. May be repeated for credit.	
<b>MVV 4341</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Voice:</b> PR: MVV 4331 and competence determined by faculty jury. Continuation of MVV 4331. May be repeated for credit.	
<b>MVV 4640</b>	<b>AS 1(1,0)</b>
<b>Voice Pedagogy I:</b> 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.	

<b>MVV 4641</b>	<b>AS 1(1,0)</b>
<b>Voice Pedagogy II:</b> PR: C.I. Continuation of MVV 4640. Intermediate to advanced levels. May be repeated for credit.	
<b>MVV 5251</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Voice:</b> PR: C.I.	
<b>MVV 5351</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Voice:</b> PR: C.I.	
<b>MVW 1210</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance Woodwind Class:</b> Private and/or class instruction in beginning woodwind playing.	
<b>MVW 1211</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Woodwinds (Flute):</b> Private and/or class instruction in beginning flute playing.	
<b>MVW 1212</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Woodwinds (Oboe):</b> PR: MVW 1211 and MVW 1213. Private and/or class instruction in beginning oboe playing.	
<b>MVW 1213</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Woodwinds (Clarinet):</b> Private and/or class instruction in beginning clarinet playing.	
<b>MVW 1214</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Woodwinds (Bassoon):</b> PR: MVW 1211 and MVW 1213. Private and/or class instruction in beginning bassoon playing.	
<b>MVW 1215</b>	<b>AS 1(1,1)</b>
<b>Secondary Performance—Woodwinds (Saxophone):</b> PR: MVW 1211 and MVW 1213. Private and/or class instruction in beginning saxophone playing.	
<b>MVW 2311</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Woodwinds (Flute):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVW 2312</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Woodwinds (Oboe):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVW 2313</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Woodwinds (Clarinet):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVW 2314</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Woodwinds (Bassoon):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVW 2315</b>	<b>AS 2(1,1)</b>
<b>Principal Performance I—Woodwinds (Saxophone):</b> PR: Major in music or consent of chairperson; audition. Private and class lessons. May be repeated for credit.	
<b>MVW 3321</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Woodwinds (Flute):</b> PR: MVW 2311 and competence determined by faculty jury. Continuation of MVW 2311. May be repeated for credit.	
<b>MVW 3322</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Woodwinds (Oboe):</b> PR: MVW 2312 and competence determined by faculty jury. Continuation of MVW 2312. May be repeated for credit.	
<b>MVW 3323</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Woodwinds (Clarinet):</b> PR: MVW 2313 and competence determined by faculty jury. Continuation of MVW 2313. May be repeated for credit.	
<b>MVW 3324</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Woodwinds (Bassoon):</b> PR: MVW 2314 and competence determined by faculty jury. Continuation of MVW 2314. May be repeated for credit.	
<b>MVW 3325</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Woodwinds (Saxophone):</b> PR: MVW 2315 and competence determined by faculty jury. Continuation of MVW 2315. May be repeated for credit.	
<b>MVW 4331</b>	<b>AS 2(1,1)</b>
<b>Principal Performance II—Woodwinds (Flute):</b> PR: MVW 3321 and competence determined by faculty jury. Continuation of MVW 3321. May be repeated for credit.	
<b>MVW 4332</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Woodwinds (Oboe):</b> PR: MVW 3322 and competence determined by faculty jury. Continuation of MVW 3322. May be repeated for credit.	
<b>MVW 4333</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Woodwinds (Clarinet):</b> PR: MVW 3323 and competence determined by faculty jury. Continuation of MVW 3323. May be repeated for credit.	

<b>MVW 4334</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Woodwinds (Bassoon):</b> PR: MVW 3324 and competence determined by faculty jury. Continuation of MVW 3324. May be repeated for credit.	
<b>MVW 4335</b>	<b>AS 2(1,1)</b>
<b>Principal Performance III—Woodwinds (Saxophone):</b> PR: MVW 3325 and competence determined by faculty jury. Continuation of MVW 3325. May be repeated for credit.	
<b>MVW 4341</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Woodwinds (Flute):</b> PR: MVW 4331 and competence determined by faculty jury. Continuation of MVW 4331. May be repeated for credit.	
<b>MVW 4342</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Woodwinds (Oboe):</b> PR: MVW 4332 and competence determined by faculty jury. Continuation of MVW 4332. May be repeated for credit.	
<b>MVW 4343</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Woodwinds (Clarinet):</b> PR: MVW 4333 and competence determined by faculty jury. Continuation of MVW 4333. May be repeated for credit.	
<b>MVW 4344</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Woodwinds (Bassoon):</b> PR: MVW 4334 and competence determined by faculty jury. Continuation of MVW 4332. May be repeated for credit.	
<b>MVW 4345</b>	<b>AS 2(1,1)</b>
<b>Principal Performance IV—Woodwinds (Saxophone):</b> PR: MVW 4335 and competence determined by faculty jury. Continuation of MVW 4335. May be repeated for credit.	
<b>MVW 5251</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Woodwinds (Flute):</b> PR: C.I.	
<b>MVW 5252</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Woodwinds (Oboe):</b> PR: C.I.	
<b>MVW 5253</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Woodwinds (Clarinet):</b> PR: C.I.	
<b>MVW 5254</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Woodwinds (Bassoon):</b> PR: C.I.	
<b>MVW 5255</b>	<b>AS 1(1,0)</b>
<b>Secondary Graduate Performance—Woodwinds (Saxophone):</b> PR: C.I.	
<b>MVW 5351</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Woodwinds (Flute):</b> PR: C.I.	
<b>MVW 5352</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Woodwinds (Oboe):</b> PR: C.I.	
<b>MVW 5353</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Woodwinds (Clarinet):</b> PR: C.I.	
<b>MVW 5354</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Woodwinds (Bassoon):</b> PR: C.I.	
<b>MVW 5355</b>	<b>AS 2(1,1)</b>
<b>Principal Graduate Performance—Woodwinds (Saxophone):</b> PR: C.I.	
<b>NUR 3134C</b>	<b>HLTH 6(3,9)</b>
<b>Scientific Theories of Nursing II:</b> Principles of maternal and infant health, with application in selected clinical settings. The family approach to the birthing process is emphasized.	
<b>NUR 3135</b>	<b>HLT 1(1,0)</b>
<b>Nursing Seminar II:</b> An opportunity to explore maternal/infant, fathering, sibling and family relationships.	
<b>NUR 3207C</b>	<b>HLTH 11(6,15)</b>
<b>Scientific Theories of Nursing I:</b> Theories applicable to the nurse's role in prevention of illness, health maintenance, acute care and rehabilitation are applied to individuals of all ages in various clinical settings.	
<b>NUR 3208</b>	<b>HLTH 1(1,0)</b>
<b>Nursing Seminar I:</b> Discussion of current issues related to nursing practice. Exploration of specific problems associated with NUR 3207C.	
<b>NUR 3618C</b>	<b>HLTH 9(5,16)</b>
<b>Concepts Basic to Nursing Practice:</b> Beginning principles and concepts of nursing theory and practice utilizing the nursing process in selected clinical settings.	
<b>NUR 3725C</b>	<b>HLTH 4(3,3)</b>
<b>Pathophysiology and Physical Assessment:</b> Clinical concepts of disease processes integrated with physical assessment of clients.	
<b>NUR 4411C</b>	<b>HLTH 11(6,15)</b>
<b>Scientific Theories of Nursing III:</b> Theories and principles of community health and psychiatric/mental health nursing. Clinical application in selected settings.	

- NUR 4412** **HLTH 1(1,0)**  
**Nursing Seminar III:** Discussion of current trends and issues related to community health and psychiatric/mental health nursing.
- NUR 4660C** **HLTH 3(0,9)**  
**Special Nursing Topics:** Comprehensive nursing care to individuals with complex and critical problems.
- NUR 4905C** **HLTH 3(1,6)**  
**Nursing Independent Study:** An opportunity for in-depth study in an area of special interest to the student. Laboratory experience included.
- NUU 3111** **HLTH 1(1,0)**  
**Introduction to Baccalaureate Nursing:** Overview of baccalaureate nursing philosophy, objectives, conceptual framework, scope of practice, history, legal and ethical issues.
- NUU 4225C** **HLTH 7(2,15)**  
**Scientific Theories IV:** Scientific theories and principles of leadership and management of patient care. Application of the decision-making process in selected clinical experiences.
- NUU 4226** **HLTH 1(1,0)**  
**Nursing Seminar IV:** Nursing in today's society.
- NUU 4300** **HLTH 2(2,0)**  
**Critical Inquiry:** A study of approaches to problematic situations in nursing. Selected experiences in investigating, analyzing, and interpreting nursing research.
- OCE 1012** **EN 3(3,0)**  
**Oceanography and Space:** Fundamentals of oceanography and space with emphasis on the engineering aspects and uses.
- ORI 3001** **AS 3(1,2)**  
**Interpretation I:** Analysis of thought, development of imagination; several oral presentations of a variety of literary forms. (Recommended for students majoring in English and preparing to teach literature.)
- ORI 3002** **AS 3(1,2)**  
**Interpretation II:** PR: ORI 3001 or C.I. Selecting and abridging literary material for platform use; preparation and presentation by individual groups of programs for special and general occasions.
- ORI 3210** **AS 3(1,2)**  
**Interpretation III:** PR: ORI 3001. Practice in interpretation by individuals and groups with particular emphasis on planned presentation for all age audiences, with special emphasis on children.
- PAD 3003** **AS 4(4,0)**  
**Public Administration:** An examination of the basic environment, culture, and organization of public administration in the United States.
- PAD 4034** **AS 4(4,0)**  
**The Administration of Public Policy:** Problems of values, interests, and objectives and their impact on the administration of public programs, stressing the interplay between social values, policies and administration.
- PAD 4040** **AS 4(4,0)**  
**Ethics and Values in Public Administration:** Examination of the issues of ethics in the public sector—basis for public concern, past practice, present patterns of response; individual/social aspects of ethical behavior.
- PAD 4104** **AS 4(4,0)**  
**Administrative Theory:** A review of the behavioral aspects of the administrative process, its impact on organizational goal achievement and on supervisory strategies. Some social and structural pathologies affecting administrative practice.
- PAD 4110** **AS 4(4,0)**  
**Intergovernmental Administration:** Various approaches to studying and explaining the American intergovernmental system. Emphasis on interorganizational activities, i.e., negotiation, cooperation, and coordination within the legal setting.
- PAD 4204** **AS 4(4,0)**  
**Fiscal Management:** PR: C.I. Analysis of methods of securing public funds, the process of budget-making, and techniques of management used in managing public funds.
- PAD 4414** **AS 4(4,0)**  
**Public Personnel Administration:** The history, operating components, structural characteristics and increasing impact of laws and related sanctions on personnel practices of public agencies.
- PAD 4424** **AS 4(4,0)**  
**Labor Relations in the Public Sector:** A study of current trends and developments in employment relations in the public sector, especially employee organization, negotiations, and the collective bargaining process.

- PAD 4941** **AS 4-8(0,8)**  
**Public Administration Internship:** PR: C.I. Internship in municipal, county, state or federal government, including assignments in such fields as personnel, planning, budget and fiscal, procurement and public safety.
- PAD 5807** **AS 4(4,0)**  
**Administrative Practice in the Public Sector:** The application of various theoretical concepts to the "real world" of public administration. Policy formulation and execution, is examined through the case study mode.
- PCB 3023** **AS 3(3,0)**  
**Cell Physiology:** PR: 8 hours in biological sciences or C.I. CR: CHM 3211. Basic physiological processes, cellular organization, exchange of materials, conversion of energy, irritability and contractibility.
- PCB 3043** **AS 3(3,0)**  
**Principles of Ecology:** 8 hours in biological sciences. Elements of ecosystems, biogeochemical cycling, environmental factor interactions, population dynamics and community development.
- PCB 3043L** **AS 1(0,3)**  
**Principles of Ecology Laboratory:** CR: PCB 3043. Field and laboratory investigations of natural ecosystems with emphasis on current methodology in ecology.
- PCB 3063** **AS 3(3,0)**  
**Genetics:** PR: BSC 1010C. Basic principles of heredity as applied to prokaryotes and eukaryotes.
- PCB 3063L** **AS 1(0,3)**  
**Genetics Laboratory:** CR: PCB 3063. Introduction to laboratory techniques of genetics.
- PCB 3233C** **AS 4(3,3)**  
**Immunology and Serology:** PR: BSC 2010. Basic principles of the immune reaction, antigens antibody formulation, hypersensitivity and autoimmunity; serological and immunological laboratory techniques.
- PCB 3703C** **AS 4(3,3)**  
**Human Physiology:** PR: BSC 2010C or equivalent. The physiology and interrelationships of organ systems of the human body.
- PCB 4183C** **AS 3(1,6)**  
**Microtechnique:** PR: 1 yr. biology. Preparation of plant and animal tissue of microscopic study.
- PCB 4302C** **AS 4(2,6)**  
**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** **AS 4(2,6)**  
**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** **AS 4(4,0)**  
**Animal Physiology:** PR: PCB 3023 or C.I. Functions of body processes occurring in animals with emphasis on vertebrate physiology.
- PCB 5046C** **AS 5(3,4)**  
**Advanced Ecology:** PR: Ecology, statistics and 2 years of biological science. Population and community ecology with emphasis on growth, regulation, species interactions, succession, and community classification.
- PCB 5675C** **AS 4(3,2)**  
**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** **AS 3(3,0)**  
**Endocrinology:** PR: PCB 4723 and BCH 4053 or C.I. Mechanisms of action of hormones; interrelationship between the nervous and endocrine systems.
- PCO 4203** **AS 4(3,2)**  
**Interviewing and Counseling:** PR: PSY 2013, PPE 3003. A review of various interviewing and counseling theories and techniques as well as practical experience in interviewing and counseling procedures.
- PEL 2121C** **ED 2(2,1)**  
**Beginning Golf:** Performance and application of basic skills, rules and etiquette. Physiological and social values accruing from this life-time sport.
- PEL 2341C** **ED 2(2,1)**  
**Beginning Tennis:** Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this life-time sport.
- PEL 3123C** **ED 2(2,1)**  
**Advanced Golf:** PR: PEL 2121C or equivalent competency. A study of performance and application of advanced skills, rules, and etiquette. Physiological and social values accruing from this life-time sport.



- PEL 3343C** **ED 2(2,1)**  
**Advanced Tennis:** PR: PEL 2341C or equivalent competency. A study of performance and application of advanced skills, rules, etiquette. Physiological and social values accruing from this life-time sport.
- PEM 3102C** **ED 2(2,1)**  
**Body Development:** An in-depth study of individual physical (musculo-skeletal, neuromuscular, cardiorespiratory) fitness. Emphasis on individual diagnosis, principles, procedures, and conduct of related exercise programs.
- PEM 4153C** **ED 2(2,1)**  
**Actualization of Physical Potential in Contemporary Living:** Factors underlying physical potential. Self physical assessment, values of physical activity, self-improvement, contemporary problems, body awareness, body mechanics, family responsibilities. Development of individual programs.
- PEN 1121C** **ED 2(2,1)**  
**Elementary Swimming:** For non-swimmers and beginning swimmers. Development and study of technique in the basic skills of water safety and swimming.
- PEN 2123C** **ED 2(2,1)**  
**Advanced Swimming:** PR: PEN 1121C 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.
- PEN 3101C** **ED 2(2,1)**  
**Aquatics:** PR: PEN 2123 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.
- PEN 3113C** **ED 2(2,1)**  
**Life Savings:** Instruction, training and certification in basic life saving swimming skills.
- PEO 3011C** **ED 4(2,2)**  
**Instructional Analysis in Team Sports:** PR: Sophomore standing. Analysis of team sports for purposes of teaching and coaching. Includes techniques, conditioning, strategy.
- PEO 3031C** **ED 2(1,1)**  
**Instructional Analysis of Individual Activities:** Analysis of individual sports for purposes of teaching and coaching. Includes techniques, conditioning, strategy.
- PEP 3000** **ED 2(1,1)**  
**Instructional Analysis of Performer Centered Activities:** Analysis of gymnastics, tumbling, wrestling and weight training for purposes of teaching and coaching. Includes techniques, conditioning, strategy.
- PEQ 3101C** **ED 2(1,1)**  
**Instructional Analysis in Aquatics:** PR: Sophomore standing or C.I. Analysis of aquatic activities for purposes of teaching and coaching. Includes techniques, conditioning, strategy.
- PEQ 3115C** **ED 2(2,1)**  
**Water Safety Instruction:** PR: PEN 3113C or equivalent competency. Methods of teaching water safety. Includes practical application and certification.
- PET 3215** **AS 3(3,0)**  
**Sports Psychology:** A review of principles of psychology related to the enhancement of satisfaction and performance in sports.
- PET 3450C** **ED 2(1,1)**  
**Physical Education in Secondary School:** PR: Admission to Junior Block, or C.I. Study of course objectives for the secondary school curriculum and survey of methods and materials having special application for teaching Physical Education.
- PET 3453** **ED 3(2,1)**  
**Coaching Theory and Athletic Training:** Theory and methods of coaching and the recognition, treatment, and rehabilitation of sports injuries.
- PET 3461C** **ED 2(1,1)**  
**Teaching Physical Education in the Elementary School:** PR: Admission to Junior Block or C.I. Organization, practice and conduct of elementary school physical education with emphasis on teaching methods.
- PET 4050C** **ED 3(2,1)**  
**Motor Development and Learning:** PE junior standing. An analysis of the theories and factors influencing the motor development of children and the learning of gross and fine motor skills.
- PET 4312C** **ED 3(2,1)**  
**Anatomic and Mechanical Foundations of Human Movement:** Anatomic and mechanical principles significant to human movement; competencies relating to analysis and evaluation of performance skill and prescription for improvement.
- PET 4370C** **ED 2(1,1)**  
**Exercise Physiology—Cardiovascular:** PR: PET 4312C. Central and peripheral cardiovascular mechanisms that facilitate, and are affected by, exercise. Related principles of testing, training, and exercise strategy.

- PET 4371C** ED 2(1,1)  
**Exercise Physiology—Respiratory:** PR: PET 3212C and PET 4370C. Physiological mechanisms of metabolism, gas transport, and pulmonary function that facilitate, and are affected by exercise. Related principles of testing, training, and exercise strategy.
- PET 4410** ED 2(2,0)  
**Organization and Administration of Typical and Atypical Physical Education Programs:** Administering and organizing physical education programs for instruction of typical and atypical students within the total school physical education program.
- PET 4601** ED 3(3,0)  
**Motor Development: Habilitation and Remediation for Exceptional Students:** The comparative study of motor development in typical and atypical children, evaluative processes, methods of enrichment and prescriptive techniques.
- PET 4640** ED 3(3,0)  
**Adapted Physical Education:** Principles and methods of adapting physical education activities and programs for atypical participants, mainstreaming rationale and methods analyzed.
- PHH 3100** AS 3(3,0)  
**Ancient Philosophy:** Foundations of Western philosophy in ancient Greek thinking about man and nature, including the pre-Socratics, Socrates, Plato, Aristotle.
- PHH 3400** AS 3(3,0)  
**Modern Philosophy:** Challenges of science and religion to philosophy. Responses of faith, reason, relativism, and atheism.
- PHH 3600** AS 3(3,0)  
**Problems in Contemporary Philosophy:** Prominent issues and trends in 20th century philosophy, excluding Existentialism.
- PHI 1100** AS 3(3,0)  
**Critical Thinking:** An examination of fallacies and other logical abuses in conjunction with an analysis of traditional modes in an attempt to encourage meaningful thought and usage.
- PHI 2010** AS 3(3,0)  
**Introduction to Philosophy:** Inquiry into the meaning and justification of fundamental ideas and beliefs concerning reality, knowledge, and values; application to relevant topics in ethics, religion, and politics.
- PHI 2130** AS 3(3,0)  
**Formal Logic I:** Analysis of logical form and of procedures used in deductive inference, of the kind underlying mathematical reasoning.
- PHI 3131** AS 3(3,0)  
**Formal Logic II:** PR: PHI 2130. Systematic study of propositional and first-order predicate logic; logistic systems and axiomatic methods; problems of metatheory, including consistency, completeness and decidability.
- PHI 3600** AS 3(3,0)  
**Ethics:** An examination of the nature of moral problems, judgements and principles with an emphasis on recent formulations in ethical theory.
- PHI 3630** AS 3(3,0)  
**Practical Moral Dilemmas:** Probes practical moral problems arising out of advancement and complexities in modern professional life. Considers one or more of the following: medicine, business, technology, law.
- PHI 3700** AS 3(3,0)  
**Philosophy of Religion:** An examination of basic ideas, beliefs, attitudes and functions of religions; the significance of religion in human experiences.
- PHI 3800** AS 3(3,0)  
**Aesthetics:** An investigation into the nature of human artistic experience with special reference to questions of form, perception and style.
- PHI 3803** AS 3(3,0)  
**Philosophy and Creativity:** A companion course to PHI 3800, Aesthetics. Examines the empirical and metaphysical claims made for creativity; attempts to account for intuition, genius and intelligence.
- PHI 4220** AS 3(3,0)  
**Philosophy of Language:** PR: PHI 2010 and 2130. Develops philosophically illuminating descriptions of certain general features of language, such as reference, truth, meaning, and necessity.
- PHI 4360** AS 3(3,0)  
**Theory of Knowledge:** PR: PHI 2010 and PHI 2130. The study of knowledge: What is it? Can we have it? Topics include skepticism, "other minds," certainty, and belief.
- PHI 4400** AS 3(3,0)  
**Philosophy of Science:** An examination of the conceptual foundations and methodology of modern science.

- PHI 4500** AS 3(3,0)  
**Metaphysics:** PR: PHI 2010 and PHI 2130. Investigates "first principles" and inquiries into the ultimate nature of reality through consideration of being, substance, essence, space, time, cause and effect.
- PHI 4770** AS 3(3,0)  
**Atheism:** A study of the principal theoretical and practical objections to theism.
- PHM 3100** AS 3(3,0)  
**Social Philosophy:** Philosophical analysis and evaluation of selected issues arising from interaction of the individual, society, and the state.
- PHM 3350** AS 3(3,0)  
**Introduction to Marxist Philosophy:** A study of the fundamental principles of Marxist philosophy, developed by Marx, Engels and Lenin.
- PHP 3786** AS 3(3,0)  
**Existentialism:** Study of existentialist analysis and criticisms of the human situations as found in the writings of such philosophers as Kierkegaard, Nietzsche, Heidegger, Sartre, and Camus.
- PHP 4788** AS 3(3,0)  
**Contemporary Marxism:** An examination of major issues in current Marxist-Leninist philosophy.
- PHS 3151** AS 4(3,2)  
**Computer Methods in Physics:** PR: PHY 2040 and COP 1110 or C.I. Nonanalytical problems in physics and astronomy solved by approximation with computer assistance.
- PHS 3303** AS 3(3,0)  
**Nuclear and Plasma Physics:** PR: PHY 3044. Nuclear force, structure, models, reactions, radioactivity, strange particles, Boltzman equation, Debye length, diffusion, mobility and transport, instabilities..
- PHS 3805** AS 3(3,0)  
**Physical Basis of Music:** PR: MUT 2212 or C.I. Lectures, demonstrations, and student practicum; covers topics in wavemotion, acoustics of musical instruments, musical scales, timbre, architectural acoustics, human ear, sound reproduction.
- PHS 4404** AS 3(3,0)  
**Solid State Physics:** PR: PHY 3046 or C.I. Properties of solids, crystal binding, free electron model, band theory of solids. Fermi surface, and solid state applications.
- PHY 2040** AS 3(3,0)  
**University Physics I:** PR: High School physics or PHY 2050C; CR: MAC 3311. Mechanics, properties of matter, thermodynamics.
- PHY 2040L** AS 1(0,3)  
**University Physics Laboratory I:** CR: PHY 2040. Laboratory experiments covering selected topics in physics.
- PHY 2041** AS 3(3,0)  
**University Physics II:** PR: PHY 2040; CR: MAC 3312 Light, sound, electricity, magnetism, alternating current.
- PHY 2041L** AS 1(0,3)  
**University Physics Laboratory II:** CR: PHY 2041. Continuation of physics laboratory instruction.
- PHY 2050C** AS 4(3,3)  
**College Physics I:** PR: MAC 1104. Kinematics, Newton's laws, circular motion, torque, center gravity, work, energy, power, machines, waves, sound electricity, currents, magnetism, induction, generators, motors, geometrical optics, eye, camera, telescope, microscope.
- PHY 2051C** AS 4(3,3)  
**College Physics II:** PR: PHY 2050C or one year of high school physics. Fluids, Bernoulli viscosity, kinetic theory, osmosis, heat, thermodynamics, latent heat, conduction, convection, radiation, DC-AC circuits, instrumentation, semiconductors, physical optics, interference, polarization, X-rays, radioactivity, detectors, shielding, dosimetry.
- PHY 3014C** AS 3(1,3)  
**Project Physics I:** "Hand-on" lecture-laboratory course, particularly for Elementary Education majors and prospective Junior High science teachers. Weather forces, motion, energy, solids, liquids, gases, heat, solar energy.
- PHY 3015C** AS 3(1,3)  
**Project Physics II:** Naked eye astronomy, waves, sound, electricity, magnetism, motors, light, color, photography, nuclear radiation.
- PHY 3034** AS 3(3,0)  
**Physics of Science Fiction:** PR: PSC 1512 or C.I. Study and discussion of physical principles which form the basis of selected science fiction themes.
- PHY 3043** AS 3(3,0)  
**Mechanics and Special Relativity:** PR: PHY 2041, MAP 3302. Mechanics, vectors, coordinate transformations, rigid body dynamics, simultaneity relativistic formulations.

- PHY 3044** **AS 3(3,0)**  
**Electricity, Magnetism and Electromagnetic Waves:** PR: PHY 3043. Electrostatics, magnetostatics, current electricity, EM fields and waves, Maxwell's equations
- PHY 3045** **AS 3(3,0)**  
**Wave Mechanics and Solid State:** PR: PHY 3044 and PHS 3151. Schrodinger equation, one electron atom, many particle systems, free electron model, band theory of solids, Fermi surface, superconductivity.
- PHY 3046** **AS 3(3,0)**  
**Thermodynamics and Statistical Physics:** PR: PHY 3421C. Equations of state, equilibrium thermodynamics, derivation of variables from probability concepts and statistical physics, distribution functions.
- PHY 3421C** **AS 4(3,2)**  
**Optics and Modern Physics:** PR: PHY 2041 or C.I. Geometric optics, ray diagrams, polarization, diffraction, interference, atomic, molecular, nuclear, solid state physics, spectroscopy, x-rays, nuclear radiation.
- PHY 3722C** **AS 3(1,5)**  
**Physics Laboratory—Electronics:** PR: PHY 3752C or C.I. State-of-art electronics, transducers, operational amplifiers, phase sensitive circuits, active filters.
- PHY 3752C** **AS 4(3,3)**  
**Physics of Scientific Instruments:** PR: PHY 2041 or C.I. A lecture-laboratory course on application, operation and limitation of various scientific instruments. Meters, oscilloscopes, operational amplifiers, transducers, elements of digital circuitry.
- PHY 3802L** **AS 3(3,0)**  
**Intermediate Physics Laboratory:** PR: PHY 3421C 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 4424** **AS 3(3,0)**  
**Optics:** PR: PHY 3421C. Wave optics absorption, stimulated emission, lasers, transforms, coherence, holography.
- PHY 4804** **AS 3(3,0)**  
**Quantum Mechanics:** PR: PHY 3046 or C.I. A study of the postulates of quantum mechanics, the Schrodinger equation, and an introduction to the statistics of many particle systems.
- PHY 4803L** **AS 3(1,5)**  
**Advanced Physics Laboratory:** PR: PHY 3802L. Experiments in optics, electronics, nuclear and solid state physics. Emphasis on design, data, and scientific writing.
- POS 2041** **AS 3(3,0)**  
**American National Government:** A study of the dynamics of American national government, including its structure, organization, powers, and procedures.
- POS 3122** **AS 4(4,0)**  
**State Government and Public Policy:** A comparative study of American state governments, political processes, and public policies, with emphasis on Florida.
- POS 3173** **AS 4(4,0)**  
**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.
- POS 3233** **AS 4(4,0)**  
**Public Opinion:** A substantive and theoretical study of public opinion with emphasis on opinion formation, opinion measurement, policy linkages. May include field experience in polling.
- POS 3235** **AS 4(4,0)**  
**Mass Media and Politics:** PR: POS 2041 or C.I. Influence of media on campaigns, public officials, public opinion, the definition of political news, and selected public policies.
- POS 3253** **AS 4(4,0)**  
**Contemporary Revolution and Political Violence:** Theories and cases of revolutionary change and political violence in the contemporary world.
- POS 3273** **AS 4(4,0)**  
**Voting and Elections:** Theoretical and substantive inquiry into U.S. electoral system; includes focus on voter behavior as well as national and state electoral systems.
- POS 3413** **AS 4(4,0)**  
**The American Presidency:** PR: POS 2041 or C.I. Examination of historical and contemporary role of the presidency, including presidential selection process and the office's evolution in status, powers, administrative responsibilities, leadership, and decision-making.
- POS 3424** **AS 4(4,0)**  
**Congress & the Legislative Process:** PR: POS 2041 or C.I. Examination of the Congress as an institution undergoing dynamic change; emphasis upon recruitment of legislators, institutional and informal rules, the committee system, legislative procedures.

- POS 3443** **AS 4(4,0)**  
**Political Parties & Processes:** PR: POS 2041 or C.I. In depth study of the American political party system in the context of changing American politics; topics include: development, organization, reforms, legislative and executive roles.
- POS 3703** **AS 4(4,0)**  
**Scope and Methods of Political Science:** Introduction to the scope and methodology of political analysis. Extensive examination of the discipline, research design and methodology.
- POS 4142** **AS 4(4,0)**  
**Metropolitan Politics:** Analysis of political patterns, processes, and issues in American communities. Intergovernmental relations and structural and political arrangements in the existing and emerging metropolitan areas.
- POS 4206** **AS 4(4,0)**  
**Political Psychology:** The Psychological analysis of political behavior with emphasis on the individual rather than the political system; includes political attitudes and communication, leadership, and personality influences on politics.
- POS 4246** **AS 4(4,0)**  
**Political Socialization:** PR: POS 2041 or C.I. Analysis of recruitment and socialization processes. Identification of the agents and processes of political socialization in national and cross-cultural contexts.
- POS 4252** **AS 4(4,0)**  
**Politics of the Future:** Exploration of possible political processes of the future by examining both visions of the future and specific problem areas such as ecological and technological challenges.
- POS 4261** **AS 4(4,0)**  
**Political Corruption:** An examination of official corruption at each level of government: a focus on the who, what, when, where and how of public corruption.
- POS 4265** **AS 4(4,0)**  
**Power and Policy in the U.S.** PR: POS 2041 or C.I. Examination of the bases of political power in the U.S. In depth study of socio-economic political linkages in the policy-making process.
- POS 4284** **AS 4(4,0)**  
**Judicial Process & Politics:** Study of the formal and informal judicial process. Legal culture, bureaucratic model, judicial recruitment and outputs, comparative judicial behavior.
- POS 4412** **AS 4(4,0)**  
**Presidential Campaigning:** PR: C.I. Introduces the process of candidate selection, convention behavior, actual campaign process and the transition of power.
- POS 4603** **AS 4(4,0)**  
**American Constitutional Law:** PR: POS 2041 or C.I. Development of American federalism and national power, commerce clause and nationalization of the economy.
- POS 4604** **AS 4(4,0)**  
**American Constitutional Law II:** PR: POS 2041 or C.I. Development of civil liberties and civil rights in the American federal system.
- POS 4941** **AS 3-10(0,3-10)**  
**Political Science Internship:** PR: C.I. Internship working with National, State, County or Municipal government. Assignments with selected civic organization, elected or appointed official.
- POT 3302** **AS 4(4,0)**  
**Modern Political Ideologies:** A study of modern ideologies since the French Revolution including liberalism, conservatism, capitalism, nationalism, Fascism and anarchism.
- POT 4003** **AS 4(4,0)**  
**Political Theory:** PR: POS 2041 or C.I. Examination of various normative approaches to the study of political science, stressing contemporary developments in the field.
- POT 4045** **AS 4(4,0)**  
**Ancient, Medieval and Early Modern Political Philosophy:** Study of the development of political and social ideas in western thought from early Greece through the 17th century.
- POT 4054** **AS 4(4,0)**  
**Modern Political Philosophy:** Study of the development of political and social ideas from the 18th century to the present. May be taken independently of POT 4045 (Ancient, Medieval and Early Modern Political Philosophy).
- POT 4314** **AS 4(4,0)**  
**Contemporary Democratic Theory:** PR: POS 2041 or C.I. Study of democratic theories emphasizing liberal democracy and its critics, elitist theories, participatory democracy, citizen participation and relevance of empirical research to democratic theory.
- PPE 3003** **AS 3(3,0)**  
**Personality Theory:** PR: PSY 2013. A survey of theory and research on the development of personality characteristics.
- PSB 3002** **AS 4(4,0)**  
**Physiological Psychology:** PR: PSY 2013. A survey of the physiological basis of behavior emphasizing the relationship between the nervous systems and behavior. Lecture and demonstration/lab.

<b>PSB 3442</b>	<b>AS 3(3,0)</b>
<b>Drugs and Behavior:</b> PR: PSY 2013. Effects of certain drugs upon the nervous system, behavior, and society. Causes of drug abuse and impact on mental health.	
<b>PSB 4013C</b>	<b>AS 4(2,2)</b>
<b>Introduction to Neuropsychology:</b> PR: PSB 3002. Study of brain function with particular emphasis on human behavior. Lecture—Lab.	
<b>PSB 4103C</b>	<b>AS 3(2,2)</b>
<b>Biofeedback Applications:</b> PSY 2013, PSB 3002 and C.I. Introduction to theory, instrumentation, research and clinical application of biofeedback. Training in use of biofeedback equipment. Lec.—Lab.	
<b>PSC 1512</b>	<b>AS 3(3,0)</b>
<b>Physical Science:</b> PR: MAC 1104. 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.	
<b>PSC 1512L</b>	<b>AS 1(0,2)</b>
<b>Physical Science Lab:</b> CR: PSC 1512. Experiments to apply the scientific method to observation and analysis in mechanics, heat, light, electricity and magnetism, chemical and physical transformations.	
<b>PSY 2013</b>	<b>AS 3(3,0)</b>
<b>General Psychology:</b> An introductory survey of the basic principles, theories, and methods of contemporary psychology.	
<b>PSY 2023</b>	<b>AS 1(1,0)</b>
<b>Careers in Psychology:</b> PR: PSY 2013. An examination of various career opportunities in Psychology including educational entry requirements, and related professional issues.	
<b>PSY 3204</b>	<b>AS 4(3,2)</b>
<b>Statistical Methods in Psychology:</b> PR: PSY 2013. Standard scores, confidence intervals, sampling distributions, hypothesis testing, correlation and regression as applied to research in psychology.	
<b>PSY 3214</b>	<b>AS 4(3,2)</b>
<b>Research Methods in Psychology:</b> PR: PSY 2013 and PSY 3204. Investigation of experimental designs and research methods utilized in Psychology. Analysis and preparation of experimental designs in Psychology.	
<b>PSY 3302</b>	<b>AS 3(3,0)</b>
<b>Psychological Measurement:</b> PR: PSY 2013, 3204 and STA 2014. Theory of test construction and consideration of selected measures of psychological characteristics.	
<b>PSY 3624</b>	<b>AS 3(3,0)</b>
<b>Parapsychology:</b> 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.	
<b>PSY 3951</b>	<b>AS 3(1,5)</b>
<b>Undergraduate Field Work:</b> PR: C.I. Placement in a community agency for supervised experience in applications of psychology to community problems.	
<b>PSY 4604</b>	<b>AS 3(3,0)</b>
<b>History and Systems of Psychology:</b> PR: EXP 3404 and PPE 3003. Historical development of psychology with emphasis on classical theoretical positions.	
<b>PUP 3314</b>	<b>AS 4(4,0)</b>
<b>Minorities in American Politics:</b> 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.	
<b>PUP 4003</b>	<b>AS 4(4,0)</b>
<b>American Public Policy:</b> 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.	
<b>PUP 4009</b>	<b>AS 4(4,0)</b>
<b>Topics in Public Policy:</b> Intensive analysis of a current policy problem. Sample topics include education, growth management, housing, affirmative action, welfare, and transportation. May be repeated once.	
<b>PUP 4323</b>	<b>AS 4(4,0)</b>
<b>Women and Politics:</b> An examination of demands for change in the social, political and economic status of women and the policy response of the system.	
<b>PUP 4503</b>	<b>AS 4(4,0)</b>
<b>Government &amp; Science:</b> 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.	
<b>PUP 4602</b>	<b>AS 4(4,0)</b>
<b>Politics of Health:</b> PR: C.I. Analysis of public health policies. Primary focus upon political proc-	

esses, policy makers, interest group interventions including consumers, and policy outcomes. Comparative health policies.

**PUR 4000** AS 3(3,0)

**Public Relations:** Principles and practice of Public Relations including: techniques, research, tools, publicity and management.

**PUR 4800** AS 3(3,0)

**Public Relations Campaigns:** PR: PUR 4000. Planning and execution of public relations campaigns for profit and non-profit organizations.

**RED 3012** ED 3(3,0)

**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** ED 3(3,1)

**Diagnostic and Corrective Reading Strategies:** PR: RED 3012 or C.I. 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** ED 3(3,0)

**Developmental Reading:** PR: Regular Certificate or C.I. Principles, procedures, organization, and current practices in the elementary reading program. Materials and methods of instruction.

**RED 5514** ED 3(3,1)

**Classroom Diagnosis and Treatment of Reading Difficulties:** PR: RED 5147 or equivalent. Classroom diagnosis and corrective teaching in reading; instructional materials.

**REE 3040** BA 3(3,0)

**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 4100** BA 3(3,0)

**Real Estate Investment Analysis:** PR: REE 3040. Focus on real estate decision making in the private sector utilizing tools of financial and economic analysis.

**REL 2302** AS 3(3,0)

**World Religions:** Basic features and historical background on Confucianism, Taoism, Hinduism, Buddhism, Judaism, Christianity and Islam.

**REL 3203** AS 4(4,0)

**The Hebrew and Christian Heritage:** The Old and New Testaments as religious documents; their socio-political context in the Ancient Near East.

**REL 3314** AS 3(3,0)

**Religions of China and Japan:** A study of basic concepts in Shinto, Taoism, Confucianism, Buddhism, and Zen.

**REL 3342** AS 3(3,0)

**Hinduism:** A study of Hindu religious ideas and scriptures; the Vedas, the Upanishads, the Bhagvat Gita, and later works.

**REL 3353** AS 3(3,0)

**Islam:** An inquiry into the foundations and development of Islamic thought from earliest times to modern in various parts of the world.

**REL 3432** AS 3(3,0)

**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** AS 3(3,0)

**Studies in Christianity:** An inquiry into the foundations and development of Christian thought in various parts of the world.

**REL 3600** AS 3(3,0)

**Studies in Judaism:** An inquiry into the foundations and development of Jewish thought in various parts of the world.

**REL 4182** AS 3(3,0)

**Mysticism:** The models and aims of the mystic, both Eastern and Western, as seen in art, music, and literature.

**REL 4184** AS 4(4,0)

**Mythology:** An examination and interpretation of myths dealing with gods, divine heroes, and sacred events.

**REL 4420** AS 3(3,0)

**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.

**RET 3026C** HLTH 4(3,3)

**Introduction to Respiratory Therapy:** PR: Admission to the professional upper division Respiratory Therapy Program. Fundamental respiratory therapy principles and practices will be studied. Introduction to the profession and basic methods are covered. Lecture and lab.

- RET 3244C** **HLTH 2(1,3)**  
**Life Support Systems:** PR: RET 3026C. Lecture-laboratory, measures utilized to support the critically ill patient, intubation, airway maintenance, arterial line insertion and care, post operative care are all covered.
- RET 3264C** **HLTH 3(2,3)**  
**Mechanical Ventilation:** PR: RET 3026C. Function and use of mechanical ventilators, patient evaluation methods. All forms of ventilatory support will be studied. Lecture—Laboratory.
- RET 3442** **HLTH 1(1,1)**  
**Cardiopulmonary Instrumentation:** PR: RET 3026C. Blood gas analyzers, Physiologic monitoring, electrical safety and quality control. Lecture-demonstration.
- RET 3483** **HLTH 1(1,1)**  
**Respiratory Disease Assessment:** PR: RET 3026C. Physical examination of the chest, demonstration equipment use, methods and theory. Chest radiography will be extensively covered. Lecture-demonstration.
- RET 3874** **HLTH 5(1,16)**  
**Clinical Practice I:** PR: C.I. Basic equipment and patient care. IPPB Therapy. Cleaning sterilization and maintenance procedures. Suction techniques.
- RET 3875** **HLTH 10(1,32)**  
**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.
- RET 4034** **HLTH 1(2,0)**  
**Problems in Patient Management:** PR: RET 3483. CR: RET 4935. Problem oriented approach to the treatment of chronic and acute respiratory disorders. Computer based clinical simulations are utilized.
- RET 4104** **HLTH 2(2,0)**  
**Respiratory Therapy Education Systems:** PR: EVT 3063. Survey of the formal education of the respiratory therapist.
- RET 4262** **HLTH 3(3,0)**  
**Neonatal Respiratory Care:** PR: RET 3264 & RET 4714. Mechanical ventilators and their use in neonatal respiratory care.
- RET 4284C** **HLTH 3(2,3)**  
**Cardiopulmonary Diagnostics:** PR: RET 3442 and RET 3244. Advanced diagnostic procedures used in cardiovascular laboratories and critical care units, lecture-laboratory.
- RET 4414C** **HLTH 3(2,3)**  
**Pulmonary Function Studies:** PR: RET 3026C. Detailed procedures and tests to provide information for diagnosis of pulmonary disease, lecture-laboratory.
- RET 4616** **HLTH 2(2,0)**  
**Cardiopulmonary Services:** PR: GEB 3004, HSC 4101. Management of a cardiopulmonary services in the hospital. Lecture.
- RET 4714** **HLTH 2(2,0)**  
**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.
- RET 4876** **HLTH 10(1,32)**  
**Clinical Practice III:** PR: RET 3875. Care of patients with more complex diseases. Pulmonary function studies. Pediatric and neonatal critical care. Echo and cardiac catheterization. Emergency and trauma.
- RET 4934** **HLTH 2(2,0)**  
**Selected Topics in Respiratory Therapy:** PR: C.I. Current topics of adult critical care, as they apply to the advanced study of respiratory therapy.
- RET 4935** **HLTH 4(4,0)**  
**Chest Medicine:** PR: APB 3263. Disease states treated medically in conjunction with one or more modalities of respiratory therapy.
- RMI 3015** **BA 3(3,0)**  
**Principles of Risk and Insurance:** PR: 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.
- RTE 2002** **HLTH 1(1,0)**  
**Fundamentals of Radiologic Technology:** PR: PHY 2051 or C.I. Fundamentals of radiation, terminology, procedures, protection, patient care, professional ethics and medical-legal aspects of radiology. History of the Profession.
- RTE 3156** **HLTH 2(2,0)**  
**Pathophysiology:** PR: C.I. The study of radiologic science in the diagnosis and treatment of disease.



- RTE 3387C** **HLTH 2(2,0)**  
**Medical Physics:** PR: RTE 3684 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 3412C** **HLTH 3(2,2)**  
**Principles of Radiographic Exposure I:** PR: Admission to the professional phase of the RTE program or C.I. The principles controlling the production of an optimum radiograph.
- RTE 3457C** **HLTH 2(1,3)**  
**Principles of Radiographic Exposure II:** PR: RTE 3412C or C.I. Continuation of RTE 3212C with emphasis on exposure technique, evaluation and use of imaging accessories, processing techniques.
- RTE 3528C** **HLTH 3(2,2)**  
**Radiographic Procedures I:** PR: Admission to the professional phase of the RAS program or C.I. A study of patient positioning, equipment manipulation and quality evaluation of radiographic studies of the appendicular skeleton, chest, and abdomen.
- RTE 3549** **HLTH 3(2,2)**  
**Radiographic Procedures II:** PR: RTE 3528 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 3684C** **HLTH 3(2,2)**  
**Physics of Image Production:** PR: College Physics II. Physics of diagnostic radiology including radiation production; physical principles of radiographic generator operation and characteristics of electromagnetic radiation.
- RTE 3806** **HLTH 4(0,20)**  
**Clinical Education II:** PR: RTE 3831 or C.I. Supervised clinical practice in radiographic procedures, radiation protection, patient care, equipment orientation, radiographic technic, darkroom procedures, and film quality evaluation.
- RTE 3816** **HLTH 4(0,20)**  
**Clinical Education III:** PR: RTE 3806 or C.I. Supervised clinical practice in performing radiographic procedures with emphasis on competency evaluation of routine radiographic examinations.
- RTE 3826** **HLTH 5(0,25)**  
**Clinical Education IV:** PR: RTE 3816 or C.I. Supervised clinical practice in radiographic procedures; competency evaluation of routine radiographic examinations.
- RTE 3831** **HLTH 4(0,20)**  
**Clinical Education Orientation:** PR: Admission professional phase of the RAS program RTE 2002. Orientation to patient care, introduction to areas involving the field of radiology and clinical orientation to the function of radiologic technologists. Chest, abdomen, radiography.
- RTE 4205C** **HLTH 3(1,6)**  
**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** **HLTH 2(2,0)**  
**Quantitative Methods in Radiology Management:** PR: ACC 2324 or C.I. Concepts of radiology department management emphasizing financing, budgeting, medical records; billing; leasing purchasing of equipment; inventory; data storage and retrieval systems; determination of data effectiveness.
- RTE 4209** **HLTH 4(3,10)**  
**Radiological Administrative Practice:** PR: MAN 3310 or C.I. Administration of radiology departments; operation standards, personnel management; facility planning; economic feasibility; community hospital board administration-professional interrelationships; regulatory agencies; medical legal aspects.
- RTE 4256L** **HLTH 3(0,30)**  
**Directed Study in Clinical Education:** PR: 4256 or C.I. Directed activity in classroom instruction in radiologic technology.
- RTE 4569** **HLTH 2(1,3)**  
**Imaging in Diagnostic Radiography:** PR: RTE 3387 or C.I. Quality assurance programs with evaluation of radiographic imaging modalities and information retrieval systems. Tube output evaluation, sensitometry, and flow studies.
- RTE 4843** **HLTH 5(0,25)**  
**Clinical Education VI:** PR: RTE 4876 or C.I. Advanced clinical practice in diagnostic radiography, radiation therapy, nuclear medicine, special procedures, and other diagnostic imaging.
- RTE 4876** **HLTH 5(0,25)**  
**Clinical Education V:** PR: C.I. Supervised clinical practice; emphasis on competency evaluation of routine radiographic examinations.

<b>RTV 3000</b>	<b>AS 3(3,0)</b>
<b>Foundations of Broadcasting:</b> Nature of the media, the mechanics of operation, history, economics, programming, and internal and external control.	
<b>RTV 3200</b>	<b>AS 4(1,3)</b>
<b>Broadcast Techniques:</b> PR: RTV 3000. Introduction to the radio and television studio. Utilization of studio operating techniques and equipment (consoles, recorders, cameras, etc.) for use in educational and commercial broadcasting. Lab TBA.	
<b>RTV 3210</b>	<b>AS 4(1,3)</b>
<b>Radio Production:</b> PR: RTV 3200 or C.I. The production of music (live and recorded), talk, interview, discussion, sports, and documentary including performance (talent and announcing) and direction.	
<b>RTV 3220</b>	<b>AS 4(1,3)</b>
<b>Television Production:</b> PR: RTV 3200 or C.I. Emphasis on the coordination of talent, visuals, audio and lighting with the dramatic values of the presentation.	
<b>RTV 3231</b>	<b>AS 4(1,3)</b>
<b>Broadcast Announcing and Performance:</b> 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.	
<b>RTV 3300</b>	<b>AS 4(1,3)</b>
<b>Broadcast Journalism:</b> PR: English proficiency examination. Introduction to news sources, writing and interviewing techniques for radio-television news.	
<b>RTV 3501</b>	<b>AS 4(2,2)</b>
<b>Broadcast Continuity and Programming:</b> PR: English proficiency examination. Preparation of written commercial copy for radio and television. Examination of program practices and traffic systems.	
<b>RTV 4206</b>	<b>AS 4(1,3)</b>
<b>Television Directing:</b> PR: RTV 3220. Preparation and direction of programs with emphasis on dramatic values of composition. Typing skills required.	
<b>RTV 4402</b>	<b>AS 3(3-0)</b>
<b>Broadcast Criticism:</b> PR: RTV 3000 for RTV majors; English proficiency examination. Evaluation and criticism of past and present radio and television programs, policies, and critics. Concentration on the problem of criteria development.	
<b>RTV 4403</b>	<b>AS 3(3,0)</b>
<b>Radio, Television and Society:</b> 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.	
<b>RTV 4404</b>	<b>AS 3(3,0)</b>
<b>International Broadcasting:</b> Comparative analysis of national broadcast systems. World broadcasting as a social, political and economic force.	
<b>RTV 4600</b>	<b>AS 4(3,1)</b>
<b>Non-Commercial Broadcasting:</b> The uses of the electronic mass media for the dissemination of non-commercial programming. Public broadcasting and educational uses of the media.	
<b>RTV 4700</b>	<b>AS 3(3,0)</b>
<b>Regulation of Broadcasting:</b> PR: RTV 3000. Federal, state, local and self-regulatory agencies and practices which govern electronic media.	
<b>RTV 4800</b>	<b>AS 3(3,0)</b>
<b>Broadcast Management:</b> PR: RTV 4700. Consideration of broadcast management problems in station operations at the local, regional, and national levels.	
<b>RUS 1100</b>	<b>AS 3(3,1)</b>
<b>Elementary Russian Language and Civilization:</b> Designed to initiate the student to the major language skills: listening, speaking, reading, and writing.	
<b>RUS 1101</b>	<b>AS 3(3,1)</b>
<b>Elementary Russian Language and Civilization:</b> PR: RUS 1100 or equivalent. Continuation of RUS 1100.	
<b>RUS 2210</b>	<b>AS 3(3,0)</b>
<b>Intensive Russian Conversation:</b> PR: One year of Russian or equivalent. Practical use of the language leading toward fluency and correctness in speaking.	
<b>RUS 2230</b>	<b>AS 3(3,1)</b>
<b>Intermediate Russian Language and Civilization:</b> PR: RUS 1101 or equivalent. Designed to continue development of language skills at the intermediate level, together with a review of grammar, idiomatic expressions, extensive reading, and study of Russian culture.	
<b>RUS 2231</b>	<b>AS 3(3,1)</b>
<b>Intermediate Russian Language and Civilization:</b> PR: RUS 2230 or equivalent. Continuation of RUS 2230 with emphasis on Russian civilization.	
<b>RUS 3240</b>	<b>HFA 3(3,0)</b>
<b>Russian Conversation:</b> 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. **HFA 3(3,0)**

**SCE 3310** **Teaching Science in Elementary School:** PR: Junior Standing or C.I. Selected concepts; organizing for instruction; techniques; evaluation procedures. **ED 4(4,0)**

**SCE 3330** **Science Instructional Analysis:** PR: EDG 4341 or C.I. Course objectives for a school curriculum and methods and materials. **ED 4(3,2)**

**SCE 5238** **Inquiry in the Sciences:** PR: Regular Certificate or C.I. Teaching science by inquiry in the secondary school and development of inquiry lessons. **ED 3(3,0)**

**SED 3335** **Speech Instruction Analysis:** PR: EDG 4341 or C.I. Study of instructional programs in speech; objectives, materials, techniques, organization for instruction, evaluation procedures, current research. **ED 3(2,2)**

**SED 4371** **Directing Extracurricular Speech Activities:** Debate, extemporaneous speech and other speech events; selection and training of contestants, interschool and intramural speech activities. **AS 3(3,0)**

**SED 5670** **Speech Communication Instruction:** PR: C.I. Communication models as teaching devices, design of communication curricula, instructional media with speech practicum and classroom criticism and evaluation. **AS 3(3,0)**

**SOC 2000** **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. **AS 3(3,0)**

**SOC 3020** **Social Problems:** Analysis of major social problems such as mental disorders, sexual deviance, racial discrimination, poverty, community disorganization, and violence. **AS 3(3,0)**

**SOC 3110** **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)**

**SOC 3130** **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)**

**SOC 3150** **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)**

**SOC 3161** **Sociology of Alcoholism:** Introduction to the nature of alcoholism and review of its impact on society. **AS 3(3,0)**

**SOC 3201** **Social Institutions:** PR: SOC 2000. The application of general sociological principles, theories, and elements to the major social institutions of modern society. **AS 3(3,0)**

**SOC 3251** **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)**

**SOC 3310** **Urban Sociology:** PR: SOC 2000. Historical roots of urbanization. Analysis and impact of community change on social organizations in modern industrial societies. **AS 3(3,0)**

**SOC 3402** **Social Change: A Historical and Theoretical Approach:** PR: SOC 2000. Concerned with the context and essential sources of social development and change. **AS 3(3,0)**

**SOC 3410** **Social Stratification:** PR: SOC 2000. Study of class, status and power, cultural variations in stratification systems; patterns of mobility and change. **AS 3(3,0)**

**SOC 3500** **Research Methods:** PR: SOC 2000. **AS 4(3,1)**

**SOC 3504** **Social Research:** PR: SOC 2000. Study of scientific method, problem formulation, data collection and interpretation, reporting and criticism. **AS 3(2,1)**

**SOC 3521** **Research Methods and Statistics:** PR: SOC 2000 and one other sociology course. **AS 4(3,1)**

<b>SOC 3600</b>	<b>AS 3(3,0)</b>
<b>Modern Sociological Thought:</b> PR: SOC 2000. A study of major European and American contributors to modern sociology since World War II.	
<b>SOC 3640</b>	<b>AS 3(3,0)</b>
<b>The Development of Social Thought:</b> PR: SOC 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.	
<b>SOC 3720</b>	<b>AS 3(3,0)</b>
<b>Afro-American Social Problems:</b> Current Afro-American social problems in the United States.	
<b>SOC 3745</b>	<b>AS 3(3,0)</b>
<b>Race and Ethnic Minorities in the United States:</b> Theoretical analysis of the emergence, maintenance and disruption of patterns of racial and ethnic stratification.	
<b>SOC 3834</b>	<b>AS 3(3,0)</b>
<b>Sex Roles in Modern Society:</b> The traditional and changing roles of women and men viewed in a cross-cultural perspective.	
<b>SOC 3850</b>	<b>AS 3(3,0)</b>
<b>Collective Behavior:</b> PR: SOC 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.	
<b>SOC 3871</b>	<b>AS 3(3,0)</b>
<b>Modern Organizations:</b> Study of structure of social organizations, especially work organizations. Organizational and motivation theories and the social psychology of leadership and decision making are addressed.	
<b>SOC 4160</b>	<b>AS 3(3,0)</b>
<b>Sociology of Drug Abuse:</b> Analysis of the socio-culture elements of the drug culture.	
<b>SOC 4221</b>	<b>AS 3(3,0)</b>
<b>Political Sociology:</b> Sociological analysis of political and parapolitical groups; socioeconomic variable of voting behavior, power elites; societies and systems of government.	
<b>SOC 4230</b>	<b>AS 3(3,0)</b>
<b>Medical Sociology:</b> Analysis of patient beliefs and behavior, health practitioners, the social organization of hospitals and health services, contemporary problems in the delivery of health care.	
<b>SOC 4241</b>	<b>AS 3(3,0)</b>
<b>Sociology of Aging:</b> Sociological aspects of aging in America.	
<b>SOC 4262</b>	<b>AS 3(3,0)</b>
<b>Sociology of Occupations and Professions:</b> An examination of occupations and professions from the sociological perspective. Emphasized are professional and occupational socialization, marginality and choice as well as women and work.	
<b>SOC 4281</b>	<b>AS 3(3,0)</b>
<b>Sociology of Education:</b> PR: SOC 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.	
<b>SOC 4334</b>	<b>AS 3(3,0)</b>
<b>Soviet Sociology:</b> Analysis of relations of various Soviet institutions such as education, religion, and the Communist party to society; class structure and social problems.	
<b>SOC 4480</b>	<b>AS 3(3,0)</b>
<b>Applied Sociology:</b> PR: SOC 2000 and 3201. Examination of the utilization of sociological principles in the treatment of practical human problems and organization.	
<b>SOC 4507</b>	<b>AS 4(3,1)</b>
<b>Data Analysis:</b> PR: SOC 3500 and a statistic course.	
<b>SOC 4509</b>	<b>AS 4(2,2)</b>
<b>Social Research Practicum:</b> PR: SOC 4507 and C.I. Application of advanced research designs and data analysis techniques to assigned projects, with an emphasis on data management.	
<b>SOC 4830</b>	<b>AS 3(3,0)</b>
<b>Sociological Social Psychology:</b> PR: SOC 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.	
<b>SOP 3004</b>	<b>AS 3(3,0)</b>
<b>Social Psychology:</b> PR: PSY 2013. Effects of social situations and social variables on the behavior of individuals.	
<b>SOP 3706</b>	<b>AS 3(3,0)</b>
<b>Television and Behavior:</b> The influence of television viewing on such behaviors as scholastic achievement, aggression, prosocial behavior, sex-role and racial stereotypes, and consumer behavior.	

- SOP 3724** **AS 3(3,0)**  
**The Psychology of Racial Prejudice:** PR: PSY 2013. Examination of literature relating to prejudice toward ethnic groups; effects of racism on individuals, development and maintenance of prejudice, and possible ways to reduce prejudice.
- SOP 3742** **AS 3(3,0)**  
**Psychology of Women:** PR: PSY 2013. Examination of the psychological impact of changing sex roles on women in modern society. Topics include childrearing, working women, sex differences in personality and cognition.
- SOP 3772** **AS 3(3,0)**  
**Sexual Behavior:** PR: PSY 2013. Physiological, social, and clinical aspects of human sexuality.
- SOW 3104** **AS 3(3,0)**  
**Human Growth and Development:** Development of social work skills in assessing an individual's biological, psychological and social development from birth to death, recognizing influences of culture and other environmental factors.
- SOW 3110** **AS 3(3,0)**  
**Assessing Individual Behavior:** The development of social work skills in assessing individual functioning at various life stages from major theoretical perspectives.
- SOW 3191** **AS 3(3,0)**  
**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** **AS 3(3,0)**  
**Social Welfare:** A Social Institution: Study of social welfare policies, programs and services, including socio-cultural, political, economic and historical forces affecting changes in societal responses to human needs. Oriented to non-majors.
- SOW 3232** **AS 3(3,0)**  
**Social Welfare Policy, Services, and Issues:** PR: SOW 3302. Development of skills needed to critically analyze social welfare goals, structures and practices. Proposes improvements in societal resource systems.
- SOW 3302** **AS 3(3,0)**  
**Introduction to Social Welfare and Social Work:** Study of social welfare as an institution and social work as a profession and factors which influence their development as societal resource systems. Oriented to majors.
- SOW 4300** **AS 3(2,1)**  
**Generalist Practice in Social Work:** Study of social work values, systems perspective, problem solving approach, generalist functions, and the use of a generalist model of practice.
- SOW 4341** **AS 3(1,2)**  
**Micro-Level Roles and Interventions in Social Work:** PR: SOW 4300, SOW 4352. Study and simulated practice of roles and tasks in systemic problem solving with individuals, families, and supportive and remedial groups.
- SOW 4343** **AS 3(1,2)**  
**Macro-Level Roles and Interventions in Social Work:** PR: SOW 4300, SOW 4352. Study and simulated practice of roles and tasks in systemic problem solving to obtain and improve social welfare resources within organizations and communities.
- SOW 4352** **AS 3(1,2)**  
**Interpersonal Skills in Social Work Practice:** PR: SOW 4300. Simulated practice of interviewing, group leadership, written communication, and oral presentations, in consensual as well as conflictual contexts of social work.
- SOW 4381** **AS 3(1,2)**  
**Agency Management:** PR: SOW 3302 or SOW 3203. Basic administrative practice including planning, staffing, delegating, managing and developing personnel, monitoring services, budgeting and fund raising.
- SOW 4431** **AS 3(2,1)**  
**Evaluating Social Work Practice and Service Programs:** PR: SOC 3504, SOW 4300. Skill development in (1) documenting unmet client needs, (2) aggregating data for assessing interventive outcomes, (3) evaluating programs and (4) analyzing research practice linkages.
- SOW 4510** **AS 9(0,9)**  
**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 400 clock hours in the field.
- SOW 4522** **AS 3(3,0)**  
**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 4620** **AS 3(2,1)**  
**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. **AS 3(3,0)**

**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. **AS 3(3,0)**

**SPA 3001** **Introduction to Communicative Disorders:** Etiology, symptoms, and methods of diagnosing and treating communicative disorders. For beginning and prospective majors in communicative disorders. **HLTH 3(3,0)**

**SPA 3003** **Detection and Prevention of Speech and Hearing Problems:** An elective course for non-majors. Live and videotaped demonstrations of speech and hearing cases. Specific suggestions for prevention. **HLTH 3(3,0)**

**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. **HLTH 1(0,2)**

**SPA 3101** **Physiological Bases of Speech and Hearing:** PR: SPA 3001. An introduction to the anatomical physiological, and physical elements underlying the communication process. **HLTH 3(3,0)**

**SPA 3112** **Basic Phonetics:** Physiological descriptions and visual notation of speech patterns and regional dialects. **HLTH 3(3,0)**

**SPA 3112L** **Basic Phonetics Laboratory:** Students will have practical experiences in transcription of normal and deviant speech. **HLTH 1(0,2)**

**SPA 3550** **Clinical Methods in Communicative Disorders:** PR: SPA 3001. An analysis of techniques and methods of planning and executing therapeutic programs for communicatively handicapped individuals. **HLTH 3(3,0)**

**SPA 3550L** **Clinical Methods in Communicative Disorders Laboratory:** Students will have practical experience in analysis of live and videotaped diagnosis and therapy sessions. **HLTH 1(0,2)**

**SPA 4011** **Fundamentals of Speech and Hearing Science:** Lectures and demonstrations in basic acoustics and speech acoustics. **HLTH 3(3,0)**

**SPA 4030** **Basic Audiology:** Introduction to physics of sound, anatomy of hearing mechanism, pure tone audiometry, hearing aids, problems of the hearing handicapped. Clinical skills development will be required. **HLTH 4(4,0)**

**SPA 4201** **Communicative Disorders: Articulation:** PR: SPA 3001, 3112. Survey of articulation disorders and their management. **HLTH 3(3,0)**

**SPA 4201L** **Communicative Disorders: Articulation Laboratory:** Students will have practical experience in diagnosis and treatment in articulation disorders. **HLTH 1(0,2)**

**SPA 4210** **Communicative Disorders: Voice:** PR: SPA 3101, 3550. Survey of voice disorders and their management. Observations required. **HLTH 4(3,1)**

**SPA 4222** **Nonorganic Speech Disorders:** PR: SPA 3550, 4201. Survey of nonorganic aspects of stuttering and voice disorders and their management. **HLTH 3(3,0)**

**SPA 4222L** **Nonorganic Speech Disorders Laboratory:** Students will have practical experience in diagnosis and treatment in nonorganic speech disorders. **HLTH 1(0,2)**

**SPA 4250** **Organic Speech Disorders:** PR: SPA 3101, 4030, 4201. Survey of organically based communication disorders and their management. Observations required. **HLTH 3(3,0)**

**SPA 4250L** **Organic Speech Disorders Laboratory:** Students will have practical experience in observations of organic speech disorders. **HLTH 1(0,2)**

- SPA 4326** HLTH 4(4,0)  
**Aural Habilitation-Rehabilitation:** PR: SPA 4011, 4201. Principles and procedures in the utilization of residual hearing, auditory training, speech reading and the use of hearing aids.
- SPA 4402** HLTH 3(3,0)  
**Communicative Disorders: Language:** PR: SPA 3550, LIN 3710. Survey of language disorders and their management. Observations required.
- SPA 4402L** HLTH 1(0,2)  
**Communicative Disorders: Language Laboratory:** Students will have practical experience in diagnosis and treatment in language disorders.
- SPA 4941** HLTH 1(1,1)  
**Practicum in Communicative Disorders.**
- SPA 5005** HLTH 3(3,0)  
**Survey of Communicative Disorders:** A survey of speech, language, and hearing disorders for habilitative personnel and other interested professionals.
- SPA 5103** HLTH 3(3,0)  
**Anatomy and Physiology of the Auditory Mechanism:** PR: Graduate status or C.I. Structure and function of the systems comprising audition.
- SPA 5132** HLTH 4(3,3)  
**Instrumentation in Psychoacoustics:** PR: Graduate status or C.I. Lectures, readings and experiments pertaining to the subjective reception of sound.
- SPA 5225** HLTH 3(3,0)  
**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** HLTH 1(0,2)  
**Fluency Disorders Laboratory:** PR: Graduate status or C.I. Practical application of clinical skills in fluency disorders.
- SPA 5307** HLTH 3(3,0)  
**Differential Diagnosis of Auditory Disorders:** PR: Graduate status or C.I. Clinical techniques in pure tone speech, acoustic impedance and electrophysiologic response audiometry.
- SPA 5358** HLTH 4(4,0)  
**Aural Habilitation/Rehabilitation:** PR: C.I. Principles and procedures involved in speech and language acquisition management, utilization of residual hearing, speech reading and the use of hearing aids.
- SPA 5458** HLTH 3(3,0)  
**Therapeutic Communication:** PR: Graduate status or C.I. Practical interviewing and counseling in the area of communicative disorders.
- SPA 5553** HLTH 3(3,0)  
**Differential Diagnostic in Speech and Language:** PR: Graduate status or C.I. Administration and interpretation of evaluation techniques, including standardized tests, will be presented. Emphasis on techniques allowing for differential diagnosis of speech and language disorders.
- SPA 5553L** HLTH 1(0,4)  
**Differential Diagnosis in Speech and Language Laboratory:** PR: Graduate status or C.I. Assignment to diagnostic teams to apply the diagnostic techniques presented in SPA 5553. Experiences include test administration, interviewing, writing diagnostic reports, oral presentations.
- SPA 5600** HLTH 3(3,0)  
**Administration and Management of Communicative Disorders Programs:** PR: Graduate status or C.I. Methods and techniques for organization and administration of speech-language and hearing disorders in public school, hospital, rehabilitation center and private practice facilities.
- SPA 5805** HLTH 3(3,0)  
**Research in Communicative Disorders:** PR: STA 4163, graduate status or C.I. Introduces the student to empirical research in the area of communication disorders. Emphasis is on hypothesis testing, methodology, analysis and interpretation of results.
- SPC 1005** AS 1(0,1)  
**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** AS 3(1,2)  
**Fundamentals of Oral Communication:** Use of the body and voice; participation in various speaking situations; planning, organizing, and delivering public speeches.
- SPC 3050** HLTH 3(3,0)  
**Voice and Articulation:** An introduction for non-majors to the anatomy of voice and speech production. Analysis of voice and articulation of each student. Exercise for individual improvement.
- SPC 3250** AS 3(1,2)  
**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. **AS 3(1,2)**
- SPC 3410** **Parliamentary Procedures:** Principles and rules governing participation and leadership in the conduct of formal business meetings. **AS 1(0,1)**
- 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. **AS 3(2,1)**
- 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. **AS 3(3,0)**
- 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. **AS 3(1,2)**
- SPC 3542** **Persuasion: Motivation:** PR: SPC 1014 or C.I. A study of motivational factors involved in persuasive speaking to secure belief and action. **AS 3(2,1)**
- 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. **AS 4(1,3)**
- SPC 4330** **Nonverbal Communication:** Review of current behavioral research in such areas as proxemics, kinesics, physical characteristics, tactile communication and paralanguage. Lectures are supplemented by frequent nonverbal exercises. **AS 3(3,0)**
- SPC 4350** **Studies in Listening:** Analysis of current trends, professional literature, and resource materials bearing upon the teaching of listening. Practice in listening; preparing listening experiences; oral and written reports. **AS 3(3,0)**
- SPC 4440** **Group Dynamics:** A study of human behavior in group situations. **AS 3(3,0)**
- SPC 4540** **Attitudes and Communication:** PR: English proficiency examination. A survey of the immediate and direct ways in which persuasive communications and social groups come to influence attitudes. **AS 3(3,0)**
- SPC 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. **AS 3(3,0)**
- SPC 5200** **Evolution of Communication Theory: General Survey:** Major communication trends from classical era to the present. Comparison of Aristotelian and non-Aristotelian rhetorics. Contributions to principal figures will be discussed. **AS 3(3,0)**
- SPN 1100** **Elementary Spanish Language and Civilization:** Designed to initiate the student to the major language skills: listening, speaking, reading, and writing. **AS 3(3,1)**
- SPN 1101** **Elementary Spanish Language and Civilization:** PR: SPN 1100 or equivalent. Continuation of SPN 1100. **AS 3(3,1)**
- SPN 1170** **Elementary Spanish Study Abroad:** Elementary Spanish language and civilization taught in the native environment. **AS 8(16,10)**
- SPN 2210** **Intensive Spanish Conversation:** PR: One year of Spanish or equivalent. Practical use of the language leading toward fluency and correctness in speaking. **AS 3(3,0)**
- SPN 2230** **Intermediate Spanish Language and Civilization:** PR: SPN 1101 or equivalent. Designed to continue development of language skills at the intermediate level. **AS 3(3,1)**
- SPN 2231** **Intermediate Spanish Language and Civilization:** PR: SPN 2230 or equivalent. Continuation of SPN 2230 with emphasis on Spanish civilization. **AS 3(3,1)**
- SPN 2270** **Intermediate Spanish Study Abroad:** PR: Elementary Spanish. Intermediate Spanish language and civilization taught in the native environment. **AS 8(16,10)**



<b>SPN 3240</b>	<b>AS 3(3,0)</b>
<b>Spanish Conversation:</b> PR: SPN 2231 or equivalent. Development of skills in conversation and comprehension through practice. This course may be repeated for credit. When repeated, credit will apply to general electives only.	
<b>SPN 3420</b>	<b>AS 3(3,0)</b>
<b>Spanish Composition:</b> PR: SPN 2231 or equivalent. Development of skills in composition. This course may be repeated for credit. When repeated, credit will apply to general electives only.	
<b>SPN 4410</b>	<b>AS 3(3,0)</b>
<b>Advanced Spanish Conversation:</b> PR: SPN 3240. Advanced conversation on directed topics from various disciplines: Literature, art, psychology, philosophy, music, business and the sciences.	
<b>SPN 4420</b>	<b>AS 3(3,0)</b>
<b>Advanced Spanish Composition:</b> PR: SPN 3420. Readings and written imitations of modern literary styles in the form of themes, sketches, poems and original stories.	
<b>SPN 4450</b>	<b>AS 3(3,0)</b>
<b>Stylistics:</b> PR: SPN 3420 or equivalent. An intense study of textural criticism. An examination of the relationship between language and literature, explications and linguistic analysis of literary texts.	
<b>SPN 4510</b>	<b>AS 3(3,0)</b>
<b>Spanish Civilization and Culture:</b> PR: SPN 3240 or SPN 3420. A study of Spanish civilization and culture from Pre-Roman times to the present. Conducted in Spanish.	
<b>SPN 4520</b>	<b>AS 3(3,0)</b>
<b>Latin American Civilization and Culture:</b> PR: SPN 3240 or SPN 3420. An overview of the currents in Latin American culture and civilization from the Pre-Columbian period to the present. Conducted in Spanish.	
<b>SPW 3100</b>	<b>AS 3(3,0)</b>
<b>Survey of Spanish Literature I:</b> PR: SPN 2231 or equivalent. Main literary currents and works from the Middle Ages through the Eighteenth Century.	
<b>SPW 3101</b>	<b>AS 3(3,0)</b>
<b>Survey of Spanish Literature II:</b> PR: SPN 2231 or equivalent. Main literary currents and works of the Nineteenth Century to the present.	
<b>SPW 3130</b>	<b>AS 3(3,0)</b>
<b>Survey of Latin-American Literature I:</b> PR: SPN 2231 or equivalent. Main literary currents and works from the colonial period to the Nineteenth Century Romanticism.	
<b>SPW 3131</b>	<b>AS 3(3,0)</b>
<b>Survey of Latin-American Literature II:</b> PR: SPN 2231 or equivalent. Main literary currents and works of the Nineteenth Century from the Realism to the present.	
<b>SPW 3370</b>	<b>AS 3(3,0)</b>
<b>Spanish Short Story:</b> PR: SPN 2231 or equivalent. A study of representative 19th and 20th Century Spanish short stories and their authors.	
<b>SPW 4310</b>	<b>AS 3(3,0)</b>
<b>Golden Age Drama:</b> PR: SPW 3100. A study of the drama of the Golden Age with special emphasis on Lope, Tirso, Alarcon, and Calderon. The controversies of the Spanish theatre and its influence abroad.	
<b>SPW 4460</b>	<b>AS 3(3,0)</b>
<b>Nineteenth Century Spanish Literature:</b> PR: SPW 3101. A study of the representative authors and works in Spanish Romanticism, Realism and Naturalism.	
<b>SPW 4480</b>	<b>AS 3(3,0)</b>
<b>Twentieth Century Spanish Literature:</b> PR: SPW 3101. A study of the representative authors and works in drama and the novel.	
<b>SPW 4600</b>	<b>AS 3(3,0)</b>
<b>Cervantes I:</b> PR: 3100. Don Quixote (Part I).	
<b>SPW 4601</b>	<b>AS 3(3,0)</b>
<b>Cervantes II:</b> PR: 3100. Don Quixote (Part II).	
<b>SPW 4725</b>	<b>AS 3(3,0)</b>
<b>The Generation of 1898:</b> PR: SPW 3101. A study of the Generation's main authors and their works.	
<b>SSE 3312</b>	<b>ED 4(4,0)</b>
<b>Teaching Social Science in the Elementary School:</b> PR: Admission to Phase II or C.I. Selected themes, problems, and concepts; organizing for instruction; techniques; evaluation procedures.	
<b>SSE 3333</b>	<b>ED 4(3,2)</b>
<b>Social Science Instructional Analysis:</b> PR: EDG 4341 or C.I. Study of instructional programs in Social Sciences; objectives; materials; techniques; organization of instruction; evaluation procedures; current research.	
<b>SSE 5334</b>	<b>ED 3(3,0)</b>
<b>Inquiry in the Social Studies:</b> PR: Regular Certificate or C.I. Teaching by inquiry in the new social studies with a development of inquiry episodes.	

- SSE 5440** **ED 3(3,0)**  
**Law Education Studies Materials:** PR: Senior standing or C.I. Design, organization and development of educational materials relating constitutional law concepts to citizenship education for schools.
- SSI 4155** **AS 4(4,0)**  
**Science Fiction and the Social Sciences:** A multi-media examination of note-worthy science fiction from the Social Science perspective.
- STA 2014** **AS 3(3,0)**  
**Principles of Statistics:** Introduction to statistical concepts in modern society. Basic principles, frequency distributions, measures of location and dispersion, probability, statistical inference.
- STA 3023** **AS 3(3,0)**  
**Fundamentals of Probability and Statistics:** PR: Four years of high school mathematics or MAC 1104 or C.I. First methods course introducing probability and statistical inference including estimation, hypothesis testing, binomial and normal distributions, small samples.
- STA 3032** **EN 3(3,0)**  
**Probability and Statistics for Engineers:** PR: MAC 3313 and COP 3215. Axioms of probability; combinatorial and geometrical probability; probability distributions; measures of location and dispersion; sampling and sampling distributions; estimation and tests of hypotheses; engineering applications.
- STA 3664** **AS 3(3,0)**  
**Statistical Quality Control:** PR: One course in statistics or C.I. Statistical concepts and methods applied to the control of quality of manufactured products.
- STA 4102** **AS 3(3,0)**  
**Computer Processing of Statistical Data:** PR: STA 4163 and knowledge of a programming language or C.I. Use of packages such as SAS, BMD, SPSS for data validation, description and analysis of data, regression and analysis of variance and covariance.
- STA 4163** **AS 3(3,0)**  
**Statistical Methods I:** PR: One course in statistics or C.I. Statistics in research includes methods of analyzing data, statistical concepts and models, estimation, tests hypotheses, regression and correlation, an introduction to analysis of variance and chi-square.
- STA 4164** **AS 3(3,0)**  
**Statistical Methods II:** PR: STA 4163 or C.I. A continuation of STA 4163 including further study of regression, analysis of variance and covariance and multiple comparisons.
- STA 4202** **AS 3(3,0)**  
**Experimental Design:** PR: STA 4163 or C.I. Methods of constructing and analyzing designs for experimental investigations. Concepts of blocking, randomization, and replication. Confounding in factorial experiments. Incomplete block designs.
- STA 4222** **AS 3(3,0)**  
**Sample Survey Methods:** PR: STA 3023 or C.I. Constructing and analyzing designs for survey investigations. Simple random, stratified multistage and multiphase sampling designs. Methods of estimation. Techniques of survey investigation.
- STA 4321** **AS 3(3,0)**  
**Statistical Theory I:** PR: MAC 3312 or C.I. Topics include sample spaces, probability axioms, distribution functions, sampling distributions, interval estimation and hypothesis testing.
- STA 4322** **AS 3(3,0)**  
**Statistical Theory II:** PR: STA 4321 or C.I. Continuation of STA 4321. Topics include the multivariate normal, regression and correlation, linear models, analysis of variance and distribution-free methods.
- STA 4442** **AS 3(3,0)**  
**Probability Theory and Applications:** PR: STA 4321 or C.I. Markov chains, recurrent events, sequences of random variables, random walk, and simple stochastic processes.
- STA 4502** **AS 3(3,0)**  
**Nonparametric Statistical Methods:** PR: STA 3023 or C.I. Statistical methods that do not require specification of a parametric distribution. Rank tests and tests for randomness and independence.
- STA 5156** **EN 4(4,0)**  
**Probability and Statistics for Engineers:** PR: STA 3032 or equivalent. Theory and applications of discrete and continuous random variables, hypothesis tests, confidence intervals, regression analysis and correlation.
- STA 5206** **AS 3(3,0)**  
**Statistical Analysis:** PR: A course in statistical methods and a course in mathematical statistics or C.I. This course relates the ideas of probability and statistics, including distribution theory, to the collection and analysis of data.
- STD 3151** **ED 3(3,0)**  
**Career Development Analysis:** Analysis of job core areas. Community, state and federal information services, educational requirements and employment prospects in selected areas. Application and job interview techniques.

<b>SUR 3101C</b>	<b>EN 3(2,3)</b>
<b>Surveying:</b> PR: Junior Standing. Theory and field practice in surveying measurements, and the reduction and adjustment of field data.	
<b>THE 1020</b>	<b>AS 3(2,1)</b>
<b>Theatre Survey:</b> PR: None. An overview of the theatre arts.	
<b>THE 2071</b>	<b>AS 3(2,2)</b>
<b>Cinema Survey:</b> A broad cultural approach to cinema as theatre.	
<b>THE 2925</b>	<b>AS 2(0,10)</b>
<b>Theatre Practicum I:</b> Open to all students interested in participating in productions of University Theatre. May be repeated for credit. Primarily an activity course.	
<b>THE 3112</b>	<b>AS 3(3,0)</b>
<b>Theatre History I:</b> Development of theatre art from the earliest times through the seventeenth century.	
<b>THE 3113</b>	<b>AS 3(3,0)</b>
<b>Theatre History II:</b> Development of theatre art from the seventeenth century to the twentieth century.	
<b>THE 3251</b>	<b>AS 3(2,2)</b>
<b>History of the Motion Picture:</b> Development of the film industry; its social and economic impact. Major films and trends in context.	
<b>THE 3260</b>	<b>AS 3(2,2)</b>
<b>Theatrical Costume History and Design:</b> History and theory of theatrical costumes.	
<b>THE 3312</b>	<b>AS 3(3,0)</b>
<b>Drama Development I:</b> Study of dramatic literature from the Greek theatre through the seventeenth century.	
<b>THE 3313</b>	<b>AS 3(3,0)</b>
<b>Drama Development II:</b> A study of dramatic literature from the 18th through 20th centuries. Continuation of THE 3312.	
<b>THE 3925</b>	<b>AS 2(0,10)</b>
<b>Theatre Practicum II:</b> 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.	
<b>THE 4072</b>	<b>AS 3(3,0)</b>
<b>Principles of Motion Picture Art:</b> PR: THE 3251 or C.I. Aesthetic consideration of the motion picture as art. May be repeated for credit.	
<b>THE 4073</b>	<b>AS 3(2,2)</b>
<b>Film Production:</b> PR: C.I. Professional 16mm film production, scripting, production, sound, and editing of theatre department ensemble films. May be repeated twice.	
<b>THE 4075</b>	<b>AS 3(3,0)</b>
<b>Modern Motion Picture Technique:</b> PR: THE 3251 or C.I. An examination of the techniques of motion picture as art; directing, acting, editing, writing, cinematography.	
<b>THE 4200</b>	<b>AS 3(2,2)</b>
<b>Broadway and Regional Theatre Trends:</b> An examination of the influences of the American drama and theatre. Trends in theatrical production and dramatic types.	
<b>THE 4375</b>	<b>AS 3(3,0)</b>
<b>Contemporary Theatre and Drama:</b> Trends in theatrical production and dramatic literature in Italy, France, Germany, Russia and the Scandinavian countries.	
<b>THE 4800</b>	<b>AS 3(2,2)</b>
<b>Children's Theatre:</b> An introduction to the bases of theatre production for young people. Production of children's theatre, play selection, costumes, management, and touring.	
<b>TPA 2082</b>	<b>AS 3(2,2)</b>
<b>Stage Properties:</b> Design, construction, operation, and management of stage properties.	
<b>TPA 2210</b>	<b>AS 3(2,2)</b>
<b>Technical Theatre Production:</b> PR: THE 1020. History, theory, and practice of technical theatre production.	
<b>TPA 3060</b>	<b>AS 3(2,2)</b>
<b>Scene Design I:</b> 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).	
<b>TPA 3220</b>	<b>AS 3(2,2)</b>
<b>Stage Lighting:</b> PR: THE 1020 and 2210. Study of stage lighting techniques, practices, and equipment. (Service on light crew as required).	
<b>TPA 3221</b>	<b>AS 3(2,2)</b>
<b>Lighting Design:</b> PR: TPA 3220. Continuation of Stage Lighting with emphasis on theory, style and individual lighting design projects.	
<b>TPA 3230</b>	<b>AS 3(2,2)</b>
<b>Theatrical Costume Construction and Technique:</b> A continuation of THE 3260 in which emphasis is placed on design and construction, planning, and execution of costumes.	

<b>TPA 3250</b>	<b>AS 3(2,2)</b>
<b>Make-up Technique:</b> Analysis and design of stage make-up.	
<b>TPA 3400</b>	<b>AS 3(3,0)</b>
<b>Theatre Management:</b> Study of the development, organization, management, funding, and promotion of Theatre programs.	
<b>TPA 4061</b>	<b>AS 3(2,2)</b>
<b>Scene Design II:</b> PR: TPA 3060, 3220. A continuation of TPA 3060 in which the emphasis is placed on independent planning and execution of scene designs.	
<b>TPP 2110</b>	<b>AS 3(2,2)</b>
<b>Acting I:</b> Emphasis on movement, motivation, voice, characterizational techniques, makeup, and other basic requirements for acting.	
<b>TPP 3111</b>	<b>AS 3(2,2)</b>
<b>Acting II:</b> PR: TPP 2110 or C.I. Continuation of TPP 2110. May be repeated for credit.	
<b>TPP 3130</b>	<b>AS 3(2,2)</b>
<b>Classical Mime:</b> PR: TPP 2110 or C.I. Introduction to the art of mime with an emphasis on mask work and illusion.	
<b>TPP 3310</b>	<b>AS 3(2,2)</b>
<b>Directing I:</b> Fundamental principles of theatrical directing. Each student is required to direct short scenes for laboratory presentation and criticism.	
<b>TPP 3700</b>	<b>AS 3(2,2)</b>
<b>Stage Diction:</b> The role of the voice in the art of acting though practice in vocal characterization.	
<b>TPP 4220</b>	<b>AS 3(2,2)</b>
<b>Audition Techniques:</b> Preparation of audition material for musical, dinner, outdoor and repertory theatres, as well as graduate schools. Emphasis on resumes and unions.	
<b>TPP 4260</b>	<b>AS 3(2,2)</b>
<b>Acting for Film and Television:</b> PR: TPP 2110 or C.I. Preparation for professional level work through studio work and field trips. Emphasis on resumes, composites, unions, and audition techniques for the medium.	
<b>TPP 4311</b>	<b>AS 3(2,2)</b>
<b>Directing II:</b> PR: TPP 3310. Further theories and techniques of play direction, study of dramatic values, plot structure, style, mood, composition, and directing approach.	
<b>TPP 4530</b>	<b>AS 3(2,2)</b>
<b>Stage Combat:</b> PR: TPP 2110 or C.I. Introduction to staged fight sequences from plays. Both armed and unarmed work will be explored.	
<b>TTE 4004</b>	<b>EN 3(3,0)</b>
<b>Transportation Engineering:</b> PR: EGN 3613 and STA 3032. Investigation of all forms of transport—highway, rail, water, air. Systems approach to planning, design, construction, operation, and administration of transportation networks.	
<b>TTE 5204</b>	<b>EN 3(3,0)</b>
<b>Traffic Engineering:</b> PR: STA 3032. Study of operator and vehicle characteristics, and design for street capacity, signals, signs and markings.	
<b>TTE 5720</b>	<b>EN 3(3,0)</b>
<b>Geometric Designs of Transportation Systems:</b> PR: TTE 4004. Study of geometric and construction design elements in the engineering of transportation systems.	
<b>URP 4026</b>	<b>AS 4(4,0)</b>
<b>Community Planning and Development:</b> Contemporary planning concepts, roles of the planning practitioner, and the influence of the political, economic, and social environments on public and quasi-public agencies.	
<b>VIC 3000</b>	<b>AS 3(3,0)</b>
<b>Visual Communication:</b> A study of the visual system of man, and the influences of the visual media on modern society.	
<b>VIC 3001</b>	<b>AS 3(3,0)</b>
<b>Photo Communication:</b> Photography of a communication device; use of still camera; basic photographic technique. Open to all majors.	
<b>ZOO 1020</b>	<b>AS 2(2,0)</b>
<b>Biology of Man:</b> An introduction to man as a member of the animal kingdom; his taxonomy, anatomy, growth, reproduction, development, heredity, evolution, behavior, diseases, and population growth.	
<b>ZOO 2010C</b>	<b>AS 3(2,4)</b>
<b>General Zoology:</b> PR: High school biology or C.I. Introduction to zoology; structure, function and representative groups; current concepts in zoological sciences.	
<b>ZOO 3303C</b>	<b>AS 4(2,6)</b>
<b>Vertebrate Zoology:</b> PR: 6 hours of zoology or C.I. Evolution and classification followed by an introduction to vertebrate ecology, natural history and behavior.	

- ZOO 3713C** **AS 5(3,6)**  
**Comparative Vertebrate Anatomy:** PR: ZOO 2010C. The vertebrate animals; relationship of organs and systems; and their phylogentic significance.
- ZOO 3733C** **AS 4(3,3)**  
**Human Anatomy:** PR: BSC 2010C or equivalent. Structure of the human body. Not open to students in ZOO 3713 or equivalent.
- ZOO 3753C** **AS 4(2,6)**  
**Vertebrate Histology:** PR: ZOO 2010C. Anatomy, structure and function of major cell types and tissues.
- ZOO 4203C** **AS 4(3,3)**  
**Invertebrate Zoology:** PR: 8 hours of biology or C.I. Taxonomy, anatomy and ecology of the invertebrate animals.
- ZOO 4453C** **AS 4(2,6)**  
**Ichthyology:** PR: 6 hours of zoology or C.I. Introduction to the biology of the fishes, their classification, evolution and life histories.
- ZOO 4603C** **AS 4(3,4)**  
**Embryology/Development:** PR: 8 hours biology or C.I. Concepts of developmental processes. Emphasis on embryology of vertebrates.
- ZOO 5463C** **AS 4(2,6)**  
**Herpetology:** PR: 6 hours of zoology or C.I. Introduction to the biology of the amphibians and reptiles, their classification, evolution and life histories.
- ZOO 5475C** **AS 4(2,6)**  
**Ornithology:** PR: 6 hours of zoology or C.I. Introduction to the biology of birds, their classification, evolution and life histories.
- ZOO 5483C** **AS 4(2,6)**  
**Mammalogy:** PR: 6 hours of zoology or C.I. Introduction to the biology of mammals, their classification, evolution and life histories.
- ZOO 5815** **AS 3(3,0)**  
**Zoogeography:** PR: 8 hours of zoology or C.I. Principles and concepts concerning regional patterns of animal distributions of the world, both past and present.



# FACULTY

The date indicates the first year of employment at the University of Central Florida.

- ABBOTT, DAVID W.**, *Professor of Psychology*  
(1968), B.A., M.S., Ph.D. (University of Massachusetts)
- ABEL, EILEEN M.**, *Assistant Professor of Sociology*  
(1978), A.B., M.S.W. (University of Maryland)
- ACIERNO, LOUIS J.**, *Associate Professor of Public Health*  
(1981), B.S., M.D. (Georgetown University)
- ADICKS, RICHARD**, *Professor of English*  
(1968), B.A.E., M.A., Ph.D., (Tulane University)
- ALEXANDER, GEORGE JR.**, *Assistant Professor of Military Science*  
(1981), B.S., M.S., M.B.A. (Central Michigan University)
- ALLEN, WILLIAM D.**, *Professor of Sociology*  
(1969), B.S., M.S.W. Ph.D., (Ohio State University)
- ALOI, MARY GAY**, *Assistant Professor of Nursing*  
(1978), B.S., M.S. (Syracuse University)
- AMMONS, JAMES H.**, *Assistant Professor of Public Service Administration*  
(1977), B.S., M.S.P.A., Ph.D. (Florida State University)
- ANDERSON, B. BETTY**, *Professor of Education*  
(1968), B.A., M.A., Ed.D. (University of Maryland)
- ANDREWS, BERNICE D.**, *Assistant Professor of Computer Science*  
(1981), B.S., M.Ed., Ph.D. (University of Florida)
- ANDREWS, LARRY C.**, *Associate Professor of Mathematics*  
(1972), B.S., M.S., Ph.D. (Michigan State University)
- ANTHONY, JOBY M.**, *Chairman, Department of Mathematics and Statistics; Associate Professor of Mathematics*  
(1970), B.S., M.A.M., Ph.D. (North Carolina State University)
- ARMSTRONG, JOHN H.**, *Associate Professor of Education*  
(1970), B.S., M.S., Ed.D. (Oklahoma State University)
- ARMSTRONG, LEE H.**, *Associate Professor of Mathematics*  
(1968), B.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)
- ATKINSON, STANLEY M.**, *Assistant Professor of Finance*  
(1981), B.B.A., M.B.A., D.B.A. (Mississippi State University)
- AVERY, CLARENCE G.**, *Chairman, Department of Accountancy and Professor of Accountancy*  
(1972), B.S., B.A., M.S.A., Ph.D. (University of Illinois), C.P.A. (State of Illinois, State of Ohio)
- BAKER, GRAEME L.**, *Professor of Chemistry*  
(1968), B.S., M.S., Ph.D. (Montana State University)
- BARNES, BETH**, *Acting Dean, Undergraduate Studies and Assistant Professor of English*  
(1975), B.A., M.A., Ph.D. (University of North Carolina at Chapel Hill)
- BARR, CAROL J.**, *Instructor of Medical Record Administration*  
(1980), B.S., RRA (Florida Technological University)
- BARR, MURRAY P.**, *Assistant Professor of Mathematics*  
(1968), B.S., M.S. (Adelphi University)
- BARR-JOHNSON, VIRGINIA**, *Professor of Education*  
(1971), B.A., M.Ed., Ph.D. (Florida State University)
- BARSCHE, KARL-HEINRICH**, *Assistant Professor of Foreign Languages*  
(1977), B.A., M.A., Ph.D. (University of Colorado)
- BAUER, CHRISTIAN S., JR.**, *Associate Professor of Engineering and Director, Transportation Systems Institute*  
(1970), B.S.I.E., M.S.E., Ph.D. (University of Florida), P.E. (Florida)

- BEADLE, JAMES S.**, *Associate Professor of Education*  
(1968), B.S., M.S., Ph.D. (Michigan State University)
- BEAN, STEVEN J.**, *Assistant Professor of Statistics*  
(1978), B.S., M.S., Ph.D. (University of South Florida)
- BECK, JAMES K.**, *Associate Professor of Engineering*  
(1970), B.S.A.E., M.S.E. (University of Central Florida) P.E. (Florida)
- BECKER, DONALD C.**, *Assistant Professor of Public Service Administration*  
(1976), B.A., M.Ed. (Wayne State University)
- BELKERDID, MADJID A.**, *Instructor of Engineering*  
(1979), B.S.E., M.S.E. (University of Central Florida)
- BENSON, CYNTHIA L.**, *Visiting Instructor in Political Science*  
(1981), B.S., M.A. (Ohio University)
- BERGNER, JOHN F., JR.**, *Professor of Health Sciences*  
(1975), B.S., M.S.P.H., Ph.D. (University of Maryland)
- BERRINGER, ORVILLE M.**, *Preprofessional Coordinator and Professor of Biological Sciences*  
(1981), B.S., M.S., Ph.D. (University of Oregon)
- BERRY, WALDRON**, *Associate Professor of Management*  
(1970), B.S., A.M., M.B.A., Ph.D. (University of Florida)
- BIRD, ROBERT C.**, *Associate Professor of Education*  
(1971), B.S., M.Ed., Ph.D. (Florida State University)
- BISHOP, PATRICIA J.**, *Assistant Professor of Engineering*  
(1978), B.S.E., M.S.M.E., Ph.D. (Purdue University) P.E. (Florida)
- BLAU, BURTON I.**, *Associate Professor of Psychology*  
(1972), B.A., M.A., Ph.D. (Southern Illinois University)
- BLEDSON, CAROL C.**, *Assistant Dean for Academic Affairs and Assistant Professor of Communication*  
(1970), B.S., M.A., (University of Oklahoma)
- BLEDSON, ROBERT L.**, *Associate Professor of Political Science*  
(1968), A.B., M.A., Ph.D. (University of Florida)
- BLOCK, DAVID L.**, *Director, Florida Solar Energy Center and Professor of Engineering*  
(1968), B.S., M.S., Ph.D. (Virginia Polytechnic Institute), P.E. (Florida)
- BLUME, DELORYS M.**, *Assistant Professor of Education*  
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December, 1969	William H. Dial, Doctor of Commercial Science
June, 1970	John W. Young, Doctor of Applied Science
March, 1973	Louis C. Murray, Doctor of Public Service
August, 1974	Fred Elmo Clayton, Doctor of Professional Engineering
August, 1978	Richard F. Livingston, Doctor of Business Administration
August, 1980	Howard Phillips (Posthumous) Doctor of Public Service
August, 1980	Thelma Dudley, Doctor of Humanities
December, 1981	Gene Burns, Master of Letters

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