



Tomorrow starts here.

East Carolina University®

Graduate Catalog 2011-2012

East Carolina University is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, national origin, religion, gender, age, or disability. Moreover, East Carolina University is open to people of all races and actively seeks to promote racial integration by recruiting and enrolling a larger number of minority students. East Carolina University is an equal opportunity/affirmative action employer.

UNIVERSITY TELEPHONE NUMBERS

University Operator: 252-328-6131

Graduate Admissions: 252-328-6012

Brody School of Medicine Admissions: 252-744-2202

School of Dental Medicine Admissions: 252-737-7000

This catalog is effective with the beginning of the academic year.

Courses normally meet one hour per week for each semester hour credit. The numbers in parentheses following the title for each course listed under the various programs, departments, and schools of the university indicate the semester hours credit. Exceptions to the rule, such as labs, are printed after course titles.

Prerequisites and corequisites for courses in section 8 of this catalog are indicated as follows: P if prerequisite; C if corequisite; P/C if prerequisite or corequisite. When P, C, or P/C is preceded by R, it is recommended but not required.

All provisions, regulations, degree programs, and course listings in this catalog are subject to revision by the appropriate governing bodies of East Carolina University. Students pursuing degree programs when such changes are instituted are expected to comply with the revisions that relate to their programs.



BULLETIN

2011-2012 GRADUATE CATALOG

This catalog is not the official ECU graduate catalog.

Access www.ecu.edu/cs-acad/academicprograms/catalogs.cfm for the official version of the 2011-2012 graduate catalog for updates throughout the academic year.

EAST CAROLINA UNIVERSITY BULLETIN (USPS 017-195)

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UNIVERSITY CALENDARS 2011-2012

Official university calendars, which incorporate any modifications to the calendars below, are maintained by the East Carolina University Faculty Senate office and may be accessed at <http://www.ecu.edu/fsonline>.

SUMMER SESSION 2011 FIRST TERM

(Actual class days: 4 Mondays, 6 Tuesdays, 5 Wednesdays, 5 Thursdays, 5 Fridays, 1 registration day, 1 final exam day)

March 15, Tuesday	Last day to apply for admission to Graduate School for first summer term.
March 26, Saturday	Last day to apply for graduation during the summer session.
April 15, Friday	Last day to apply as a post baccalaureate teacher licensure student for summer session.
May 1, Sunday	Last day to apply as an undergraduate student for summer first term & 11 week sessions.
May 11, Wednesday	Late processing fee assessed for all who have not paid fees by close of business.
May 12, Thursday	Fee accepted with late processing fee.
May 13, Friday	Schedules canceled for all who have not paid fees by 4:00 p.m.
May 16, Monday	New student registration and schedule changes.
May 17, Tuesday	Classes begin; schedule changes.
May 18, Wednesday	Last day for registration and schedule changes (drop and add) for first term by 5:00 p.m.
May 30, Monday	Memorial Day (no classes).
June 1, Wednesday	Last day to apply as an undergraduate student for second summer session.
June 3, Friday	Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of regularly scheduled class meetings.
June 15, Wednesday	Last day for graduate students to drop courses without grades by 5:00 p.m.
June 21, Tuesday	Classes end. Last day to submit grade replacement requests.
June 22, Wednesday	Final examinations.
June 24, Friday	Grades due in by noon.
July 1, Friday	Last day to apply as an undergraduate readmit student or post baccalaureate teacher licensure student for the fall term.
August 9, Tuesday	Last day to submit appeals to SAAC for readmission for fall semester.

SECOND TERM

(Actual class days: 4 Mondays, 5 Tuesdays, 5 Wednesdays, 6 Thursdays, 5 Fridays,
1 day for new student registration, 1 final exam day)

March 26, Saturday	Last day to apply for graduation during the summer session.
April 15, Friday	Last day to apply as a post baccalaureate teacher licensure student for summer sessions.
May 1, Sunday	Last day to apply as an undergraduate student for second summer term & 11 week sessions.
May 2, Monday	Last day to apply for admission to Graduate School for second summer term.
June 1, Wednesday	Last day to apply as an undergraduate student for second summer term.
June 16, Thursday	Late processing fee assessed for all who have not paid fees by close of business.
June 17, Friday	Fees accepted with late processing fee.

UNIVERSITY CALENDARS

June 20, Monday	Schedules canceled for all who have not paid fees by 4:00 p.m.
June 22, Wednesday	New student registration; schedule changes.
June 23, Thursday	Classes begin; schedule changes.
June 24, Friday	Last day for late registration and schedule changes (drop and add) for second summer term by 5:00 p.m.
June 27, Monday	Last day for schedule changes (add only) by 5:00 p.m.
July 1, Friday	Last day to apply as an undergraduate readmit student or post baccalaureate teacher licensure student for the fall term.
July 4, Monday	State Holiday (no classes).
July 12, Tuesday	Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of regularly scheduled class meetings.
July 18, Monday	Last day to submit thesis to Graduate School for completion of degree in summer session.
July 22, Friday	Last day for graduate students to drop courses without grades by 5:00 p.m.
July 28, Thursday	Classes end. Last day to submit grade replacement requests.
July 29, Friday	Final examinations.
August 1, Monday	Grades due at noon.
August 9, Tuesday	Last day to submit appeals to SAAC for readmission for fall semester.

11-WEEK SUMMER SESSION 2011

(Actual class days: 8 Mondays, 11 Tuesdays, 10 Wednesdays, 11 Thursdays, 10 Fridays, 1 final exam day)

March 15, Tuesday	Last day to apply for admission to Graduate School for summer session.
March 26, Saturday	Last day to apply for graduation during the summer session.
April 15, Friday	Last day to apply as a post baccalaureate teacher licensure student for summer sessions.
May 1, Sunday	Last day to apply as an undergraduate student for summer second term & 11 week sessions.
May 11, Wednesday	Late processing fee assessed for all who have not paid fees by 4:00 p.m.
May 12, Thursday	Fee accepted with late processing fee.
May 13, Friday	Schedules canceled for all who have not paid fees by 4:00 p.m.
May 16, Monday	Registration and schedule changes.
May 17, Tuesday	Classes begin; schedule changes.
May 18, Wednesday	Last day for registration and schedule changes (drop and add) by 5:00 p.m.
May 19, Thursday	Last day for schedule changes (add only) by 5:00 p.m.
May 30, Monday	Memorial Day (no classes).
June 1, Wednesday	Last day to apply as an undergraduate student for second summer term.
June 22, Wednesday	Midsummer Break (no classes).
June 23, Thursday	Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of regular scheduled class meetings.

July 1, Friday	Last day to apply as an undergraduate readmit student or post baccalaureate teacher licensure student for the fall term.
July 4, Monday	State Holiday (no classes).
July 18, Monday	Last day to submit thesis to Graduate School for completion of degree in the summer session.
July 22, Friday	Last day for graduate students to drop courses without grades by 5:00 p.m.
July 28, Thursday	Classes end. Last day for submission of grade replacement requests.
July 29, Friday	Final examinations.
August 1, Monday	Grades due at noon.
August 9, Tuesday	Last day to submit appeals to SAAC for readmission for fall semester.

FALL SEMESTER 2011

(Actual class days: 13 Mondays, 15 Tuesdays, 14 Wednesdays, 14 Thursdays, 14 Fridays, 13 Saturdays.
Effective class days: 14 Mondays, 14 Tuesdays, 14 Wednesdays, 14 Thursdays, 14 Fridays, 13 Saturdays.)

March 15, Tuesday	Last day to apply as an undergraduate freshman student for the fall semester.
April 15, Friday	Last day to apply as an undergraduate transfer student for the fall semester.
June 1, Wednesday	Last day to apply for admission to Graduate School for the fall semester.
July 1, Friday	Last day to apply as an undergraduate readmit student or post baccalaureate teacher licensure student for the fall semester.
August 9, Tuesday	Last day to submit appeals to SAAC for readmission for fall semester.
August 11, Thursday	Late processing fee assessed for all who have not paid fees by close of business.
August 12, Friday	Fees accepted with late processing fee.
August 15, Monday	Schedules canceled for all who have not paid fees by 4:00 p.m.
August 22, Monday	Faculty meetings.
August 22, Monday	Advising, registration, and schedule adjustments.
August 23, Tuesday	Classes begin; schedule changes.
August 29, Monday	Last day for late registration and schedule changes (drop and add) by 5:00 p.m.
September 5, Monday	Labor Day holiday (no classes).
September 6, Tuesday	State holiday makeup day (classes which would have met on Monday, September 5, will meet on this day so there will effectively be the same number of Mondays and Tuesdays as every other weekday during the semester; Tuesday classes will not meet).
September 6, Tuesday	Last day to apply for graduation in December.
October 8-11 Saturday-Tuesday	Fall Break.
October 12, Wednesday	8:00 a.m. Classes resume.
October 17-21 Monday- Friday	Advising for spring semester 2012.
October 18, Tuesday	Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of their regularly scheduled class meetings.
October 24, Monday	Registration for spring semester 2012 begins.
November 1, Tuesday	Last day to apply as an undergraduate student for the spring semester.
November 23-27 Wednesday-Sunday	Thanksgiving break.
November 28, Monday	8:00 a.m. Classes resume.
November 28, Monday	Last day for undergraduate students to remove incompletes given during spring and/or summer session 2011. Last day for graduate students to drop courses without grades by 5:00 p.m.
November 29, Tuesday	Last day to submit thesis to the Graduate School for completion of degree in this term.
December 6, Tuesday	Classes end. Last day for submission of grade replacement requests. Last day for graduate students to remove incompletes given during fall 2010.
December 7, Wednesday	Reading Day.
December 8, Thursday	Final examinations begin.

December 15, Thursday	Exams for fall semester close at 4:30 p.m.
December 16, Friday	Commencement.
December 17, Saturday	Grades due at noon.
December 23, Friday	Last day to submit appeals to SAAC for readmission for spring semester.

EXAMINATION SCHEDULE – FALL SEMESTER 2011

There will be no departure from the printed schedule, except as noted below: All examinations for one credit hour classes will be held during the last regular meeting of the class. Classes meeting more than three times a week will follow the examination schedule for MWF classes. Clinical and non-traditional class schedules, including graduate level courses, may also adopt a modified examination schedule as required. The final exam meeting is required in order to satisfy the 750 contact minutes per credit hour required by the University of North Carolina General Administration. Department Chairs are responsible for monitoring adherence to scheduled examination requirements.

Classes beginning 6:00 p.m. or later are considered night classes. Examinations in classes meeting one night a week will be held at 7:30-10:00 p.m. on the first night of their usual meeting during the examination period (December 8-December 15). Examinations in classes meeting two or more nights a week and beginning before 8:00 p.m. will be held at 7:30-10:00 p.m. on the first night of their usual meeting during the examination period (December 8-December 15). Examinations in classes meeting two or more nights a week and beginning at or after 8:00 p.m. will be held at 7:30-10:00 p.m. on the second night of their usual meeting during the examination period (December 8-December 15). Classes meeting on Saturday morning will have the final examination on Saturday, December 10, at the usual hour at which the classes meet. Distance education classes should give their final examination in a timely fashion to allow submitting of grades on time.

Classes beginning on the half hour or meeting longer than one hour will have the final examination at the time scheduled of the hour during which the class begins (e.g., a 9:30-11:00 a.m. TTh classes will follow the examination schedule of the 9:00 a.m. TTh classes; 8:00-10:00 a.m. MWF classes will follow the examination schedule of the 8:00 a.m. MWF classes).

Common examinations, including DE sections, will be held according to the following schedule:

FREN 1001, 1003, SPAN 1001, 1004, GERM 1001	5:00-7:30 Thursday, December 8
FREN 1002, SPAN 1002, 1003, GERM 1002	5:00-7:30 Friday, December 9
MATH 1065	5:00-7:30 Monday, December 12
CHEM 0150, 1120, 1130, 1150, 1160	5:00-7:30 Tuesday, December 13
CHEM 1121, 1131, 1151, 1161, 2753, 2763.....	5:00-7:30 Wednesday, December 14

Times class regularly meets

Time and day of examination

8:00 MWF	8:00 - 10:30 Wednesday, December 14
8:00 TTh	8:00 - 10:30 Thursday, December 15
9:00 MWF	8:00 - 10:30 Friday, December 9
9:00 TTh (9:30)	8:00 - 10:30 Thursday, December 8
10:00 MWF	8:00 - 10:30 Monday, December 12
10:00 TTh	8:00 - 10:30 Tuesday, December 13
11:00 MWF	11:00 - 1:30 Wednesday, December 14
11:00 TTh	11:00 - 1:30 Tuesday, December 13
12:00 MWF	11:00 - 1:30 Friday, December 9
12:00 TTh (12:30)	11:00 - 1:30 Thursday, December 8
1:00 MWF	11:00 - 1:30 Monday, December 12
1:00 TTh	11:00 - 1:30 Thursday, December 15
2:00 MWF	2:00 - 4:30 Wednesday, December 14
2:00 TTh	2:00 - 4:30 Thursday, December 15
3:00 MWF (3:30)	2:00 - 4:30 Friday, December 9
3:00 TTh (3:30)	2:00 - 4:30 Tuesday, December 13
4:00 MWF	2:00 - 4:30 Monday, December 12
4:00 TTh	2:00 - 4:30 Thursday, December 8
5:00 MWF	5:00 - 7:30 Monday, December 12
5:00 TTh	5:00 - 7:30 Thursday, December 8

SPRING SEMESTER 2012

(Actual class days: 14 Mondays, 15 Tuesdays, 14 Wednesdays, 14 Thursdays, 13 Fridays, 14 Saturdays.
Effective class days: 14 Mondays, 14 Tuesdays, 14 Wednesdays, 14 Thursdays, 14 Fridays, 14 Saturdays.)

October 15, Saturday	Last day to apply for admission to Graduate School for the spring semester.
November 1, Tuesday	Last day to apply as an undergraduate student for the spring semester.
December 23, Friday	Last day to submit appeals to SAAC for readmission for spring semester.
January 2, Monday	Late processing fee assessed for all who have not paid fees by 4:00 p.m. Fees accepted with late processing fee.
January 3, Tuesday	Class schedules canceled for all who have not paid fees by 4:00 p.m.
January 6, Friday	New student registration; schedule adjustments.
January 9, Monday	Classes begin; schedule changes.
January 13, Friday	Last day for late registration and schedule changes (drop and add) by 5:00 p.m.
January 16, Monday	State Holiday (no classes).
January 18, Wednesday	Schedules canceled for all who have not paid fees by 4:00 p.m. (Late add).
January 24, Tuesday	Last day to apply for graduation in May.
March 1, Thursday	Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of regularly scheduled class meetings.
March 4-11 Sunday - Sunday	Spring Break.
March 12, Monday	8:00 a.m. Classes resume.
March 12-16 Monday - Friday	Advising for summer session and fall semester 2012.
March 15, Tuesday	Last day to apply as an undergraduate freshman student for the fall semester.
March 19, Monday	Registration for summer sessions and fall semester 2012 begins.
March 26, Monday	Last day to apply for graduation during the summer sessions.
April 6-7, Friday-Saturday	State holiday (no classes).
April 12, Thursday	Undergraduate students last day to remove incompletes given during fall semester 2011. Last day for graduate students to drop courses without grades by 5:00 p.m.
April 13, Friday	Last day to submit thesis to the Graduate School for completion of degree in this term.
April 16, Monday	Last day to apply as an undergraduate transfer student for the fall semester. Last day to apply as a post baccalaureate teacher licensure student for summer sessions.
April 23, Monday	Graduate students last day to remove incompletes given during spring and/or summer session 2011.
April 24, Tuesday	State holiday makeup day (Classes which would have met on April 6, Friday, will meet on this day so there will effectively be the same number of Fridays and Tuesdays as every other weekday during the semester; Tuesday classes will not meet). Classes end. Last day for submission of grade replacement requests.
April 25, Wednesday	Reading Day.
April 26, Thursday	Final examinations begin.

May 1, Tuesday	Last day to apply as an undergraduate student for first summer and 11 week sessions.
May 3, Thursday	Exams for spring semester close at 4:30 p.m.
May 4, Friday	Commencement.
May 5, Saturday	Grades due at noon.

**EXAMINATION SCHEDULE
SPRING SEMESTER 2012**

There will be no departure from the printed schedule, except as noted below: All examinations for one credit hour classes will be held during the last regular meeting of the class. Classes meeting more than three times a week will follow the examination schedule for MWF classes. Clinical and non-traditional class schedules, including graduate level courses, may also adopt a modified examination schedule as required. The final exam meeting is required in order to satisfy the 750 contact minutes per credit hour required by the University of North Carolina General Administration. Department chairs are responsible for monitoring adherence to scheduled examination requirements.

Classes beginning 6:00 p.m. or later are considered night classes. Examinations in classes meeting one night a week will be held at 7:30-10:00 p.m. on the first night of their usual meeting during the examination period (April 26-May 3). Examinations in classes meeting two or more nights a week and beginning before 8:00 p.m. will be held at 7:30-10:00 p.m. on the first night of their usual meeting during the examination period (April 26-May 3). Examinations in classes meeting two or more nights per week and beginning at or after 8:00 p.m. will be held at 7:30-9:30 p.m. on the second night of their usual meeting during the examination period (April 26-May 3). Classes meeting on Saturday morning will have the final examination on Saturday, April 30, at the usual hour at which the class meets. Distance education classes should give their final examination in a timely fashion to allow submitting of grades on time.

Classes beginning on the half hour or meeting more than one hour will have the final examination at the time scheduled of the hour during which the class begins (e.g., a 9:30-11:00 a.m. TTh classes will meet the examination schedule of the 9:00 a.m. TTh classes; an 8:00-10:00 a.m. MWF classes will meet the examination schedule of the 8:00 a.m. MWF classes)

Common examinations, including DE sections, will be held according to the following schedule:

MATH 1065.....	5:00-7:30 Thursday, April 26
CHEM 0150, 1120, 1130, 1150, 1160.....	5:00-7:30 Friday, April 27
CHEM 1121, 1131, 1151, 1161, 2753, 2763	5:00-7:30 Monday, April 30
FREN 1001, 1003; GERM 1001; SPAN 1001, 1004	5:00-7:30 Tuesday, May 1
FREN 1002; GERM 1002; SPAN 1002, 1003.....	5:00-7:30 Wednesday, May 2

Times class regularly meets	Time and day of examination
8:00 MWF	8:00 - 10:30 Monday, April 30
8:00 TTh	8:00 - 10:30 Tuesday, May 1
9:00 MWF	8:00 - 10:30 Wednesday, May 2
9:00 TTh (9:30)	8:00 - 10:30 Thursday, May 3
10:00 MWF	8:00 - 10:30 Friday, April 27
10:00 TTh	8:00 - 10:30 Thursday, April 26
11:00 MWF	11:00 - 1:30 Monday, April 30
11:00 TTh	11:00 - 1:30 Thursday, April 26
12:00 MWF	11:00 - 1:30 Wednesday, May 2
12:00 TTh (12:30)	11:00 - 1:30 Thursday, May 3
1:00 MWF	11:00 - 1:30 Friday, April 27
1:00 TTh	11:00 - 1:30 Tuesday, May 1
2:00 MWF	2:00 - 4:30 Monday, April 30
2:00 TTh	2:00 - 4:30 Tuesday, May 1
3:00 MWF (3:30)	2:00 - 4:30 Wednesday, May 2
3:00 TTh (3:30)	2:00 - 4:30 Thursday, April 26
4:00 MWF	2:00 - 4:30 Friday, April 27
4:00 TTh	2:00 - 4:30 Thursday, May 3
5:00 MWF	5:00 - 7:30 Monday, April 30
5:00 TTh	5:00 - 7:30 Thursday, April 26

SUMMER SESSION 2012

FIRST TERM

(Actual class days: 4 Mondays, 6 Tuesdays, 5 Wednesdays, 5 Thursdays, 5 Fridays, 1 final exam day)

March 15, Thursday	Last day to apply for admission to Graduate School for first summer term.
March 26, Monday	Last day to apply for graduation during the summer session.
April 15, Sunday	Last day to apply as a post baccalaureate teacher licensure student for summer sessions.
May 1, Tuesday	Last day to apply as an undergraduate student for first summer term & 11-week sessions.
May 9, Wednesday	Late processing fee assessed for all who have not paid fees by 4:00 p.m.
May 10, Thursday	Fees accepted with late processing fee.
May 11, Friday	Schedules canceled for all who have not paid fees by 4:00 p.m.
May 14, Monday	New student registration; schedule changes.
May 15, Tuesday	Classes begin; schedule changes.
May 16, Wednesday	Last day for late registration and schedule changes (drop and add) for first term by 5:00 p.m.
May 28, Monday	Memorial Day (no classes).
June 1, Friday	Last day to apply as an undergraduate student for second summer term. Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of regularly scheduled class meetings.
June 13, Wednesday	Last day for graduate students to drop courses without grades by 5:00 p.m.
June 19, Tuesday	Classes end. Last day to submit grade replacement requests.
June 20, Wednesday	Final examinations.
June 22, Friday	Grades due at noon.
July 1, Sunday	Last day to apply as an undergraduate readmit student or post baccalaureate teacher licensure student for the fall semester.
August 7, Tuesday	Last day to submit appeals to SAAC for readmission for fall semester.

SECOND TERM

(Actual class days: 5 Mondays, 5 Tuesdays, 4 Wednesdays, 6 Thursdays, 5 Fridays, 1 final exam day)

March 26, Monday	Last day to apply for graduation during the summer session.
April 15, Sunday	Last day to apply as a post baccalaureate teacher licensure student for summer sessions.
May 1, Tuesday	Last day to apply as an undergraduate student for second summer term & 11-week sessions.
May 2, Wednesday	Last day to apply for admission to Graduate School for second summer term.
June 1, Friday	Last day to apply as an undergraduate student for second summer term.
June 14, Thursday	Late processing fee assessed for all who have not paid fees by 4:00 p.m.
June 15, Friday	Fees accepted with late processing fee.
June 18, Monday	Schedules canceled for all who have not paid fees by 4:00 p.m.

June 20, Wednesday	New student registration; schedule changes.
June 21, Thursday	Classes begin; schedule changes.
June 22, Friday	Last day for late registration and schedule changes (drop and add) for second term by 5:00 p.m.
July 1, Sunday	Last day to apply as an undergraduate readmit student or post baccalaureate teacher licensure student for the fall semester.
July 4, Wednesday	State Holiday (no classes).
July 10, Tuesday	Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of regularly scheduled class meetings.
July 16, Monday	Last day to submit thesis to Graduate School for completion of degree in summer session.
July 20, Friday	Last day for graduate students to drop courses without grades by 5:00 p.m.
July 26, Thursday	Classes end. Last day to submit grade replacement requests.
July 27, Friday	Final examinations.
July 30, Monday	Grades due at noon.
August 7, Tuesday	Last day to submit appeals to SAAC for readmission for fall semester.

11-WEEK SUMMER SESSION 2012

(Actual class days: 9 Mondays, 11 Tuesdays, 9 Wednesdays, 11 Thursdays, 10 Fridays, 1 final exam day)

March 15, Thursday	Last day to apply for admission to Graduate School for summer session.
March 26, Monday	Last day to apply for graduation during the summer session.
April 15, Sunday	Last day to apply as a post baccalaureate teacher licensure student for summer session.
May 1, Tuesday	Last day to apply as an undergraduate student for first summer term & 11-week session.
May 9, Wednesday	Late processing fee assessed for all who have not paid fees by 4:00 p.m.
May 10, Thursday	Fees accepted with late processing fee.
May 11, Friday	Schedules canceled for all who have not paid fees by 4:00 p.m.
May 14, Monday	New student registration; schedule changes.
May 15, Tuesday	Classes begin; schedule changes.
May 16, Wednesday	Last day for late registration and schedule changes (drop and add) by 5:00 p.m.
May 28, Monday	Memorial Day (no classes).
June 1, Friday	Last day to apply as an undergraduate student for second summer term.
June 20, Wednesday	Midsummer Break (no classes).
June 21, Thursday	Last day for undergraduate students to drop term-length courses or withdraw from school without grades by 5:00 p.m. Block courses may be dropped only during the first 50 percent of regular scheduled class meetings.
July 1, Sunday	Last day to apply as an undergraduate readmit student or post baccalaureate teacher licensure student for the fall semester.
July 4, Wednesday	State Holiday (no classes).

UNIVERSITY CALENDARS

July 16, Monday

Last day to submit thesis to Graduate School for completion of degree in the summer session.

July 20, Friday

Last day for graduate students to drop courses without grades by 5:00 p.m.

July 26, Thursday

Classes end. Last day for submission of grade replacement requests.

July 27, Friday

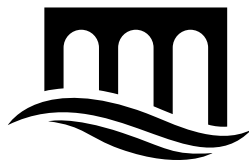
Final examinations.

July 30, Monday

Grades due at noon.

August 7, Tuesday

Last day to submit appeals to SAAC for readmission for fall semester.



Welcome To **EAST CAROLINA UNIVERSITY**

On July 2, 1908, former governor Thomas Jordan Jarvis, considered to be the father of East Carolina University, made the following remark as he broke ground for a teachers training school where Jarvis Residence Hall now stands:

"We can never begin to calculate the value it will be to North Carolina."

The teachers college, chartered by the North Carolina General Assembly on March 8, 1907, as a two-year normal school, opened its first regular session on October 5, 1909, with 174 men and women students enrolled. The first graduating class received diplomas on June 6, 1911. The years that followed revealed the accuracy of Jarvis' statement.

Since its inception in 1907, East Carolina has evolved from a teachers training school to a national research university. The student population has grown from 147 to over 25,000. The campus now includes more than 160 buildings in four locations: the central campus, health sciences, athletics, and west research campus. The university's academic programs are housed in ten colleges and professional schools, including the Brody School of Medicine at East Carolina University.

East Carolina University has become the institution that was envisioned by its early leaders, fulfilling its motto, "to serve." Today's leadership continues to build upon the foundation laid by Robert H. Wright, the first president of the university:

We will give to the rising generation the purest inheritance of the nation and better preparation than has ever been given to a preceding generation. This school is an expression of that determination; it was built by the people, for the people, and may it ever remain with the people, as a servant of the people.

In North Carolina, all public educational institutions that grant baccalaureate degrees are part of The University of North Carolina. Of the sixteen constituent institutions of the multicampus state university, East Carolina University is the third largest. The University of North Carolina includes Appalachian State University, East Carolina University, Elizabeth City State University, Fayetteville State University, North Carolina Agricultural and Technical State University, North Carolina Central University, North Carolina School of the Arts, North Carolina State University, the University of North Carolina at Asheville, the University of North Carolina at Chapel Hill, the University of North Carolina at Charlotte, the University of North Carolina at Greensboro, the University of North Carolina at Pembroke, the University of North Carolina at Wilmington, Western Carolina University, and Winston-Salem State University. The North Carolina School of Science and Mathematics, a residential high school for gifted students, is an affiliated school of The University of North Carolina.

OUR MISSION

East Carolina University, a constituent institution of The University of North Carolina, is a public doctoral university committed to meeting the educational needs of North Carolina and the mid-Atlantic region. It offers baccalaureate, master's, specialist, and doctoral degrees in the liberal arts, sciences, and professional fields, including medicine. The university is dedicated to educational excellence, responsible stewardship of the public trust, and academic freedom. ECU values the contributions of a diverse community, supports shared governance, and guarantees equality of opportunity.

The university's motto is *servire*, meaning "to serve." The university seeks to meet that obligation through the interrelated components of its mission: service through education, research and creative activity, and leadership and partnership.

The mission of East Carolina University is: To serve as a national model for **public service and regional transformation** by:

- preparing our students to compete and succeed in the global economy and multicultural society,
- distinguishing ourselves by the ability to train and prepare leaders,
- creating a strong, sustainable future for Eastern North Carolina through education, research, innovation, investment, and outreach,
- saving lives, curing diseases, and positively transforming health and health care, and
- providing cultural enrichment and powerful inspiration as we work to sustain and improve quality of life.

ORGANIZATION OF THE UNIVERSITY OF NORTH CAROLINA

The University of North Carolina Board of Governors is the policy-making body legally charged with “the general determination, control, supervision, management, and governance of all affairs of the constituent institutions.” It elects the president, who administers The University.

BOARD OF GOVERNORS

Hannah D. Gage, Chairman
Peter D. Hans, Vice Chairman
Dudley E. Flood, Secretary

Terms Expiring in 2015

Brent D. Barringer, Cary, NC	Mary Ann Maxwell, Goldsboro, NC
W. Louis Bissette, Jr., Asheville, NC	William Edwin McMahan, Charlotte, NC
Fred Eshelman, Wilmington, NC	Hari H. Nath, Cary, NC
John C. Fennebresque, Charlotte, NC	David Murphy Powers, Winston-Salem, NC
Ann B. Goodnight, Cary, NC	Richard ‘Dick’ Taylor, Lumberton, NC
H. Frank Grainger, Cary, NC	Raiford Trask III, Wilmington, NC
Thomas J. Harrelson, Southport, NC	Phillip D. Walker, Hickory, NC
G. Leroy Lail, Hickory, NC	

Terms Expiring in 2013

John M. Blackburn, Linville, NC	Paul Fulton, Winston-Salem, NC
Peaches Gunter Blank, Nashville, TN	Franklin E. McCain, Charlotte, NC
Laura W. Buffaloe, Roanoke Rapids, NC	Charles H. Mercer, Jr., Raleigh, NC
Bill Daughtridge, Jr., Rocky Mount, NC	Fred G. Mills, Raleigh, NC
Walter C. Davenport, Raleigh, NC	Burley B. Mitchell, Jr., Raleigh, NC
James M. Deal, Jr., Boone, NC	Irvin A. Roseman, Wilmington, NC
Phillip R. Dixon, Greenville, NC	David W. Young, Asheville, NC

Emeriti Members

Gov. James E. Holshouser, Jr., Southern Pines, NC J. Bradley Wilson, Durham, NC

Ex-Officio Member

Atul C. Bhula, Raleigh, NC

OFFICERS OF ADMINISTRATION

The University of North Carolina Board of Governors elects a president, who administers The University of North Carolina.

Thomas W. Ross, President
Jeffrey R. Davies, Chief of Staff
Bart Corgnati, Secretary of the University
Laura Luger, Vice President and General Counsel
Suzanne Trager Ortega, Senior Vice President for Academic Affairs
Joni Worthington, Vice President for Communications
Kimrey Rhinehardt, Vice President for Federal Relations
Charlie Perusse, Vice President for Finance
Anita Watkins, Vice President for Governmental Relations
John Leydon, Vice President for Information Resources and Chief Information Officer
Steven Leath, Vice President for Research
William Fleming, Vice President of Human Resources

ORGANIZATION OF EAST CAROLINA UNIVERSITY

Each institution has a board of trustees, which holds extensive powers over academic and other operations of its institution on delegation from the Board of Governors.

BOARD OF TRUSTEES

David S. Brody, Chair

Robert V. Lucas, Vice Chair

E. David Redwine, Secretary

Term Expiring in 2011

William H. Bodenhamer, Jr., Fort Lauderdale, FL

Robert G. Brinkley, Charlotte, NC

David S. Brody, Kinston, NC

Robert J. Greczyn, Jr., Cary, NC

Carol M. Mabe, Greensboro, NC

E. David Redwine, Ocean Isle Beach, NC

Term Expiring in 2013

Joel K. Butler, Greenville, NC

W. Kendall Chalk, Winston-Salem, NC

Steven W. Jones, Raleigh, NC

Robert V. Lucas, Selma, NC

Danny R. Scott, Swansea, IL

Mark E. Tipton, Raleigh, NC

Ex-Officio Member

Tremayne Smith, President, Student Government Association, Ex-officio

OFFICERS OF ADMINISTRATION

Each of the sixteen constituent institutions is headed by a chancellor, who is elected by the Board of Governors on the president's nomination and is responsible to the president.

Office of the Chancellor

Steve Ballard, BA, PhD, Chancellor

Philip Rogers, BA, MPA, Chief of Staff

John Durham, BA, MA, Executive Director of University Communications and Assistant Secretary to the Board of Trustees

Stacie Tronto, BSA, MBA, CIA, CISA, CFE, Director, Internal Audit

Donna Gooden Payne, BA, JD, University Attorney

Graduate School Officers of Administration

Deirdre M. Mageean, BSSc, MA, PhD, Vice Chancellor for Research and Graduate Studies

Paul Gemperline, BS, PhD, Dean of the Graduate School

Thomas J. McConnell, BS, PhD, Associate Dean of the Graduate School

Belinda P. Patterson, BS, MAEd, EdD, Associate Dean of the Graduate School

Robin Armstrong, BSBA, MBA, Director of Graduate Admissions

MEMBERSHIPS AND ACCREDITATIONS

East Carolina University (ECU) is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, master's, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of ECU.

All ECU teacher education programs are accredited by the National Council for the Accreditation of Teacher Education (NCATE) and the North Carolina Department of Public Instruction.

ECU is also a member of or accredited* by the following organizations:

ABET, Inc. *	Association for Continuing Higher Education
Academic Common Market	Association for Gerontology in Higher Education
Accreditation Association for Ambulatory Health Care, Inc. *	Association of Academic Health Centers
Accreditation Council for Academic Accreditation of the	Association of Academic Health Sciences Libraries
American Speech-Language-Hearing Association	Association to Advance Collegiate Schools of Business
Accreditation Council for Continuing Medical Education	International*
Accreditation Council for Graduate Medical Education	Association of the Advancement of Health Education/
Accreditation Council for Occupational Therapy Education	Society of Public Health Educators*
of the American Occupational Therapy Association*	Association of American Colleges
Accreditation Review Committee on Education for	Association of American Medical Colleges
Physician Assistant, Inc.	Association of College and Research Libraries
Administration of Accounting Programs Group, American	Association of College and University Printers
Accounting Association	Association of College Unions-International
American Academy of Religion	Association of College and University Housing Officers-
American Alliance for Health, Physical Education, Recreation	International
and Dance*	Association of Collegiate Schools of Planning
American Anthropological Association	Association of Experiential Education
American Association for Marriage and Family Therapy*	Association of Governing Boards of Universities and
American Association of Colleges of Nursing	Colleges
American Association of Colleges for Teacher Education	Association on Higher Education and Disability
American Association of Family and Consumer Sciences	Association of Environmental Health Academic Programs
American Association of School Librarians*	Association of Higher Education Facilities Officers
American Association of State Colleges and Universities	Association of Performing Arts Presenters
American Chemical Society*	Association of Physician Assistant Program
American College Health Association	Association of Public and Land-Grant Universities
American College of Nurse-Midwives*	Association of Southeastern Research Libraries
American College of Sports Medicine	Association of Technology, Management,
American College Personnel Association	and Applied Engineering
American Council for Construction Education*	Association of University Programs in Health Administration
American Council of Learned Societies	Association of University Research Parks
American Council of Nurse Midwives	Campus Safety Health and Environmental Management
American Council on Education	Association
American Council on the Teaching of Foreign Languages*	Coalition for Academic and Scientific Computation
American Dietetic Association*	College and University Personnel Association
American Historical Association	Commission on Accreditation for Health Informatics and
American Institute of Ultrasound in Medicine	Information Management Education*
American Kinesiology Association	Commission on Accreditation in Physical
American Library Association	Therapy Education*
American Mathematical Society	Commission on Accreditation of Allied Health
American Music Therapy Association	Education Programs
American Philosophical Association	Commission on Accreditation of Athletic Training Education
American Physical Therapy Association	Commission on Accreditation of Medical Physics
American Political Science Association	Educational Programs
American Society of Allied Health Professions	Commission on Collegiate Nursing Education (CCNE)
American Society of Cytopathology	Conference USA
American Sociological Association	Consortium for Oceanographic Research and Education
Arts Advocates of North Carolina	Cooperative Education Association, Inc.
Association for the Care of Children's Health	Corporation for Research and Educational Networking
Association for Childhood Education International*	Council for the Advancement and Support of Education

MEMBERSHIPS AND ACCREDITATIONS

Council for Exceptional Students*	National Association of Schools of Public Affairs and Administration*
Council for Higher Education Accreditation (CHEA)	National Association of Student Financial Aid Administrators
Council for Interior Design Accreditation*	National Collegiate Athletic Association (NCAA)
Council of Colleges of Arts and Sciences	National Collegiate Honors Council
Council of Graduate Schools in the United States	National Commission for Cooperative Education
Council on Collegiate Education in Nursing	National Council for Accreditation of Environmental Health Curricula
Council on Postsecondary Accreditation	National Council for Accreditation of Teacher Education*
Council on Rehabilitation Education*	National Council of Teachers of Mathematics
Council on Social Work Education*	National Council of University Research Administrators
Council on Undergraduate Research	National Council on Family Relations
Educational Leadership Constituent Council*	National Environmental Health Science and Protection Accreditation Council*
Fulbright Association	National Humanities Alliance
Health Education Accreditation of Allied Health Education Programs/Joint Review Committee on Educational Programs in Athletic Training*	National Intramural-Recreational Sports Association
Homeland Security Defense Education Consortium	National Kitchen and Bath Association*
International Association for Management Education	National League for Nursing Accrediting Commission*
International Association of Buddhist Studies	National Middle School Association*
International Association of Campus Law Enforcement Administrators	National Network of Libraries of Medicine
International Association of Counseling Services	National Recreation and Park Association/American Association for Physical Activity and Recreation/Council on Accreditation*
International Association of Performing Arts Administrators	National Safety Council
International Association of Tibetan Studies	National Women's Studies Association
International Council of Hotel, Restaurant, and Institutional Education	North American Association of Summer Sessions
International Dance Education Association	North Carolina Adult Education Association
International Parking Institute Congress	North Carolina Alliance of Allied Health Professions
International Publishing Management Association	North Carolina Association for Biomedical Research
International Technology Education Association	North Carolina Association of Colleges and Teacher Educators
International Ticketing Association	North Carolina Association of Colleges and Universities
Joint Commission for Ambulatory and Health Organization*	North Carolina Association of International Educators
Joint Commission on Accreditation of Healthcare Organizations	North Carolina Association of Summer Sessions
Liaison Committee on Medical Education*	North Carolina Board of Nursing*
Medical Library Association	North Carolina Department of Justice, Criminal Justice Education and Training Standards Commission*
Music Library Association	North Carolina Distance Learning Association
National Academic Consortium for Homeland Security	North Carolina State Board of Education*
National Accrediting Agency for Clinical Laboratory Sciences*	Oak Ridge Associated Universities
National Association for Business Teacher Education	Planning Accreditation Board of American Planning Association
National Association for Campus Activities	Society for College and University Planning
National Association for the Education of Young Children*	Society for the Scientific Study of Religion
National Association of Campus Card Users	Society of Biblical Literature
National Association of College Stores	Southeastern Universities Research Association
National Association of College and University Business Officers	Southeastern Women's Studies Association
National Association of College and University Food Services	Southern Association of Colleges and Employers
National Association of College Auxiliary Services	Southern Association of Colleges and Schools*
National Association of College Law Enforcement Officers	Southern Association of College and University Business Officers
National Association of Colleges and Employers	Southern Building Code Congress International
National Association of Collegiate Concessionaires	Southern Conference of Graduate Schools
National Association of Educational Procurement	Student Affairs Administrators in Higher Education (NASPA)
National Association of Foreign Student Advisors	Teacher Education Council of State Colleges and Universities
National Association of School Psychologist*	The College Board
National Association of Schools of Art and Design*	The Renaissance Group
National Association of Schools of Music*	

GENERAL INFORMATION

University Consortium for International Programs
University Corporation for Advanced Internet Development

University of North Carolina Exchange Program
University Risk and Management Insurance Association

ACADEMIC DIVISIONS, COLLEGES, AND SCHOOLS

Division of Academic and Student Affairs	Division of Health Sciences
Academic Library Services	Health Sciences Library
The Honors College	College of Allied Health Sciences
Thomas Harriot College of Arts and Sciences	College of Nursing
College of Business	School of Dental Medicine
College of Education	The Brody School of Medicine
College of Fine Arts and Communication	East Carolina Heart Institute
College of Health and Human Performance	Division of Research and Graduate Studies
College of Human Ecology	Centers and Institutes, Division
College of Technology and Computer Science	Coastal Studies Institute, UNC
Office of Academic Program Planning and Development	Graduate School
Office of Emerging Academic Initiatives	Office of Engagement, Innovation, and Economic Development
Office of Enrollment Services	Office of Grants and Contracts
Office of Equity, Diversity and Community Relations	Office for Human Research Integrity
Office of Institutional Planning, Assessment and Research	Office of Research Compliance and Administration
Office of International Affairs	Office of Sponsored Programs
Office of Leadership Collaborative	Office of Undergraduate Research
Office of Student Affairs	Institutional Animal Care and Use Committee

ACADEMIC INTEGRITY

Academic integrity is expected of every East Carolina University graduate student. A student's instructor or individual graduate advisory committee or an appropriate departmental graduate committee or advisor may initiate actions, in accordance with Faculty Manual procedures, against a graduate student that is believed to have been engaged in academic dishonesty. Academic dishonesty includes: cheating, the giving or receiving of any unauthorized aid or assistance, or the giving or receiving of unfair advantage on any form of academic work; plagiarism, copying the language, structure, ideas, and/or thoughts of another and adopting those as one's original work; falsification, statement of untruth, either verbal or written, regarding any circumstances relating to academic work; and attempting any act which if completed would constitute an academic integrity violation as defined above.

While academic dishonesty actions are taking place against a graduate student, the graduate student may not withdraw from the university, drop a course in which academic dishonesty is suspected, take a comprehensive or final examination for a degree, or submit a thesis or dissertation to the Graduate School.

CAMPUS AND BUILDINGS

The main campus encompasses over 400 acres in an urban setting within the city of Greenville and is convenient to both the downtown area and shopping centers. The campus is a pleasing mixture of architectural styles. The five million square feet of academic, research, and residence facilities have modern appointments and are well equipped. The Health Sciences Campus, located on 70 acres, houses the Brody School of Medicine and is the hub of the university's health sciences program. The west research campus has over 450 acres and is the home for several research and graduate programs.

In the past ten years, the university has received over \$723 million for capital improvements. The university continues to focus resources on a comprehensive program to incorporate new technology into classroom and lab facilities. The university has completed the 2000 Bond Referendum Expansion and Renovation Program in excess of \$190 million. Major renovations have been completed in the Old Cafeteria Building and Flanagan classrooms and labs. In 2008, the Carol G. Belk Building renovation was completed and reopened for classroom, laboratory, and office space use. In 2003, the university completed construction of the Science and Technology Building that comprises 270,000 gross square feet of classrooms and labs. Joyner Library houses over one million volumes. Student services continues to improve with renovations to Dining Services facilities, the Croatan and Wright Place, the addition of the North Recreation Fields Complex, and renovations to Scott Residence

Hall. Student services have been enhanced by the addition of West End Dining in 2005, the Student Recreation Center, and Todd Dining Facility. The new 488 bed College Hill residence hall project completed in 2006 brought suite style residence accommodations. Major renovations have been completed in Jarvis Residence Hall, Jones Residence Hall, and Student Health Services. All residence halls will have sprinklers installed by 2012. The Health Sciences Campus continues to expand with the addition of the Dental School named the Ledyard E. Ross Hall and a new Family Medicine Center and Monk Geriatric Center of 117,000 square feet. Recent growth on the Health Sciences campus has included the additions of the East Carolina Heart Institute in 2008, the Health Sciences Building in 2006, and the Warren Life Sciences Building. The Nursing, Allied Health, Health Sciences Library Building known as the Health Sciences Building at 303,000 square feet became the second largest building ever constructed on campus. The athletic complex continues to grow with the 7,000 seat expansion of the end zone in Dowdy-Ficklen Stadium bringing capacity seating to 50,000. Other expansion projects underway include a softball stadium, track & field facility, soccer stadium, and Olympic Sports Teams building. Recent growth to the athletic complex included the addition of Clark LeClair Stadium in 2005, arguably rated as one of the top collegiate baseball facilities in the nation. With an estimated price tag of \$11 million, Clark-LeClair Stadium nearly doubled Harrington Field's capacity of approximately 1,750 (excluding outfield areas). Just beyond the end zone of Dowdy-Ficklen Stadium, is the state-of-the-art strength and conditioning center, the Murphy Center, opened in 2002. Campus beautification continues to be a priority with goal of preserving and enhancing the charming character of the campus. Sustainable building designs, practices and policies insures our ability to meet the present needs of the university without compromising our ability to meet the needs of future, as we continue to expand our campus while minimizing the impact to the environment.

A map of the university campuses with corresponding building key may be found inside the back cover of this publication. The building key for class schedules may be found following the index of this catalog.

CAMPUS LIBRARIES

J. Y. JOYNER LIBRARY

Joyner Library is the main campus library at East Carolina University. Joyner offers an abundance of print and online resources, including:

- 1.4 million print volumes
- More than 400,000 electronic books
- 11,000 DVDs and videos
- More than 28,000 CDs and other sound recordings
- More than 60,000 online and print journals and other serials
- More than 400 databases
- 2.5 million pieces of microform
- More than 30,000 maps
- Special Collections, manuscripts, and rare books

Joyner Library has more than 250 computers for use by students. Each is loaded with Microsoft Office Suite, Internet tools, and specialized course-related software. Many of the computers are equipped with scanners; free printing is also available.

Wireless access is available throughout the library. Students may use their own laptops or borrow library-owned laptops for use in the building. In addition to laptops, the library loans e-book readers, iPads, video cameras, digital cameras, and other equipment. Equipment is checked out from the Circulation Desk, near the library entrance.

Joyner Library has 35 group study rooms, many of which can be reserved for two-hour blocks. Most group study rooms are equipped with plasma screens. Individual study rooms are available on a first-come basis. Open study space is provided on all four floors of the library; numerous study carrels are available for individual quiet study. Snacks and drinks can be purchased from the library's Java City location or from vending machines.

Joyner's first floor features the Collaborative Learning Center; which opened in August 2010. A variety of seating styles - booths, lounge chairs, ottomans, and study tables and chairs - offer comfortable options for individual and group research and study. Large computer monitors facilitate group work. The Center includes a viewing/presentation practice room that can be reserved for two-hour blocks.

All students registered at East Carolina University, regardless of location, have access to the library's subscription-based electronic resources. Students can use these resources to find journal articles, read newspapers, and check out e-books without leaving

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their home or dorm room. Access is provided through the library's Web site at www.lib.ecu.edu. Student status is verified by Pirate ID and password. In addition, the online Joyner Library catalog can be searched from any location.

The Reference Department offers personal assistance to members of the ECU community (both on-campus and distance learners) who need help with their research and course assignments. Assistance is provided at the reference desk, by telephone, text and instant messaging, and via the Ask a Librarian e-mail service. Members of the Reference staff help users identify relevant print and online sources, learn to use these sources, formulate search strategies, find statistical data, and much more. The Reference collection includes high-quality print and online reference materials and databases. The Reference Department is located on the first floor, at the back of the library.

Circulation Services include checking materials and equipment in and out, managing print and electronic reserves, and assisting patrons. Students must present an ECU OneCard or distance education student card to check out materials.

Through a worldwide network of thousands of libraries, Interlibrary Loan (ILL) provides ECU students with research materials not available from Joyner Library at no charge – often within days for articles and one or two weeks for loaned items. Articles are delivered via e-mail. Whether the items are owned by Joyner Library or borrowed from another library, distance education students who live outside Pitt County can use Document Delivery to have articles delivered by e-mail and have books and other materials shipped to their home address.

One of the most inviting areas of the library is the Verona Joyner Langford North Carolina Collection (Room 3300). The department collects, preserves, provides access to and actively promotes the use of printed and non-print materials pertaining to the state. Holdings include books, broadsides, clipping and vertical files, maps, microforms, periodicals and state documents. The collection emphasizes the history of eastern North Carolina. The department's Snow L. and B.W.C. Roberts Collection includes more than 1,200 works of fiction set in North Carolina and dating from 1720. A number of these books and scores of historical works from the North Carolina Collection have been digitized for the Eastern North Carolina Digital Library.

The Special Collections Department located on the fourth floor is a major historical research facility and is among the largest such collections in North Carolina. It contains a wide variety of rare and valuable manuscript, archival and published collections with strengths in the areas of maritime and North Carolina history. Among its major subdivisions are the East Carolina Manuscript Collection, University Archives, the Rare Book Collection, Map Collection, Hoover Collection on International Communism, and the James H. and Virginia Schlobin Literature of the Fantastic Collection. The collections are open to students, faculty, staff, and the general public. However, all researchers must register, provide current and valid photographic identification, and agree to abide by collection rules to obtain access to collections.

The Teaching Resources Center (TRC) is located on the second floor of Joyner Library. It serves as a resource for students enrolled in the teacher education program at East Carolina University and for educators in eastern North Carolina. The TRC service desk provides reference assistance supported by educational reference librarians. Resources available in the TRC include NC adopted K-12 textbooks, supplementary K-12 textbooks, textbook correlations, bibliographies, guides, mixed media, professional materials, online resources, K-12 reference materials, easy books, big books, juvenile/young adult fiction, nonfiction and biographies. The Enhancing Teachers' Classrooms room located in the TRC is designed to assist pre-service teachers and educators in creating and producing quality lesson units. It houses two laminators, two Ellison die cut centers with several hundred die cuts, an artwaxer, a light box, a binding machine, several paper cutters, a Badge-A-Minit button maker and cutter, office supplies and computer workstations with educational software installations and resources. Additionally, the Ronnie Barnes African American Resource Center is housed in the TRC.

The Music Library is located in the A.J. Fletcher Music Center. It offers the same services as Joyner: circulation, reserves, reference assistance, bibliographic instruction, interlibrary loan, photocopiers, and printers. The collection consists of more than 80,000 books, music scores, periodicals, software, and sound and video recordings representative of all types and periods of music. A thirteen station technology lab with PCs and playback equipment for CDs, DVDs, DAT, LPs, videocassettes, mini-discs, CD-ROMs, laser discs, and audiocassettes is available for use by library patrons.

Joyner Library is open extensive hours each week, with 24-hour access during exam periods. Hours are posted on the main entrance of the building. Special hours are posted for holidays and semester breaks. The library maintains a recording of current operating hours that may be obtained by telephoning 252-328-4285. Hours are also posted on the Web site at www.ecu.edu/cs-lib/hours.cfm.

WILLIAM E. LAUPUS HEALTH SCIENCES LIBRARY

As a unit of East Carolina University's Division of Health Sciences, Laupus Library provides access to quality health information to support education, research and clinical care in eastern North Carolina. The Laupus Library serves the Brody School of Medicine, Eastern AHEC (Area Health Education Centers), College of Allied Health Sciences, College of Nursing, School of Dental Medicine and University Health Systems of Eastern Carolina.

Located in the Health Sciences Building on East Carolina University's Health Sciences Campus, the library shares the 300,000 square foot state-of-the-art educational center with the College of Allied Health Sciences and the College of Nursing. The four-story 72,000 square foot library provides study space, 20 group study rooms, a computer lab with over 40 computers, multimedia production and consultation services, reference services, and circulating and historical collections. A book collection of over 49,619 volumes, 140 print journal titles, and 39,500 bound journal volumes, along with visual programs and anatomical models is available to the university community. Laupus Library users can access to over 14,000 electronic journals, most provide full text articles online. The library's wireless environment enables users to search the library's wide array of electronic resources and access full text information.

The Circulation Department (Access Services), located on the 2nd floor of the library, manages circulation of materials, operates a print and electronic reserve collection for course support, and maintains the library's audiovisual collection including videos, audio cassettes, anatomical models, slides, charts, microfilm, and more. To check out materials and to access the variety of services offered, bring your ECU OneCard or your distance education student card. The Circulation Department is staffed during all operating hours and is available to assist you.

The Information Services Department provides reference services for Laupus Library users. Librarians are available to guide clients to the most efficient and effective means of accessing the library's resources. Laupus Library Liaisons are assigned to each department, college, and school within the Division of Health Sciences to provide information services, Laupus Library education programs, collection development assistance and curriculum coordination to faculty, staff and students. Services include tours and orientations for groups or individuals, instruction in use of the online catalog and bibliographic databases, and computerized literature searching. The department has handouts detailing the services available to every user category.

Using electronic resources, Laupus Library can provide access to current health sciences journal literature, up to date textbook information and educational software. Laupus Library has made a commitment to use of technology to offer optimum information services and resources to ECU and UHS clinicians, faculty, researchers, students and staff. With a goal of delivering health-related information when, where and in the format needed by our clients, the library has assembled an extensive array of resources and services. These tools have been successfully used by faculty and students on ECU's campus, at home and from remote settings around the world.

The Document Delivery and Interlibrary Loan (ILL) Department at Laupus Library provide clients with access to needed materials from outside institutions and supplies other libraries with access to materials from the collections of Laupus Library. Document Delivery is a free copy service for ECU faculty, staff, students and PCMH Staff for materials (articles and books) owned by Laupus Health Sciences Library or Joyner Library. ILL Borrowing is a free service for ECU faculty, staff, students and PCMH Staff who order articles or books not available in our collections from other institutions. If you are not a ECU faculty, staff, students or PCMH Staff please see our Policies and Fees for more information on the fees for this service.

The Collection Management department organizes, manages and maintains Laupus Library materials in all formats to facilitate access by clients on-site and from remote locations. Collection Management is responsible for the quality and consistency of the online catalog which can be accessed at: <http://www.ecu.edu/laupuslibrary/>.

As a developing library collection with a museum component, the History Collections of Laupus Library collects, catalogs, preserves, and displays materials relevant to the history of health care. A special collections reading room, located on the fourth floor of Laupus Library, enhances client access to these resources. Collections include historical materials from medicine, nursing, the allied health sciences, dentistry, pharmacology, and public health. With materials of worldwide interest dating from the 16th into the 21st centuries, the collections include over 6,200 monographs, 200 artifacts, and a growing collection of oral history tapes, transcripts, and videos. There are both circulating and non-circulating sections of the History Collections. Although materials housed inside the History Collections Reading Room are non-circulating, clients may request photocopies of these materials. Document delivery charges apply.

GENERAL INFORMATION

A special focus of the History Collections is on primary care practices in eastern North Carolina. The collection supports an Oral History Program through which interviews with long-time health care providers are recorded and archived. Historical materials relating to minority health care and minority health care professionals are of particular interest to the program. Laupus Library also operates the Country Doctor Museum located in Bailey, NC as part of our history program. The Country Doctor Museum is the oldest museum in the United States dedicated to the history of America's rural health care. For more information please visit: www.countrydoctormuseum.org/.

Located on the second floor, Laupus Library's computer lab contains state-of-the-art technology to provide a full range of resources to ECU faculty, staff, and students including over 40 PC's, 3 iMac's, 2 high-speed document scanners, 1 flatbed scanner, 1 color book scanner, 2 high-volume black and white laser printers, and a color laser printer. Over 40 software titles are available in the computer lab ranging from word processing, spreadsheet, statistical, and presentation software to discipline-specific programs that complement the Division of Health Sciences curriculum. All computers are connected to the Internet and provide our clients with access to electronic library resources.

The Laupus Library Computer Lab is also responsible for loaning out digital camcorders, digital cameras, laptops, iPod touches, and TurningPoint as part of their Equipment Loan Program. The loan program is available to the ECU Division of Health Sciences faculty, staff, and students. Please visit our website for the equipment loan agreement and more information about how you can make your reservation today.

Adjacent to the computer lab, our computer classroom supports the library's instructional services program and is available for use by the Division of Health Sciences faculty and staff. The classroom is equipped with 32 student computers, an instructor computer, a networked printer, and a dual projection system to assist with software demonstrations. The classroom is also connected to the university's satellite broadcast network for viewing video teleconferences. Telecommunications equipment is available for large-scale distributed meetings, collaborative work sessions, seminars, lectures, tutorials and training between distant groups. Library Multimedia & Technology Services (MTS) is located on the 1st floor of the Brody School of Medicine Building and the 2nd floor of Laupus Library. MTS is responsible for providing multimedia and biomedical communication services to all units of the Division of Health Sciences. Services provided currently focus on AV consultation and support, classroom support, photography, video services, multimedia design and production, videoconferencing, web development, television production and operation of ECU-TV Channel 99. Please visit the MTS Web site at www.ecu.edu/laupuslibrary/mts for more information about how you can use our services. For questions about MTS services, please contact: 252-744-2467.

Laupus Library is open every day with hours posted at the main entrance of the library and on our Web site. Special hours for holidays and semester breaks can also be found on our website. For more information including hours, announcements and detailed descriptions of all library services and collections please visit: www.ecu.edu/laupuslibrary.

VIRTUAL LIBRARY AT ECU

Both Joyner Library and the William E. Laupus Health Sciences Library electronic resources are available through the VirtualLibrary@ECU. The combined resources of this digital library currently offer more than 600,000 e-books and more than 45,000 e-journals and databases.

INFORMATION TECHNOLOGY AND COMPUTING SERVICES

Information Technology and Computing Services (ITCS) provides ECU students, faculty, staff and alumni with up-to-date information technology services and support. Visit the New Student Resources Welcome page for a comprehensive list of resources, policies and guidelines available to new ECU students. But check this page often—it is frequently updated as emerging technologies are adopted by ITCS and offered to the campus community.

The IT Help Desk offers technical assistance to ECU students regarding software, hardware, and network-related questions through e-mail, telephone or live online chat.

Students can check their ECU Outlook Live e-mail at mymail.ecu.edu. Outlook Live provides a large mailbox, plenty of file storage space, and even a built-in chat feature. More information is available at www.ecu.edu/studentemail.

ACE Student Computing Support Center provides walk-in support for PC and Mac systems, software, network and virus/malware problems. As a certified repair center, ACE also offers additional hardware support and repair (including loaner computers) for students purchasing computers through the ECU Student Stores' computer program.

While students are not required to purchase a specific computer brand to attend ECU, several academic programs do require

or recommend students have access to certain computer specifications in order to complete coursework. Some programs also have specific software requirements, such as AutoCAD or graphics programs. For a list of computer requirements by department, visit the ACE Computer Purchase page.

Students can also visit any one of over 80 computer labs on campus. To locate available labs, visit the Campus Labs Web page where a click on any computer icon opens details such as real-time seat availability, phone contacts and building location. Students can also make a reservation with the Virtual Computing Lab and access many required software programs from their home computer to complete class assignments.

While residence halls are networked through a hard-wired high-speed network, ITCS provides a wireless environment for both the main and health sciences campuses, and connecting is as easy as connecting through a browser.

ECU's OneStop Web portal allows students to review financial aid information, register for courses, and look up grades online. You can also look up your ECU ID on the "Tools" page within OneStop.

Mobile technologies are making an appearance at ECU. A recently-released mobile version of ECU's OneStop Web portal for iPhone and iPod Touch devices allows students to access many of the features of the Web-based version of OneStop. As the first UNC institution to implement a mobile version of its Web portal, OneStop Mobile promises many more innovations such as an Android-compatible release and more features.

To support ECU's distance and online learning, ITCS supports Blackboard, Moodle and Centra learning management systems. And with over 300 technology-enhanced classrooms, faculty now opt to record many of their lectures for online posts. With the introduction of My Web self-service, students, faculty and staff are able to create their own academic Web space or personal blog.

It's easy to learn new technologies through our many training opportunities. Sign up with Microsoft E-Learning and choose modules to learn Microsoft Office, Windows 7 and more, while the free SAS/SPSS training prepares users for statistical research. ITCS offers one-on-one training, face-to-face classes and online tutorials to help students make effective use of any technology.

To learn more about all on-campus technologies, see the Pirate IT Essentials, an annual online magazine sponsored by ITCS, which provides a comprehensive look at many of the technology resources and policies for ECU students. Additionally, the *ECU Technology Digest* e-mail newsletter provides valuable information on upcoming software updates, training opportunities and new technology projects affecting the university community.

OAK RIDGE ASSOCIATED UNIVERSITIES

Oak Ridge Associated Universities (ORAU) is a consortium of ninety-eight doctoral-granting academic institutions and a contractor for the US Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members. ECU has been a member since 1992.

Through the Oak Ridge Institute for Science and Education (ORISE), the DOE facility that ORAU operates, undergraduates, graduates, and postgraduates as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines, including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry, and mathematics. Appointment and program length range from one month to four years. A comprehensive listing of ORAU programs and other opportunities, their disciplines, and details on locations and benefits can be found in the ORISE Catalog of Education and Training Programs, which is available at www.orau.gov/orise/educ.htm or by calling the contact below.

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry, and major federal facilities. Activities include faculty development programs such as the Ralph E. Powe Junior Faculty Enhancement Awards, the Visiting Industrial Scholars Program, consortium research funding initiatives, faculty research, and support programs as well as services to chief research officers.

For more information about ORAU and its programs, contact:

John C. Sutherland, Chairman, Department of Physics
ORAU Councilor for East Carolina University
252-328-6739 or visit the ORAU Home Page at <http://www.orau.org>.

THE OFFICE OF EQUITY, DIVERSITY AND COMMUNITY RELATIONS

The Office of Equity, Diversity and Community Relations provides leadership to the university's efforts to foster a welcoming and inclusive environment. The office promotes equity in educational opportunity, programming and employment and promotes an environment of diversity, respect and inclusion for all members of the university community.

The scope of the Office of Equity, Diversity and Community Relations encompasses institutional equity, diversity, multicultural and community/regional relations functions and involves education, intervention, compliance, consulting, programming, outreach and assessment. Administrators in this office monitor institutional practices in support of the principles of diversity and equity so that these guiding principles are applied and assessed institutionally on administrative, academic, budgetary and strategic fronts. Programs and services of the office are available to faculty, staff, students and community partners and support a sustained diverse and inclusive learning, living and working environment.

ECU's mission states that the university will serve as a national model for public service and regional transformation, by preparing our students to succeed in the global economy and multicultural society and by distinguishing ourselves by the ability to train and prepare leaders. The Ledonia Wright Cultural Center's mission is to conduct activities that parallel the university's mission of increasing cultural awareness and promoting cultural understanding. The Office of Equity, Diversity and Community Relations, views cultural competence as a set of skills that are imperative for effective leadership in today's multicultural society and global economy. Through student-focused programs, experiences and opportunities the Office of Equity, Diversity and Community Relations will endeavor to produce culturally competent ECU graduates.

OFFICE OF NEWS AND COMMUNICATIONS SERVICES

The ECU Office of News and Communications Services, also known as the News Service, tells the story of the university using the web, social media, print, video and still photography. It acts as an independent reporting service for the university community as well as handling media relations. The office is in the historic Howard House on East Fifth Street.

The News Service each day publishes on its home page, www.ecu.edu/cs-admin/news/, timely news stories and the latest information on campus activities and issues.

The News Service assists reporters preparing stories about ECU. It prepares and distributes to the media news releases about activities, honors and developments on campus. It provides information about student honors and graduations to newspapers nationwide. It produces magazines for four units at the university.

SPONSORED JOURNALS AND PUBLICATIONS

The *Journal of Curriculum and Instruction* (JoCI), sponsored by the Department of Curriculum and Instruction, College of Education, is a peer-reviewed, electronic journal that provides a forum for the dissemination of articles focused on research, practice, and related issues relevant to teaching and learning in the Pre K-12 environment. The biannual journal is published electronically at www.joci.ecu.edu.

The *North Carolina Literary Review* is published annually by East Carolina University and the North Carolina Literary and Historical Association. NCLR publishes poetry, fiction, and nonfiction prose by and interviews with North Carolina writers and articles and essays about North Carolina literature, history, and culture.

Tar River Poetry, an international journal of poetry and reviews, is published twice a year (fall and spring) under the auspices of the Department of English.

PATENT AND COPYRIGHT POLICIES

East Carolina University is dedicated to instruction, research, scholarship, engagement, innovation development and the extension of knowledge for the benefit of the public good in an environment that is open to collaboration and publication. Inventions, discoveries and other intellectual assets sometimes arise as a result of the conduct of these activities by university personnel, including students, utilizing university resources which may qualify for intellectual property protection in the form of patents, copyrights, trademarks, and service marks. The Board of Governors of the University of North Carolina has determined that patenting, and commercialization of these intellectual assets is consistent with the mission of the university.

To learn more about various forms of intellectual property protection and technology transfer opportunities for graduate students, please contact the Office of Technology Transfer or visit www.ecu.edu/ott/.

RESEARCH AND CREATIVE ACTIVITY

Research and creative activities are essential components of East Carolina University's mission. Our research and creative activities have received national and international recognition. ECU offers students opportunities to participate in more than 400 externally sponsored research and service projects directed by our faculty. Graduate programs nurture a broad range of research and creative activities from the physical and biomedical sciences to the arts and humanities to community human services projects. Research and creative activities are supported through an extensive network of internal and external resources. Annually, the university secures more than 50 million dollars in research, service, and creative activity grants from private sources and public agencies such as the National Science Foundation and the National Institutes of Health. In addition, ECU's Faculty Senate and the Division of Research and Graduate Studies provide internal support. In recognition of the extent of our research and creative activities, the Carnegie Foundation classifies ECU as a doctoral/research institution.

To learn more about research/creative activity opportunities for graduate students, please contact the graduate program directors, or visit the Division of Research and Graduate Studies Web site: www.ecu.edu/cs-acad/rgs/index.cfm.

UNIVERSITY WRITING CENTER

The University Writing Center provides support for all writing in the university, including writing for graduate studies. Graduate students are welcome to visit the UWC to work on coursework, theses, or dissertations. Because of the longer nature of graduate-level writing, however, the UWC recommends that graduate students consider visiting multiple times, working on smaller sections of their work each session. Please keep in mind that the UWC's goal is writing instruction; this is not an editing service. Graduate students are welcome at all sites of the UWC—Joyner Library First Floor, Bate 2026, and Health Sciences 1504. Students may access additional resources, including the online writing lab for students enrolled in distance education courses, through the University Writing Program Web site, www.ecu.edu/writing.

UNIVERSITY POLICIES

See appendix for information on East Carolina University's substance abuse and racial and ethnic harassment policies, as well as information on affirmative action, EEO, nondiscrimination, and sexual harassment prevention policies.

VISION

Enriching the lives of our students by enhancing the learning environment of the university. (www.ecu.edu/cs-studentaffairs/vision.cfm)

MISSION

Student Affairs actively contributes to the mission of the university by providing programs and services designed to enhance the intellectual, social, ethical, physical, cultural, and spiritual development of our students. Student Affairs seeks to enrich students' lives by creating an inclusive and welcoming environment that fosters an appreciation for life-long learning, individual responsibility, and human diversity. www.ecu.edu/cs-studentaffairs/vision.cfm

Students enrolled in East Carolina University are expected to uphold, at all times, standards of academic integrity and personal behavior that will reflect credit upon themselves, their families, and East Carolina University. Students are also expected to behave with propriety, and to respect the rights and privileges of others. They are expected to abide by the laws of the city, state, and nation, and by all rules and regulations of East Carolina University. Failure to do so may result in sanctions or separation from the university.

Registration at the university implies the student's acceptance of the published academic regulations and all other rules found in any official publication or announcement. University rules and regulations apply to all students. Conduct regulations, including the academic integrity policy, are described in the *East Carolina University Student Handbook*.

STUDENT HANDBOOK

The *East Carolina University Student Handbook* is available online at www.ecu.edu/policyhub/handbook.cfm. The handbook includes information about university policies and procedures, including drug and weapon policies, the student code of conduct, the judicial system process, and bylaws of the Student Government Association. Also included are the university sexual harassment, discrimination, conflict of interest policies, and the student grievance procedures involving equal opportunity complaints.

A copy of *Safety and You*, the university publication that includes crime statistics in compliance with federal regulations, is also in the handbook.

EAST CAROLINA CREED

In the pursuit of educational excellence, responsible stewardship, and intellectual freedom, the community of scholars at East Carolina University is committed to learning at the highest level. Founded in the tradition of service and leadership, members of our academic society exemplify high standards of professional and personal conduct at all times.

As an East Carolinian

I will carry out personal and academic integrity.

I will respect and appreciate the diversity of our people, ideas, and opinions.

I will be thoughtful and responsible in my words and actions.

I will engage in purposeful citizenship by serving as a positive role model.

Adherence to these moral principles is the obligation of every student on and off campus. In doing so, individual freedom to learn and a pledge to serve will be preserved.

STUDENT AFFAIRS

Student Affairs offices include Dean of Students consisting of Student Rights and Responsibilities, Student Health Services, Counseling Center, Career Center, Student Employment Office, Off-Campus Student Services, Disability Services, Student and Parent Services, Student Government Association, Greek Life, and Student Legal Services; Student Life consisting of Student Activities and Organizations, Campus Recreation and Wellness, Ledonia Wright Cultural Center, Center for Student Leadership and Civic Engagement, Campus Housing, and Campus Dining; Communication and Advancement consisting of Strategic Planning and Assessment, Public Relations and Resource Development, Emerging Media, Marketing, Student Media, Staff and Organizational Development, and Technology; Campus Safety consisting of Campus Police Department, Crime Prevention, Emergency Response and Preparedness and Victim Advocate; and Business Operations consisting of Finance and Administration, Human Resources, and Student Transit (www.ecu.edu/studentaffairs/).

STUDENT AFFAIRS ASSESSMENT, RESEARCH AND RETENTION

Student Affairs Assessment, Research and Retention (SAARR) champions a culture of evidence and improvement within the Division of Student Affairs in support of student learning, development, and success. SAARR provides leadership to increase the institution's knowledge about students, the educational environment, and institutional effectiveness to continuously improve student programs and services, and does so through service in support of outcomes-based assessment, data-driven decision-making, strategic planning, student-focused research, and professional education. (www.ecu.edu/studentaffairs/saassessment/).

DEAN OF STUDENTS OFFICE

The Dean of Students Office is the central campus resource for addressing and responding to student issues and concerns. By connecting with other university departments and offices, the office supports the needs of students and student communities and identifies resources to respond to those needs (www.ecu.edu/deanofstudents/).

OFF-CAMPUS STUDENT SERVICES

Off-Campus Student Services provides "one stop shop" forum through which students can find affordable housing in a safe and healthy living environment. The department works with students and the surrounding community to promote positive university/community relations. We accomplish this by encouraging open communication and developing educational programs and services in order to empower students to become personally responsible and active members of their neighborhoods and their communities. This office can help students and their parents find suitable off campus housing through an online searchable database of available housing at: (www.ecu.edu/offcampus/).

The Career Center provides current information about the job market, facilitates career exploration, and provides access to practical work experience opportunities. We coordinate one on one career coaching sessions, career fairs, trainings, and employer events. Services are available to incoming students, current students, and alumni. Full and part-time opportunities are available in the public, private, governmental, and corporate sectors (www.ecu.edu/career/).

STUDENT AFFAIRS MARKETING AND COMMUNICATION

The Office of Student Affairs Marketing and Communication collaborates with Student Affairs units and personnel as well as other university constituents to help you raise awareness and interest in student-centered programs and services, as well as increase attendance and participation. In addition, the office assists divisional units with market research, develops marketing frameworks, enhances social media presence and identifies opportunities to track and assess communication and marketing for program and/or event effectiveness. The services available include, but are not limited to graphic design, website development, videography, photography, marketing framework/planning, press releases and related training.

STUDENT HEALTH SERVICES

This comprehensive medical facility is conveniently located on campus and is available for the student's health care needs while at ECU. Access to a pharmacy, x-ray services, health and nutrition education, immunization services, massage therapy, laboratory and an allergy shot clinic are here on campus. Routine illness, injury or other non-urgent issues are seen by appointment. Students requiring more immediate medical attention can be evaluated in Triage Care. Student Health also offers pharmacy, x-ray services, health and nutrition education, immunization services, massage therapy, laboratory and an allergy shot administration clinic. Visit the Student Health Web site for more information about services, hours of operation, insurance information, and how to access care (www.ecu.edu/studenthealth/).

DISABILITY SUPPORT SERVICES

Disability Support Services (DSS) determines reasonable accommodation and provides services for people with disabilities. Students who had an IEP or a 504 plan in high school might qualify for help from DSS. Students using DSS have disabilities such as attention deficit/hyperactivity disorder, learning disability, or visual impairment (www.ecu.edu/dss/).

STUDENT RIGHTS AND RESPONSIBILITIES

The Office of Student Rights and Responsibilities promotes personal and academic integrity and a safe learning environment. The empowerment of students to make ethical decisions and to become personally responsible citizens are the goals of this office (<http://www.ecu.edu/judicialaffairs/>).

SECTION 1: STUDENT LIFE

STUDENT TRANSITIONS AND FIRST YEAR PROGRAMS

The Office of Student Transitions and First Year Programs provides a coordinated, comprehensive approach to enhancing first year student success, and beyond, by achieving four fundamental goals: developing a sense of belonging, collaborating with academic affairs, serving as a liaison for parents, and maintaining a sense of progression during the first year of college and beyond. These goals are accomplished through the following areas: New Student Orientation, Transfer Student Orientation, Freshman Seminar, Plunge Into Purple (Weeks of Welcome), Student Convocation, Parents Services & Diversity Outreach and Transfer Student Services.

STUDENT GOVERNMENT ASSOCIATION

One benefit of being a full time student at East Carolina University is membership in the Student Government Association (SGA) - the official representative governing body for ECU students. Here the student can voice opinions and gain experience and training in responsible political participation (www.ecu.edu/sga/).

GREEK LIFE

Commitment to a Greek community offers life long friendships, a chance to devote time to philanthropy, and the experience of learning firsthand how to be a leader. Sorority and fraternity membership is a great way to network with others and serve the community (www.ecu.edu/greeklife/).

STUDENT LEGAL SERVICES

Student Legal Services is a legal advisory service for students. Some of the common issues Student Legal Services addresses are lease contracts, city and county code violations, traffic or alcohol violations, domestic abuse, and victim's rights (www.ecu.edu/legalservices/).

CENTER FOR COUNSELING AND STUDENT DEVELOPMENT

A student's social and emotional development is important to the university. Students who find themselves experiencing significant levels of anxiety, depressed feelings, and/or who are stressed should consider seeing a counselor at the counseling center. This service is free and confidential. The "Self Help" section of the Web site provides valuable tips on managing one's adjustment to college and dealing with issues such as: relationships, sex, alcohol/substance use and abuse, eating disorders, and identity. The counseling center also provides ongoing outreach services to classes, residence halls, and other campus gatherings to encourage greater awareness of issues surrounding mental and emotional health of college students. (www.ecu.edu/counselingcenter/).

CAREER CENTER

The Career Center provides current information about the job market and facilitates career exploration and provides practical work experience opportunities through numerous programs and workshops. Services are available to incoming students, current students, and alumni. Full- and part-time opportunities are available in the public, private, governmental, and corporate sectors (www.ecu.edu/careercenter).

STUDENT EMPLOYMENT OFFICE

Students who are looking for a part-time job can check out the Student Employment Office located in 100-C Fletcher Residence Hall. The "Career Connections" online database can be used to search for on-campus jobs, off-campus jobs, Federal Work-Study jobs, graduate assistantships, and undergraduate assistantships (www.ecu.edu/studentemployment).

STUDENT ACTIVITIES AND ORGANIZATIONS

Attendance at events such as *Pirate Palooza*, *Barefoot on the Mall*, and *Family Weekend* are opportunities for students to connect with other students. There are hundreds of student organizations available on campus. The Student Organization Center is located in Mendenhall Student Center and is a resource for locating a group of interest to join (www.ecu.edu/studentorganizations/).

CAMPUS RECREATION AND WELLNESS

Outstanding facilities, an extensive variety of programs, and a focus on customer services make Campus Recreation & Wellness a one-stop shop for the development of a healthy lifestyle.

Facilities - The **Student Recreation Center** is the campus health club—convenient, accessible, and filled with activities to keep the mind, body, and spirit in prime condition. Special features include a climbing wall; an indoor pool and outdoor pool with a lounging area; a 10,300 square-foot fitness area with free weights, selectorized equipment and cardiovascular machines; a running track; three exercise studios, the Wellness Center, the Adventure Center; basketball, volleyball and racquetball courts. Outdoor adventure trips, group fitness classes, yoga, martial arts, water sports and lacrosse are among the many opportunities students can find at Campus Recreation and Wellness. In addition, a 1,900 square foot fitness facility is available on the first floor of Jones Residence Hall. When recreational interests move outside, the department provides several exceptional venues for participation. The **Blount Recreational Sports Complex** includes 10 flag football and soccer fields and five softball fields in addition to restrooms and parking. The Blount complex is also adjacent to a **Challenge Course** and 50-foot **Alpine Tower** used for a variety of teambuilding and leadership programs. The **North Recreational Complex** opened in the Fall of 2009 with eight multi-sport fields, a six acre lake, and a field house. Phase 2 of the project will be available in Fall 2011 and will add jogging trails, a beach area with sand volleyball courts, a boathouse, horseshoe pits, outdoor fitness equipment, an Odyssey Challenge Course, and an 18-hole disc golf course.

Programs – The **Intramural Sports** program offers over 30 different team and individual/dual activities in several skill levels while approximately 40 Club Sports are available for those seeking a more intensive experience in a particular sports. Physical Activity & Fitness features a number of ways to stay in shape including group fitness classes, personal/partner/group training, incentive programs, educational workshops, and instructional programs such as several styles of yoga, dance, and sport-oriented classes to satisfy a particular interest. For those of you looking to explore the great outdoors, the Adventure Program offers a selection of trips, educational workshops, a 27 foot climbing wall, and equipment rental while Leadership & Team Training serves over 100 groups annually through customized group initiative games, challenge course experiences, other active teambuilding activities. The department also offers programming in Adapted Recreation for people with disabilities, Aquatics, Special Events, Member Services, Safety Services, Volunteers, and Youth & Family. Wellness is the focus as the department works to support and encourage balanced and healthful lifestyles for the ECU community through a variety of physical as well as educational programs. (www.ecu.edu/crw/).

LEDONIA WRIGHT CULTURAL CENTER

The Ledonia Wright Cultural Center provides comprehensive, culture-specific programming that serves students, faculty, staff, and the community. Special resources available include computer workstations, a reading room, tutoring in math, access to a permanent art collection, and a chance to volunteer with the cultural center's programming efforts (www.ecu.edu/lwcc/).

THE CENTER FOR STUDENT LEADERSHIP AND CIVIC ENGAGEMENT

The Center for Student Leadership and Civic Engagement provides a location for student opportunities and leadership experiences. Programs focus on global citizenry, diversity, leadership skills, and civic engagement. The Emerging Leaders Program is designed to provide first year students with leadership skills (www.ecu.edu/studentleadership/).

CAMPUS LIVING

Living on campus offers students easy access to everything ECU has to offer without monthly rent payments and utility bills. Students enjoy free laundry facilities, convenient access to dining services, as well as more time to explore and enjoy the myriad of activities available on campus. Living on campus means being right in the middle of the action and close to classes (www.ecu.edu/studentlife/campusliving/).

CAMPUS DINING

When it comes to eating on campus, there are many convenient choices. Dining halls are located near the residential areas of campus and serve breakfast, lunch, and dinner, Monday through Friday, and brunch and dinner on Saturday and Sunday. In addition, food courts, coffee and juice bars, and convenience stores are located across campus. There are several different meal plans available, including three plans exclusively for commuter students. Each meal plan includes a Pirate Bucks account—a declining-balance account that is used like cash to supplement meals (www.ecu.edu/dining).

STUDENT MEDIA

Staying up-to-date on campus news, events, and activities, as well as local, regional, national, and international, happenings is made possible with The East Carolinian, Campus 31, and WZMB 91.3 FM, the student newspaper, television and radio station.

SECTION 1: STUDENT LIFE

These mainstays of campus information are complemented by the student literary and visual arts magazines, The Rebel, and Expressions (www.ecu.edu/studentmedia/).

CAMPUS SAFETY

One of ECU's most important priorities is making sure that students stay safe. The campus safety division, housed in the ECU Police Department, promotes a safe environment through awareness and educational programs. ECU uses state-of-the-art security and safety technology to enhance its efforts. Sworn officers patrol the campus on foot, on bicycles, and in marked and unmarked patrol vehicles (www.ecu.edu/police/).

EMERGENCY RESPONSE AND PREPAREDNESS

Collaborating with the university's administration, technical services and support, Police Department, and emergency management, the Office of Emergency Response and Preparedness provides a unified command of all public safety and emergency resources or weather-related conditions, ensures effective and timely communications between all safety units, and serves as the university's single point of contact and management for emergency and crisis situations (www.ecu.edu/police/erp/).

VICTIM ADVOCATE

Victim Advocate at East Carolina University was established in 2005 to provide victim advocacy services to those individuals whose life has been affected by crime. The primary mission of the advocacy program is to safeguard the constitutional rights of and provide for the emotional needs of victims during a very difficult time (www.ecu.edu/studentlife/victimservices/).

STUDENT TRANSIT

ECU Transit provides a comprehensive, safe transit service to ECU students, faculty and staff. There is no fare; all students ride free with a valid ECU I Card. Buses operate on fixed schedules throughout the academic year and both summer sessions to provide service to both on- and off-campus housing and commuter park-and-ride lots to make getting to class easy. Every student needs a break, so several shopping, service and entertainment venues around Greenville are also served. Additionally, a point-to-point van service called SafeRide operates to supplement night time bus service. All the latest route maps, schedules and other service information can also be found online at www.ecu.edu/transit.

East Carolina University is an equal educational opportunity institution. In keeping with this policy, the university makes no distinction in the admission of students or in any other of its activities on the basis of race, color, national origin, religion, gender, age, or disability.

APPLICATION

Application for graduate degree programs include a completed application form, official transcripts, letters of recommendation, official standardized test score reports, a written statement of purpose, and a nonrefundable application fee. Official transcripts are required from all undergraduate, graduate, professional and foreign institutions attended even if it was only for a single course or college credit awarded while you were in high school.

Prospective students may apply simultaneously for more than one graduate degree program, but a separate application is required for each degree program. An electronic application may be completed and submitted at the Graduate School Web site, www.ecu.edu/gradschool. Further information is available by telephoning the Graduate School at 252-328-6012.

Any individual applying or enrolled in the Graduate School must promptly notify the dean of the Graduate School in writing if any of the following occurs: any criminal charge; any disposition of a criminal charge; any type of military discharge other than honorable discharge; or any school, college, or university disciplinary action against the student. Failure to report any of the above actions is grounds for denial or withdrawal of admission to ECU as well as dismissal after enrollment.

The dates below are deadlines for receipt of the application form by the Graduate School. Early application is encouraged, particularly if application for an assistantship is contemplated. Students are encouraged to inquire about individual programs as early as possible since some programs have earlier deadlines and review applications only at fixed times during the year. Late applicants cannot be assured their application will be processed in time for the desired session of enrollment.

Session	Deadline	Session	Deadline
Fall	June 1	First Summer	March 15
Spring	October 15	Second Summer	May 1

Master's degree candidates planning to enroll in the fall who wish to be considered for out-of-state tuition waivers must submit applications by February 1. If applications are received after that date, waivers will be considered only as funds are available. Some programs have earlier deadlines. You should consult www.gradschool@ecu.edu for earlier deadlines.

ADMISSION TO A GRADUATE DEGREE PROGRAM

The university seeks to admit graduate students who show evidence of being able to succeed in and benefit from academic programs of the rigor offered. To qualify for admission to a graduate degree or certificate program (or as nondegree), an applicant must have a baccalaureate degree from a regionally accredited four year institution. Admissions decisions are based on consideration of undergraduate academic record, graduate record if applicable, admission test scores, written statement of purpose, and letters of recommendation. Each individual graduate program decides on the admissibility of its students. Some programs may recommend admission by exception for a limited number of students who do not qualify for regular admission, but have other offsetting strengths. Students, uncertain about the strength of their application, are advised to consult with the program director about their admissibility.

Individuals whose baccalaureate degree is more than ten years old and who have extensive professional experience related to the intended program of study may be eligible to seek admission through the professional admissions policy upon recommendation of the graduate program director. Interested applicants should consult with the program director of the degree program for more information.

Early contact with your program of interest can be helpful in preparing your application. Admissions criteria and required supplementary application materials vary by individual programs.

APPLICATION PROCESS

Applicants must submit:

- A completed online application with nonrefundable application fee (www.ecu.edu/gradschool).
- Official score reports sent directly to the Graduate School from the testing agencies. (ECU's GRE code is 5180 and MAT code is 1354.) Examinations must have been taken within the past five years.

SECTION 2: ADMISSION AND READMISSION

- Official transcripts from all undergraduate, graduate, professional and foreign institutions that you have attended even if it was only for a single course or college credit awarded while you were in high school.
- Three letters of reference from persons who can attest to academic competency or ability to do graduate work, if required by the program.
- A completed Statement of Purpose essay if required.
- Supplemental application and material if required by the intended program of study. Please contact the program director to learn of any additional application requirements, such as auditions, interviews, portfolios, narratives, etc.

The general test of the Graduate Record Examinations (GRE) is accepted by all masters and doctoral programs with the exception of the College of Business. The Graduate Management Admission Test (GMAT) is required for the graduate programs in accounting and business administration.

The general test of the Graduate Record Examinations (GRE) or the Miller Analogy Test (MAT) is accepted by all College of Education degree programs.

Many programs do not require entrance exam scores for holders of the master's degree or more advanced degrees. Please check with the graduate program director for more information.

The master of music degree with a major in education and all MAEd programs except adult education require North Carolina Teaching Licensure for admission.

Applicants are admitted to degree and certificate programs only upon the issuance of a formal letter of admission by the Graduate School. Admission decisions are not made until the application portfolio is complete.

Requirements for admission to the summer session terms are the same as those for regular semesters of the academic year. However, some programs of study cannot be initiated in the summer session.

Students wishing to enroll in courses offered through the Division of Continuing Studies must be admitted to the university as a degree or nondegree student. Requirements for admission are the same as those for students enrolling on the main campus.

A graduate student in good standing at another institution may apply to take a specific graduate course or courses without furnishing transcripts and examination scores if the dean of the student's graduate school supports such a request in writing. Students enroll as nondegree-seeking students.

ADMISSION TO CERTIFICATE PROGRAMS

The admissions requirements for graduate certificate programs vary by program. Some certificate programs require that the applicant be enrolled in a degree program while other certificate programs are designed for any person holding a baccalaureate degree. Credit earned while enrolled in a graduate certificate program may be transferred into a degree program with the approval of the department offering the degree program. If the degree and certificate programs are not completed concurrently, the student must submit a separate application for the certificate program at the time of graduation from the degree program.

NONDEGREE ADMISSION

Nondegree admissions is an enrollment category in which the student is not accepted into a specific degree or certificate program but is approved to take courses that have no catalog restrictions. This is intended for applicants interested in taking one or more courses at ECU, but not necessarily interested in obtaining an ECU degree or certificate at the time of application. It may be used by students matriculated at another institution who wish to enroll as visiting students, individuals wanting to take courses for personal/professional enrichment, and individuals wanting to take prerequisite course work for later application to a degree program.

To apply for nondegree enrollment, prospective students must submit an online nondegree graduate application at www.ecu.edu/gradschool. An official transcript or other document showing an earned degree from a regionally accredited institution is required. Students should submit nondegree applications no later than one week prior to registration day. A nonrefundable application fee is required.

1. A maximum of 9 s. h. of course work taken as a nondegree student may apply towards a master's or doctoral degree.
2. Nondegree students are not eligible to take graduate courses in all programs. Nondegree students should seek the permission of the graduate director in the department offering the course(s) prior to attempting to enroll.
3. Requests for degree credit for courses completed as a nondegree student are considered after admission to a graduate degree program. All nondegree course work accepted for degree credit must be approved by the chair of the student's department and the dean of the Graduate School.
4. Course work taken as a nondegree student carries with it no implication that the student will be admitted to a degree program in the Graduate School.
5. Credit earned while enrolled in a graduate certificate program may be transferred into a degree program with the approval of the department offering the degree program.
6. If credit for course work taken as a nondegree student is to be applied to a degree program, it must be satisfactorily incorporated within the applicable time frame for completion of all degree requirements.
7. Nondegree students are expected to familiarize themselves with Graduate School policies and to seek further advice or clarification.

EARLY ADMISSION TO GRADUATE STUDIES

There are a variety of ways that ECU undergraduate students may be admitted to take graduate courses before completing the requirements for their undergraduate degree.

INTEGRATED BACHELOR'S/MASTER'S PROGRAM

This program allows ECU undergraduates with at least a 3.5 GPA to apply as juniors to an integrated bachelor's/master's program. Upon admission to the master's degree program, the student can count up to 15 s.h. of graduate credit toward completion of the bachelor's degree. Students participating in an integrated program earn the bachelor's degree prior to completion of the master's degree. Students may apply for the BA Psychology/MS Occupational Therapy Program or the BS Exercise Physiology/DPT Physical Therapy programs. Other combinations will become available. Students should discuss their goals with their advisors and the Graduate School.

ACCELERATED MASTER'S DEGREE PROGRAMS

ECU currently offers two accelerated master's degree programs. These programs result in the awarding of one degree – the master's.

The College of Nursing offers an accelerated RN/MSN program for transfer students who have a RN license but do not have an undergraduate degree. Students completing the RN/MSN do not receive the BSN degree. Students in the RN/MSN option must complete all general education and cognate requirements prior to beginning undergraduate nursing courses. Separate application is made to the graduate program in the first or second semester of study in the RN/MSN option. Students enrolled in the RN/MSN option must maintain a 3.0 GPA in the 15 s.h. of undergraduate nursing courses to be eligible to continue in this option. Admission to the RN/MSN option does not guarantee entry into a specific graduate concentration.

The Department of Occupational Therapy offers an accelerated MS in occupational therapy program. Students interested in this program enroll as freshmen in health services management and follow the specified plan of study in the health service management curriculum to complete required core undergraduate courses and prerequisites for the MS degree. Students apply for Graduate School in their junior year and may be admitted upon completion of the undergraduate plan of study – a minimum of 108 credits. Students will be awarded the MS in occupational therapy at end of five years completing a total of 162 credit hours.

SIX-HOUR RULE

ECU seniors who are within 6 s.h. or less of completion of all undergraduate degree requirements may apply for admission to graduate degree programs. If admitted prior to the semester or summer term during which 6 s.h. or less and any remaining requirements must be completed, they may enroll in 5000- or 6000-level courses applicable to graduate degree requirements. Graduate courses taken under the "six hour rule" do not double count toward completion of the undergraduate degree.

Successful applicants must complete all remaining undergraduate degree requirements during the semester or summer term to which they are admitted. Failure to fulfill this requirement will result in cancellation of admission to graduate degree study and enrollment in any 6000-level courses will be invalidated.

SECTION 2: ADMISSION AND READMISSION

UNDERGRADUATE/NONDEGREE GRADUATE DUAL ENROLLMENT

Senior undergraduate students at East Carolina University who possess at least a 3.5 GPA in their last 30 semester hours of completed ECU course work are eligible to enroll in the Graduate School as a nondegree student and complete up to 9 semester hours of graduate-level course work. Graduate courses taken under the dual enrollment arrangement do not count toward completion of the undergraduate degree. These courses are eligible to count toward the graduate degree upon approval of the department offering the degree program. This form of dual enrollment is intended to give a student contemplating future admission to a graduate program the opportunity to take graduate courses while still an undergraduate. Permission must be obtained from the student's undergraduate advisor, the chairman of the department offering the courses, and the Graduate School prior to admission into the Graduate School.

OFFICIAL WITHDRAWAL

When a graduate student drops all courses in a semester in which he or she is enrolled the student must officially withdraw. Students registered on campus must apply for official withdrawal to the Office of Registrar. Students registered through Continuing Studies must apply for withdrawal to the Office of Student Services in the Division of Continuing Studies. Students withdrawing for medical/counseling reasons should complete the procedure within thirty days after the last class attendance. All other students withdrawing should complete this procedure immediately after the last class attendance. After classes have ended, no withdrawal, except in the case of severe medical emergency, can be filed. A graduate student withdrawing by the last day for graduate students to drop courses without grades as given in the Graduate School calendar will not receive grades for the semester. A graduate student withdrawing from school after the last day for graduate students to drop courses without grades shall receive a grade of F for all classes which he or she is failing at the time unless, in the judgment of the dean of the Graduate School, the failures were caused by circumstances beyond the student's control.

LEAVE OF ABSENCE AND READMISSION

Students enrolled in graduate degree programs who take a leave of absence of one or more semesters (excluding summer terms) must notify their graduate program director and file a readmission application prior to returning. During a leave of absence students will not be permitted to utilize university resources.

Students who take a leave of less than three years may file an application for readmission online at www.ecu.edu/gradschool/. There is no fee for readmission. These applications should be presented to the Graduate School at least one week prior to the opening of registration for the semester or summer term in which the student wishes to resume graduate work. Students wishing to change graduate degree or certificate programs after a leave of absence must submit a new admissions application.

Students who take a leave of absence of three or more years must submit a new complete application to be considered for admission to their former program or any other graduate program within the university. Students readmitted after a leave of absence of three years or more will be required to meet new or changed degree requirements. East Carolina University course credit will be evaluated for applicability towards degree requirements in accordance with established time limits. For information on time limitations, see Section 4: Academic Regulations (Residence and Graduate Requirements).

For more information on time limitations, see Section 4, Academic Regulations.

READMISSION FOLLOWING ACADEMIC DISMISSAL

A student dismissed from the Graduate School for poor academic performance must wait one year (including summers) before being considered for readmission. A new complete application will be required for readmission. If the student is accepted for readmission in the same graduate program, credits earned while previously enrolled will be included for the purpose of determining academic standing and meeting graduation requirements. If the student is accepted into a different program, grades and credits earned in the previous degree program from which student was dismissed will not be included for the purpose of determining academic standing and graduation in the new program; however, the student's transcript will show all courses and grades including those earned in the previous program.

For more information on probation and dismissal, see Section 4: Academic Regulations.

MEDICAL HISTORY/IMMUNIZATIONS

All newly admitted students must submit the report of medical history form which is available at www.ecu.edu/studenthealth. Online, off campus, satellite students, or students taking four credit hours or less are exempt from the immunization requirement. The exemption is automatic at the time of registration.

PREREQUISITES

The chairperson of the department or director of graduate programs in which the candidate wishes to enroll will consult with the student concerning any deficiencies in his or her undergraduate program. Required make-ups may be removed at East Carolina University or at any other institution accredited by a regional accrediting organization.

Prerequisites are stated as integral parts of various programs, entrance requirements for degree programs, and sequential progression into subject matter. Students are not allowed to enroll in courses for which they have not met the prerequisites.

PROGRAM MODIFICATIONS FOR INDIVIDUAL STUDENTS

It is important to note that published descriptions of college, school, or departmental graduate programs establish only minimum requirements. Every school or department possesses and reserves the right to require individual students to enroll in additional courses or perform additional tasks in order to meet school or departmental requirements for breadth and quality in the completion of graduate programs.

While such modifications are ordinarily made a matter of record at the beginning of a student's program, schools and departments have the prerogative to make changes in a student's program at any time prior to graduation.

GENERAL INFORMATION

Because of the early publication of this catalog, the tuition and fee schedule is omitted. The current university schedule of tuition and fees can be obtained from the cashier's office, the admissions office, or at www.ecu.edu/cs-admin/financial_serv/cashier/tufee.cfm.

It is estimated that the average graduate student who is a North Carolina resident incurs necessary expenses of approximately \$16,500 for room, meals, tuition, fees, and books during an academic year of two semesters. The costs of meals and textbooks may vary considerably, according to individual requirements. The university operates food service facilities in six locations throughout the campus. Meals are available either under a meal plan or by individual selections at moderate prices. A cost of approximately \$1,500 per semester for meals is an estimate. Students are required to purchase their textbooks. For their convenience, the university owns and operates the Student Stores, located on the ground floor of the Wright Building, where all necessary books and supplies may be purchased. The cost of books will vary with the different curricula; \$400-\$600 per semester is a reasonable estimate.

RESIDENCE STATUS FOR TUITION PURPOSES

The basis for determining the appropriate tuition charge rests upon whether a student is a resident or a nonresident of North Carolina. Each student must make a statement as to the length of his or her residence in North Carolina, with assessment by the institution of that statement to be conditioned by the following:

Residence. To qualify as a resident for tuition purposes, a person must become a legal resident and remain a legal resident for at least 12 months immediately prior to classification. Thus, there is a distinction between legal residence and residence for tuition purposes. Furthermore, 12 months legal residence means more than simple abode in North Carolina. In particular it means maintaining a domicile (permanent home of indefinite duration) as opposed to "maintaining a mere temporary residence or abode incident to enrollment in an institution of higher education". The burden of establishing facts which justify classification of a student as a resident entitled to in-state tuition rates is on the applicant for such classification, who must show his or her entitlement by the preponderance (the greater part) of the residuary information.

Initiative. Being classified a resident for tuition purposes is contingent on the student's seeking such status and providing all information that the institution may require in making the determination.

Parents' Domicile. If an individual, irrespective of age, has living parent(s) or court-appointed guardian of the person, the domicile of such parent(s) or guardian is, prima facie, the domicile of the individual; but this prima facie evidence of the individual's domicile may or may not be sustained by other information. Further, nondomiciliary status of parents is not deemed prima facie evidence of the applicant child's status if the applicant has lived (though not necessarily legally resided) in North Carolina for the five years preceding enrollment or re-registration.

Effect of Marriage. Marriage alone does not prevent a person from becoming or continuing to be a resident for tuition purposes, nor does marriage in any circumstances insure that a person will become or continue to be a resident for tuition purposes. Marriage and the legal residence of one's spouse are, however, relevant information in determining residuary intent. Furthermore, if both a husband and his wife are legal residents of North Carolina and if one of them has been a legal resident longer than the other, then the longer duration may be claimed by either spouse in meeting the twelve-month requirement for in-state tuition status.

Military Personnel. A North Carolinian who serves outside the state in the armed forces does not lose North Carolina domicile simply by reason of such service. And students from the military may prove establishment of residence by reference, as in other cases, to residuary acts accompanied by residuary intent. In addition, a separate North Carolina statute affords tuition rate benefits to certain military personnel and their dependents even though not qualifying for the in-state tuition rate by reason of twelve months legal residence in North Carolina. Members of the armed services, while stationed in and concurrently living in North Carolina, may be charged the in-state tuition rate. A dependent relative of a service member stationed in North Carolina is eligible to be charged the in-state tuition rate while the dependent relative is living in North Carolina with the service member and if the dependent relative has met any requirement of the Selective Service System applicable to the dependent relative. These tuition benefits may be enjoyed only if the applicable requirements for admission have been met; these benefits alone do not provide the basis for receiving those derivative benefits under the provisions of the residence classification statute reviewed elsewhere in this summary.

SECTION 3: FINANCIAL ASSISTANCE

Grace Period. If a person (1) has been a bona fide legal resident of the required duration, (2) has consequently been classified a resident for tuition purposes, and (3) has subsequently lost North Carolina legal residence while enrolled at a public institution of higher education, that person may continue to enjoy the in-state tuition rate for a grace period of twelve months measured from the date on which North Carolina legal residence was lost. If the twelve months period ends during an academic term for which the person is enrolled at a state institution of higher education, the grace period extends, in addition, to the end of that term. The fact of marriage to one who continues domicile outside North Carolina does not by itself cause loss of legal residence, marking the beginning of the grace period.

Minors. Minors (persons under eighteen years of age) usually have the domicile of their parents, but certain special cases are recognized by the residence classification statute in determining residence for tuition purposes.

- a. If a minor's parents live apart, the minor's domicile is deemed to be North Carolina for the time period(s) that either parent, as a North Carolina legal resident, may claim and does claim the minor as a tax dependent, even if other law or judicial act assigns the minor's domicile outside North Carolina. A minor thus deemed to be a legal resident will not, upon achieving majority before enrolling at an institution of higher education, lose North Carolina legal residence if that person:
 - (1) upon becoming an adult "acts, to the extent that the person's degree of actual emancipation permits, in a manner consistent with bona fide legal residence in North Carolina" and
 - (2) "begins enrollment at an institution of higher education not later than the fall academic term following completion of education prerequisite to admission at such institution."
- b. If a minor has lived for five or more consecutive years with relatives (other than parents) who are domiciled in North Carolina and if the relatives have functioned during this time as if they were personal guardians, the minor will be deemed a resident for tuition purposes for an enrolled term commencing immediately after at least five years in which these circumstances have existed. If under this consideration a minor is deemed to be a resident for tuition purposes immediately prior to his or her eighteenth birthday, that person on achieving majority will be deemed a legal resident of North Carolina of at least twelve months' duration. This provision acts to confer in-state tuition status even in the face of other provisions of law to the contrary; however, a person deemed a resident of twelve months' duration pursuant to this provision continues to be a legal resident of the state only so long as he or she does not abandon North Carolina domicile.

Lost But Regained Domicile. If a student ceases enrollment at or graduates from an institution of higher education while classified a resident for tuition purposes and then both abandons and reacquires North Carolina domicile within a twelve month period, that person, if he or she continues to maintain the reacquired domicile into re-enrollment at an institution of higher education, may re-enroll at the in-state tuition rate without having to meet the usual twelve-month durational requirement. However, any one person may receive the benefit of this provision only once.

Change of Status. A student admitted to initial enrollment in an institution (or permitted to re-enroll following an absence from the institutional program which involved a formal withdrawal from enrollment) must be classified by the admitting institution either as a resident or as a nonresident for tuition purposes prior to actual enrollment. A residence status classification once assigned (and finalized pursuant to any appeal properly taken) may be changed thereafter (with corresponding change in billing rates) only at intervals corresponding with the established primary divisions of the academic year.

Transfer Students. When a student transfers from one North Carolina public institution of higher education to another, he or she is treated as a new student by the institution to which he or she is transferring, and must be assigned an initial residence status classification for tuition purposes.

Regulations on Residency: the Manual. University regulations concerning the classification of students by residence, for purposes of applicable tuition differentials, are set forth in detail in *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes*. Each enrolled student is responsible for knowing the contents of that *Manual*, which is the controlling administrative statement of policy on this subject. Copies of the *Manual* are available on request at the undergraduate admissions office, the registrar's office, and the Joyner and Health Sciences Libraries. The *Manual* is also available online in the residency section of the registrar's home page: www.ecu.edu/registrar/.

Deadline for Application. Newly admitted or readmitted graduate students applying for the in-state rate for tuition should complete the *Application for In-State Residence and Tuition* and return it to the graduate admissions office at least three

weeks prior to registration day for the term for which they seek in-state tuition. Continuing graduate students who seek to have their residency status changed to in-state should complete the *Application* and return it to the Graduate School office at least three weeks prior to registration day for the term for which they seek in-state tuition. Students seeking a military waiver of out-of-state tuition should complete the *Application for a Military Waiver* and return it to the Graduate School office at least three weeks prior to registration day for the term for which they seek the waiver.

EXPENSES

FEE PAYMENT SCHEDULE

Returning students or those admitted and registering before the collection of fees begins for the fall or spring semesters will be subject to a late payment fee if tuition and fees are not paid by a published deadline, which usually precedes registration day by about two weeks. The academic calendars include the published deadlines and can be accessed online at www.ecu.edu/fsonline/fscalend.htm.

Students will be charged tuition and fees based on admission status.

Tuition and fees are subject to revision by The UNC Board of Governors and/or the ECU Board of Trustees, who reserve the right to revise them at any time found necessary or advisable and without prior notice.

No person is allowed to attend class or receive class instruction without being properly registered either for credit or for audit.

See www.ecu.edu/financial_serv/cashier/tufee.cfm for summer session and continuing studies fees.

INDEBTEDNESS TO THE UNIVERSITY AND RETURNED CHECKS

No degree, diploma, or certificate will be granted or transcript of credits furnished to a student until all financial obligations to the university, other than secured student loans, have been paid. A student may not be permitted to register, to attend classes, or to take final examinations after the due date of any unpaid obligations.

A charge will be imposed by the Office of the Cashier, Student Stores, and other university offices for returned (NSF) checks. They may subject the maker to legal action and may jeopardize other financial privileges on campus such as cashing checks where allowed.

REFUND POLICY

REFUNDING OF TUITION AND FEES

It is to the financial advantage of all students withdrawing, dropping to part-time status, or dropping to a lower block of credit hours, to do so as early in the semester/session as possible. The official withdrawal policy may be found in the academic regulations section of this catalog. Refunds for tuition and required fees (excluding room and board charges which are determined by contractual agreement) will be made as follows for students who withdraw or drop to a lower block of credit hours:

- Through the first week of classes (five class days starting the first official day of classes for the university) tuition and required fees will be refunded at 100 percent.
- The second week of classes (six to ten consecutive class days) tuition and required fees will be refunded at 75 percent minus the \$25 nonrefundable processing fee.
- The third week of classes (eleven to fifteen consecutive class days) tuition and required fees will be refunded at 50 percent minus the \$25 nonrefundable processing fee.
- The fourth week of classes (sixteen to twenty consecutive class days) tuition and required fees will be refunded at 25 percent minus the \$25 nonrefundable processing fee.
- Beginning with the fifth week of classes (twenty-first consecutive class day) refunds will not be considered.

If the student wishes to appeal balances resulting from tuition and fee charges, the process must be initiated in writing to the Tuition Refund Appeals Committee. The written appeal can be submitted to the Center for Academic Services (201 Whichard Building) or via e-mail to cas@ecu.edu.

All refunds are subject to the above noted time limitations and will be based on the difference between the amount paid and the charge for the block of hours for which the student is officially registered.

SECTION 3: FINANCIAL ASSISTANCE

POLICY EXCEPTIONS

There will be no refunds for special course fees after the first five class days of each semester.

A separate and extended refund policy exists for federal Title IV financial aid recipients. Refer to financial aid materials or contact the Office of Student Financial Aid.

To officially withdraw from the university, a student must give written notice to the Office of the Registrar. Distance education students should send electronic notification to DEDrops@ecu.edu from their ECU e-mail account.

Any refunds that a student is entitled to shall first be applied to outstanding financial obligations owed the university.

SUMMER SESSIONS

Refunds for tuition and required fees for 1st and 2nd summer sessions is limited to the first week of classes (five class days starting with the first official day of classes for the university). During this period, students receive 100 percent of the tuition and fees will be refunded.

Refunds for tuition and required fees for 11-week summer session will be made as follows:

- Through the first week of classes (five class days starting the first official day of classes for the university) tuition and required fees will be refunded 100 percent.
- The second week of classes (six to ten consecutive class days) tuition and required fees will be refunded at 75 percent.
- The third week of classes (eleven to fifteen consecutive class days) tuition and required fees will be refunded at 50 percent.
- The fourth week of classes (sixteen to twenty consecutive class days) tuition and required fees will be refunded at 25 percent.
- Beginning with the fifth week of classes (twenty-first consecutive class day) refunds will not be considered.

FINANCIAL ASSISTANCE

VETERANS ADMINISTRATION EDUCATIONAL PAYMENTS

The Offices of Veterans Administration (VA) and Social Security require a minimum course load of 9 s.h. of required courses per semester (except summer session) for payment of full-time benefits to veterans and eligible dependents.

After the student declares a major, benefits will be paid only for courses listed in the catalog under that degree/major program. Substitutions are allowed when the major chairperson gives written approval prior to the student's taking the course.

Students declared academically ineligible will be required to remove their probation before educational benefits can be recertified to the VA.

Students may be eligible to receive a special allowance for individual tutoring if they enter school at one half-time or more. To qualify, students must have a deficiency in a subject, making the tutoring necessary. There is no entitlement charged for tutorial assistance.

Further information is available at the campus veterans affairs office, 102 Whichard Building, or by checking on their Web site, www.ecu.edu/cs-acad/registrar/Veterans.cfm.

UNC CAMPUS SCHOLARSHIPS

The UNC Campus Scholarship program is awarded on financial need and merit to incoming freshmen who are North Carolina residents. The \$1,500 scholarship award is designed to assist in the diversification of the university's undergraduate student body to include the presence of first generation college students, students from disadvantaged socio-economics backgrounds, and traditionally underrepresented populations on our campus.

NATIONAL/INTERNATIONAL FELLOWSHIPS AND SCHOLARSHIPS

East Carolina University maintains an Office of National/International Fellowships and Scholarships to familiarize students with the competitive national and international fellowships and scholarships available to selected students intent on pursuing graduate work. These fellowships and scholarships, for the most part, are for terms long enough to ensure completion of

the master's degree, but in some cases they allow for work on the doctoral degree. Among the fellowships and scholarships coordinated by this office are the Barry M. Goldwater Scholarship, the Marshall Scholarships, the Rhodes Scholarships, the Fulbright Grants, and the Harry S. Truman Scholarships (undergraduate only). Interested students should contact the associate dean of the Honors College, 107 Mamie Jenkins Building, 252-328-6373.

OFFICE OF STUDENT FINANCIAL AID

Through the use of federal and state funds as well as contributions from its many friends and alumni, East Carolina University makes every effort to assist students in the continuation of their education. The staff of the university Office of Student Financial Aid assists students in obtaining funds from the source best suited to the individual's need.

Three main types of financial assistance are available to qualified students: gift aid, consisting of grants and scholarships; long-term educational loans; and part-time employment. Students classified as nondegree auditors, special students, or visitors are not eligible for financial aid. Students who are not fully admitted degree-seeking graduate students may borrow a Federal Stafford Loan only for a limited period of time (not to exceed nine months or two semesters) for coursework that is a prerequisite for admission to an ECU graduate program.

Because the primary aim of the financial aid programs is to provide assistance to students who, without aid, would be unable to continue their education, most of the funds are awarded on the basis of financial need. However, in its efforts to strive for excellence, the university offers assistance to some talented students based on merit rather than need.

The university participates in federal programs which provide funds on the basis of financial need as follows:

Federal Pell Grant	Federal Work-Study Program
Federal Supplemental Educational Opportunity Grant	Federal Stafford Loan Program
Federal Parent Loan Program	Nursing Student Loan
Federal Perkins Loan	

Information pertaining to the application process, types of aid available, and academic requirements may be obtained from the East Carolina University Office of Student Financial Aid and at www.ecu.edu/financial. Students should contact appropriate deans or departmental chairpersons of intended major areas concerning scholarships that are available in those disciplines.

THE GRADUATE CATALOG

The university's graduate catalogs are for informational purposes only and do not constitute a contractual agreement between a student and East Carolina University. The university reserves the right to make changes in curricula, degree requirements, course offerings, or academic regulations at any time when, in the judgment of the graduate faculty, the chancellor, or the Board of Trustees, such changes are in the best interest of the students and the university.

East Carolina University is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, national origin, religion, gender, age, creed, sexual orientation, or disability. East Carolina University is an equal opportunity/affirmative action employer that accommodates the needs of individuals with disabilities.

Ordinarily, a student may expect to earn a degree in accordance with the requirements of the curriculum described in the official graduate catalog in effect when he or she first entered the university or in any subsequent catalog published while he or she is a student, but the faculty of the university reserves the right to make changes in curricula and in regulations at any time when in its judgment such changes are for the best interest of the students and of the university. Graduate students should refer to the requirements of their respective college, school, or department for information about their programs of study and confer with their advisors whenever problems arise.

OFFICIAL ANNOUNCEMENTS

The university maintains approximately one hundred official bulletin boards at key locations on campus and also maintains an official bulletin board on the ECU home page, www.ecu.edu. Through consecutively numbered official announcements, academic departments and other divisions of the university communicate essential and timely information to students. It is the responsibility of the student to read and know the contents of those announcements which affect his or her program.

**FALSIFICATION OF INFORMATION ON
THE GRADUATE ADMISSIONS APPLICATION**

In order to judge the viability of an applicant for admission to the Graduate School at East Carolina University, it is necessary to have complete and accurate information about the applicant's academic and professional background, medical history, criminal/disciplinary record, and other relevant personal details. All applicants are expected to provide complete, accurate information on the admissions application and notify the Graduate School of any changes relevant to information provided. When it is found that an applicant has deliberately lied, misrepresented, or in any fashion included information designed to mislead the application reviewers with respect to any component of the application portfolio, the following actions may take place:

- 1) If the application process has not been completed and an accept/reject admission decision to the Graduate School has not been made, further processing of the application may be discontinued, and if so, no admission offer can be forthcoming.
- 2) If the applicant has been admitted into the Graduate School and not yet enrolled in a graduate degree or certificate program or as a nondegree student prior to the discovery of false, misrepresented, or misleading information in the application portfolio, the offer of admission can be rescinded.
- 3) If the applicant has been admitted into the Graduate School and has enrolled in a graduate degree or certificate program or as a nondegree student prior to the discovery of false, misrepresented, or misleading information in the application portfolio, the student may be administratively withdrawn from all classes and dismissed from the Graduate School. As a consequence of the administrative withdrawal, all forms of financial assistance from the Graduate School will be terminated and any outstanding debts to the university will be the student's responsibility.

Evidence, suggesting that an applicant has deliberately provided false or misleading information or has intentionally misrepresented any personal information on an application to the Graduate School for admission into a graduate degree or certificate program or as a nondegree student, will be brought to the dean of the Graduate School. After evaluation of the evidence and consultation with any parties involved with the application deemed relevant by the dean, a decision regarding the disposition of the application will be made by the dean.

If the applicant wishes to appeal the decision made by the dean of the Graduate School, the applicant has 10 business days from the date of the decision notification to file an appeal with the Graduate School Administrative Board (GSAB) through the Graduate School. The GSAB will hear the appeal at the first convenient, regularly-scheduled meeting and evaluate its

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merits. To reverse the decision made by the dean, a two-thirds majority of a voting quorum must be had.

In all cases where a termination of the application process or dismissal from the Graduate School has occurred, no refund of application fees will be made.

LANGUAGE REQUIREMENT

Standard American English is the language of instruction at East Carolina University, except in certain foreign language programs. Adequate knowledge of that language is expected of all students. The various departments generally evaluate students in this regard, and they may require students to secure remedial instruction if necessary. Students whose native language is not English must demonstrate capability through the TOEFL, IELTS or PTE examinations, language academy, or other means. Some departments may require knowledge of one or more foreign languages for advanced degrees. For information, the student should contact the department.

COURSE ATTENDANCE AND PARTICIPATION

Course attendance is expected of all students. Faculty members have the right to establish attendance and participation requirements in each of their courses. Course requirements (e.g., examinations, oral presentations, laboratory experiments, participation in discussion) are in no sense waived due to absence from class. Instructors may establish penalties when excessive absences would seriously hinder achievement in any course. It is the instructor's discretion as to how absences will be handled.

DISRUPTIVE ACADEMIC BEHAVIOR

East Carolina University is committed to providing each student with a rich, distinctive education experience. To this end, students who do not follow reasonable standards of behavior in the classroom or other academic setting may be removed from the course by the instructor following appropriate notice. Students removed from a course under this policy will receive a grade of "drop" according to university policy and are eligible for tuition refund as specified in the current tuition refund policy.

COURSES

COURSE LOAD

No more than 15 semester hours of work may be taken in any fall or spring semester without the written permission of the department or college and the dean of the Graduate School. A student is considered to be enrolled full-time when registered for a minimum of 9 semester hours during a regular semester. Appropriate allowance can be made and equivalent credit can be given if work other than formal courses undertaken by the student contributes to the educational program.

COURSE REPETITION

Certain graduate courses may be repeated for credit and are identified in the course descriptions in this catalog. Repetition of any graduate course other than these is subject to the approval by the student's graduate program. Degree credit for repeated courses will be given only once, but the grade assigned for each enrollment shall be permanently recorded. Both the original grade and the grade received in the repetition will be used in calculating the overall GPA.

CREDIT

The main campus of East Carolina University operates on the semester system. The fall and spring semesters are each approximately fourteen weeks in length. The summer session is divided into two equal terms of approximately five and one-half weeks each. An alternative eleven week summer schedule is available in some areas. Doctoral students may enroll for a single eleven-week summer term. The Division of Continuing Studies will supply calendars for the off-campus centers.

The university is in session five and one-half days each week. Classes usually meet for fifty-minute periods, but some of the courses meet for three hours in one evening or on Saturday morning.

Only courses numbered 5000 or higher can be counted toward completion of graduate degrees or CAS programs. At least one-half of the credit for a master's degree must be earned in courses for graduates only, numbering 6000 or above. During the summer terms, most courses are offered during the daytime. Three semester hour courses meet one and a half hours daily; five semester hour courses meet two and one-half hours daily. Other courses meet for the appropriate times in order to meet the total contact hour requirement. The university offers many graduate courses, workshops, conferences, and short

courses during the summer session. **Graduate degree credit can be earned only at the rate of one semester hour of credit for each calendar week of attendance.**

Graduate students who seek and obtain permission to take courses at other institutions for subsequent transfer to degree programs at East Carolina University may obtain credit only **at the rate of one semester hour of credit for each calendar week of course attendance. Degree or CAS credit cannot be obtained through completion of correspondence courses.**

CREDIT BY EXAMINATION

Some colleges, schools, and departments offer graduate course credit by examination according to policies adopted by such colleges, schools, and departments and the regulations described below. Not more than 20 percent of a degree or CAS program may be earned through credit by examination, and credit thus earned will not be counted as residence credit.

Graduate students who are currently enrolled, and who have been accepted in a nondoctoral degree or CAS program, may receive credit by examination for a course in which they have not been enrolled for either credit or audit. This requires approval by the appropriate dean of a college, director of a professional school, or by the chairperson of a department in the Thomas Harriot College of Arts and Sciences and finally by the dean of the Graduate School. Appropriate forms are available in the Graduate School.

Successful petitioners must pay to the university cashier a nonrefundable fee per semester hour in advance of the examination. The forms, bearing the receipt of the cashier, must be shown to the instructor conducting the examination who, in turn, must report the grade to the registrar and the dean of the Graduate School. The examination must be conducted within one week following approval of the petition by the dean of the Graduate School.

The following departments and schools do not offer credit by examination: English, geography, history, political science, music, and nursing.

TRANSFER CREDITS



Up to 20 percent of the credit hours in a program may be earned in a different but regionally accredited institution. No transfer credit from another institution will be counted toward the completion of a certificate program at East Carolina University with the exception of courses offered as part of a certificate program with a collaborating institution. Master's degree students in business administration, public administration, and social work and doctoral students are governed by statements in degree requirements. For more information about degree requirements, view *Curricula* at www.ecu.edu/cs-acad/grcat/curricula.cfm.

Graduate-level course work taken elsewhere is not automatically applicable to a graduate degree program at East Carolina University. Applicants for admission must indicate clearly on application forms their attendance at other graduate-level institutions and petition college, school, or departmental advisors to apply such earned credits to their programs. College, school, or departmental petitions for application of transfer credit must be approved by the Graduate School. Ordinarily the Graduate School will approve the application of graduate course transfer credit only if (1) the college, school, or department so recommends; (2) the graduate credit was earned at a regionally accredited institution; (3) the student was admitted to a formal graduate degree program at the time the credit was earned with a minimum final course grade of B; and (4) the credit can be satisfactorily incorporated within the applicable time frame for completion of all degree requirements. Official transcripts which will provide adequate evidence to support such petitions must be supplied.

Students who have been admitted to the Graduate School at East Carolina University may enroll at other regionally accredited graduate-level institutions for course work which is applicable to their programs provided they have obtained advance permission from their college, school, or graduate program director and the dean of the Graduate School. Forms for permission to take course work elsewhere may be downloaded from the Graduate School Web site at www.ecu.edu/gradschool. Such transfer work is included in the 20 percent maximum application of such credit to degree programs. Transfer credit for short courses or workshops can be obtained only at the rate of 1 semester hour of credit for each calendar week of course attendance; concurrent enrollment in two or more short courses or workshops is not permitted.

AUDITING COURSES

Auditing a course consists of attendance at classes and listening, but taking no part in the class. An auditor is not responsible for any assignments, nor is he or she allowed to take any tests or examinations. However, in order to have the audited

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course recorded on the official transcript, a student must attend classes regularly. An auditor may not enroll in a participation course (art classes, laboratories, etc.). Under no circumstances will a grade be assigned, evaluations be made, or performance reports be issued on a student auditing a course. Auditing a course or part of a course is contingent upon the approval of the instructor and the appropriate departmental chairperson, school director, or college dean. Students may not register to audit a course until the last day of the drop/add period. Persons who wish to attend university classes without earning credit must be admitted to the university before seeking approval to audit any course. The applicants shall complete the prescribed procedure for registering through the Office of the Registrar and pay the audit fee to the cashier's office before attendance in classes is permitted.

Students regularly enrolled in the university wishing to audit course(s) must initiate the approval process with their advisor.

REGISTRATION PROCEDURES

Students who have received a letter of admission from the Graduate School report to the office of the college, school, or department in which they are enrolled to be assigned an advisor who will assist in scheduling classes and completing registration. Each student, new or continuing, has primary responsibility for assuring that he or she is completing degree requirements and is allowed to self-register. To register, a student must complete an online registration schedule, consult an advisor, if necessary, and register via Banner Self Service. To complete the process and be officially registered and entered on the class roll, students must pay fees to the cashier's office. No person will be admitted to any class unless officially registered either for audit or for credit.

Students are expected to complete registration (including the payment of all required fees) on the dates prescribed in the university calendar. Students who register during the early registration period are required to pay their fees and secure their official schedules during a stipulated period prior to registration day. Students who fail to pay fees by this date will have their schedules canceled.

EARLY REGISTRATION

Early registration is a time designated each semester for currently enrolled, readmitted, or newly admitted students to meet with their advisors, if necessary, to review their records and plan their courses for the upcoming semester. The student will complete an online registration schedule, after consulting an advisor if necessary, register via Self Service Banner, and receive a tuition and fee schedule giving further instructions.

SCHEDULE CHANGES

A graduate student may add a course or courses through the last day to register for the semester (fall/spring semesters this is the sixth class day). The student must secure appropriate approval from the instructor and/or departmental chairperson and contact the Office of the Registrar to have the add processed.

A graduate nondoctoral student may drop a course and receive no grade according to the date given in the Graduate School calendar. The student must notify their program advisor of the drop and contact the Office of the Registrar to have the drop processed. An e-mail from the advisor or the advisor's signature on a drop form indicates awareness of the change.

A student who drops a course after the last day for graduate students to drop a class without a grade will receive a final grade of F. Students that experience a medical emergency or other emergency of such a serious nature that it is impossible or extraordinarily difficult to withdraw prior to the last day to drop a course must obtain permission from the Dean of the Graduate School. If it is determined that such an emergency existed, approval will be given for the student to be withdrawn from all courses taken during that semester. As a matter of policy it is not possible to select and retroactively drop individual courses.

Doctoral students may drop courses only with permission of their departmental chairperson or graduate committees.

No course is officially dropped or added until all appropriate approvals are obtained from the advisor and/or the Graduate School and the required procedure is completed with the Office of the Registrar.

GRADING SYSTEM

GRADES AND SCHOLARSHIP

At the first scheduled class meeting, the instructor must state the basic requirements and assignments of the course and indicate his or her method of evaluation.

In the Graduate School, grades consist of A, AU, B, C, F, I, NR, Q, R, S, U, and W.

Change of Grade

A change of grade must be made within one year from the date the original grade was received.

Definition of Grades

1. A (Excellent)
2. AU (Audit)
3. B (Good)
4. C (Passed)
5. F (Failure)
6. I (Incomplete) The grade of "I" is given for a deficiency in the quantity of work done in a course. "I" grades must be resolved within one calendar year or a grade of "F" will be automatically assigned. No exceptions to this policy will be allowed. No student will be allowed to graduate with an incomplete on his or her record.
7. NR (Not reported by faculty)
8. Q (In progress) A special grade reserved for capstone courses such as professional papers, internships, practica, and similar courses. The "Q" grade is removed when the course is successfully completed and replaced with a grade of "R". The grades in these courses are not included in meeting the cumulative "B" average required for graduation.
9. R (Replacement) A special grade that replaces the grade of "Q" or "S" upon successful completion of thesis, dissertation, and capstone courses. The grades in these courses are not included in the cumulative grade point average.
10. S (Satisfactory progress in thesis or dissertation research) A special grade reserved for thesis and dissertation courses. The grades in these courses are not included in meeting the cumulative "B" average required for graduation.
11. U (Unsatisfactory progress in thesis or dissertation research) A special grade reserved for thesis and dissertation courses. The grades in these courses are not included in meeting the cumulative "B" average required for graduation.
12. W (Withdrawn)

GRADUATE STUDENT GRADE APPEALS

The goal of this grade appeal policy is to establish a clear, fair process by which graduate students can contest a course grade that they believe has been awarded in a manner inconsistent with university policies or that has resulted from calculation errors on the part of the instructor. Recognizing, however, that the evaluation of student performance is based upon the professional judgment of instructors, and notwithstanding the exceptions noted at the end of this policy, appeals will not be considered unless based upon one or more of the following factors:

- An error was made in grade computation.
- Standards different from those established in written department, school or college policies, if specific policies exist, were used in assigning the grade.
- The instructor departed substantially from his or her previously articulated, written standards, without notifying students, in determining the grade.

Only the final course grade may be appealed. The grade assigned by the instructor is assumed to be correct and the student appealing the grade must justify the need for a change of the grade assigned.

Appeals Procedure

1. Formal grade appeals must be initiated by the student by the end of the twenty-first calendar day of the semester (not including summer sessions) following the award of the grade.

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2. The first step to resolve differences between an instructor and student concerning a grade should be a discussion with the instructor. If the instructor of record will not be available within one semester (not including summer sessions), the department chair or designee may act in lieu of the instructor of record for the purpose of grade appeals.
3. If the instructor and student cannot resolve the appeal, and the student wishes to pursue the matter further, he or she must present to the chair of the department or designee in which the course is offered, a written appeal that includes the following:
 - A statement addressing how the appeal meets one or more of the three criteria necessary for a formal appeal.
 - A description of the outcome of the informal discussion process.
 - Any relevant documents the student would like to be reviewed as part of the appeal process.
 - A copy of the course syllabus and assignment descriptions.

The department chair or designee may request additional materials from the student. After receiving a copy of the appeal materials from the department chair or designee, the instructor has fourteen calendar days to respond in writing to the appeal. The department chair or designee will discuss this response with the faculty member and will provide the student with written notification of the outcome of this step within seven calendar days after receiving the instructor's response.

4. If there is no mutually agreed upon resolution between the student and the instructor, and the student wishes to pursue the matter further, he or she has seven calendar days to submit his or her written appeal to the college dean or designee. The college dean or designee will review the appeal, provide copies of all appeal materials to the instructor, and discuss the appeal with both the instructor and the student. The instructor has seven days to review the written appeal the student has presented to the dean and, if desired, prepare an additional written response. The college dean or designee will provide the student with written notification of the result of this step within fourteen calendar days after receipt of the appeal from the student.
5. If step 4 does not lead to a mutually agreeable resolution between the student and the instructor, and the student wishes to pursue the matter further, then a Grade Appeal Committee shall be formed by the dean of the school or college in which the program resides within ten calendar days. This committee shall include five graduate faculty members from the college: one selected by the student, one selected by the instructor of record, and one appointed by the dean of the Graduate School, and two appointed by the dean of the school or college in which the program resides. A majority shall prevail in the committee. The Committee shall elect its own chair. The function of the Grade Appeal Committee shall be to evaluate the appeal in terms of the stated grounds for the appeal. The Committee's decision may be to keep the assigned grade or to raise the assigned grade. The Committee shall provide a written justification to the deans of the academic school or college and the Graduate School for its decision, including minority opinions when they exist, no later than twenty-one calendar days after the Committee's formation. The college dean shall inform the student and the instructor of the Committee's decision and provide both parties with copies of the committee report.
6. In the case of a change of grade, if the instructor of record does not implement the change of grade decided upon by the Committee within ten calendar days after learning of the Committee's decision, the dean shall implement the change of grade as determined by the Committee on the student's official transcript through the change of grade procedure. This shall be the last step in the deliberation of the formal grade appeal.
7. The dean of the Graduate School shall forward a written record of the results of all grade appeals to the appropriate vice chancellor within fourteen calendar days. The dean of the Graduate School shall also provide an annual summary to the Graduate School Administrative Board of the number of cases heard and the aggregate result of the process.

Exceptions to the Grade Appeal Policy

The Grade Appeal Policy shall constitute the sole internal administrative remedy for a change in grade, except when the grade being disputed resulted from an alleged academic integrity violation or when a grade dispute involves an Office of Equal Opportunity and Equity discrimination complaint. If a grade dispute arises from an issue that is covered under the university's Academic Integrity Policy, the process for resolution that has been established for appealing academic integrity violations must be followed. If a grade dispute arises from an issue that is covered under the university's Equal Opportunity and Equity

policies, the process for resolution that the Office of Equal Opportunity and Equity has established must be completed prior to the use of the university's grade appeal process.

REMOVAL OF INCOMPLETES

The grade of "I" is given for a deficiency in the quantity of work done in a course. "I" grades must be resolved within one calendar year or a grade of "F" will be automatically assigned. No exceptions to this policy will be allowed. No student will be allowed to graduate with an incomplete on his or her record.

ACADEMIC ELIGIBILITY STANDARDS

To meet the requirements for graduation or awarding of a graduate certificate and to remain in good academic standing, a student must demonstrate acceptable performance in course work after being admitted to a graduate or certificate program. This requires a cumulative 3.00 GPA in all course work.

In addition to the expectations for successful performance of course work described in the previous paragraph, good academic standing requires satisfactory progress in the overall graduate program. The students' advisor or graduate advisory committees may render judgments as to whether satisfactory progress is being made toward the degree, taking into account all aspects of academic performance and promise, not necessarily course work alone. A positive judgment is required to remain in good academic standing. For students involved in research-oriented programs, the student's department and individual advisory committee are responsible for evaluating the student's skills with respect to performing quality research. Failure to meet programmatic/departmental standards may result in program termination.

PROBATION AND TERMINATION POLICY

In order to remain in good academic standing, graduate students must maintain a minimum cumulative GPA of 3.0 once they have a total of 9 credit hours attempted* and any additional or higher academic standards established by their program of study. Students who fail to meet their program's criteria may be placed on probation or dismissed from the program.

Students who fail to remain in good academic standing in accordance with the paragraph above, will be automatically placed on academic probation by the Graduate School, during which time they will have an opportunity to correct their academic deficiencies. The probationary period will last for the term(s) in which the next nine credit hours are attempted. Enrollment in the Graduate School will be automatically terminated for students who fail to correct their academic deficiencies by the end of the probationary period. Graduate students will not be allowed to take classes once it becomes mathematically impossible to achieve an overall cumulative GPA of 3.00 by the end of the remaining probationary period.

Students may appeal dismissal decisions by following the process outlined in the Graduate School Appeals Procedure.

*Total credit hours attempted is the sum of credit hours for all graduate courses in which a graduate student is enrolled as of the tenth day of each semester (the Official University Enrollment Report Date or "Census Date"). Courses with a grade of "I" (incomplete) or dropped after census date are included in the calculation of credit hours attempted. Thesis and dissertation courses are not included as they may be repeated multiple times and no grade is assigned until the thesis or dissertation is defended.

GRADUATE SCHOOL APPEALS PROCEDURE

Graduate students may appeal decisions concerning unsatisfactory performance on comprehensive assessments, academic probation for reasons of unsatisfactory progress toward the degree other than insufficient grade point average, or dismissal from the graduate program. This policy does not apply to the appeal of decisions regarding course grades.

Informal resolution of appeals concerning unsatisfactory performance on comprehensive assessments, academic probation for reasons of unsatisfactory progress toward a degree, or dismissal from the graduate program is always the most desirable approach, and encouraged whenever possible. Before initiating a formal appeal, the student should discuss the problem with the person or persons whose actions are being challenged, henceforth referred to as the 'academic officer', within ten business days following the adverse recommendation or decision. The student should keep the head/chair of the department in which the student's program resides apprized of the situation and progress of negotiations. For matters concerning unsatisfactory performance on comprehensive assessments, academic probation for reasons of unsatisfactory progress toward a degree, or dismissal from the graduate program, the appropriate academic officers are the student's advisor, the graduate advising committee, and/or the student's supervisor. If the matter is not resolved to the student's satisfaction within twenty business

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days following the informal discussion between the student and the academic officer(s), the student may initiate a formal appeal by submitting the matter in writing to the dean of the Graduate School. The student shall have five additional business days to file this appeal. In the written appeal, the student must clearly address three important aspects of the appeal: 1) the action(s) being challenged, 2) the person(s) against whom the complaint is being made, and 3) the redress sought. A decision shall be deemed final on the expiration of the period for filing an appeal, or if an appeal is filed, upon issuance of a decision in such an appeal, whichever is later. No adverse recommendation or action shall be effective until such date.

The dean of the Graduate School, together with the director of the Office of Student Rights and Responsibilities, shall examine the appeal and jointly determine whether the actions complained were disciplinary or academic. If the challenged action is deemed to be disciplinary, the dean of the Graduate School shall refer the complaint to the appropriate university officers responsible for disciplinary matters within five business days. If the challenged action is deemed to be an academic matter, other than a grading decision, the dean of the Graduate School shall implement the procedures defined below, keeping all records associated with the case.

A review panel comprised of two faculty members and a graduate student will be appointed. One faculty member, from a college other than the one in which the student's academic department resides, will be appointed by the dean of the Graduate School. The other faculty member, from the college in which the student's program resides, will be appointed by the dean of the college. However, this representative will not be from the student appellant's department. In the event that either of the two aforementioned deans is a complainant in the case, the vice chancellor for research and graduate studies will appoint the appropriate faculty members. The Graduate Student Council will provide a list of graduate students who expressed a willingness to serve on review panels from which the dean of the Graduate School will appoint a student from a department other than that of the student appellant. In the event that the dean of the Graduate School is a principal in the case, the vice chancellor for Research and Graduate Studies will appoint the student member.

The review panel will consider the case in detail. It must review any and all written records of the case. It must afford the student appellant an opportunity to appear in person before it, and consider any written materials the student may wish to bring to its attention. The review panel will hear from the academic officer(s) whose action is being appealed and may confer with other involved parties. It shall evaluate any other information it deems important to its deliberations. Written summaries of the deliberations will be kept. To overcome the presumption of good faith in the performance judgment by the advisor, supervisor, and/or graduate committee, an appeal must demonstrate that the evaluation was based upon matters that are inappropriate or irrelevant to academic performance and applicable professional standards and that consideration of those matters was the deciding factor in the evaluation. Should the review panel find in favor of the student, it will submit a report, making appropriate recommendations, to the dean of the Graduate School, e.g., reassignment to a different advisor and/or graduate committee, or administration of another examination. The dean of the Graduate School and the dean of the appellant's college shall jointly review the case, giving due consideration to the review panel's report and recommendation. Following consultation with the vice chancellor for Research and Graduate Studies, the dean of the Graduate School shall make the final decision of the university. In the event that the dean of the Graduate School is a principal in the case, the duties of the dean of the Graduate School, with respect to this case, shall be transferred to the vice chancellor for Research and Graduate Studies.

COMPREHENSIVE ASSESSMENTS

All graduate programs require students to successfully complete a comprehensive assessment. The assessment may include a comprehensive examination (written and/or oral), a research project, thesis, capstone course, portfolio, and/or equivalent. The specific requirements may be found in descriptions of degree programs. For more information about degree requirements, view Curricula at www.ecu.edu/cs-acad/grcat/curricula.cfm.

THESIS/DISSERTATION: RESEARCH, EXAMINATION, PREPARATION, AND DELIVERY

In programs where a thesis or dissertation is prepared, the student must comply with the specific regulations of his or her school or department and the general requirements of the Graduate School. These requirements are specified in the *Manual of Basic Requirements for Theses and Dissertations* which is approved by the Graduate School and available on the Graduate School's Web site, www.ecu.edu/gradschool/. The manual contains details on the form, preparation, and electronic submission of theses and dissertations.

Thesis and dissertation topics must be approved by the thesis/dissertation advisory committee and the chairperson of the department. The Thesis/Dissertation Research Approval form, available on the Graduate School Web site, must be completed,

appropriate signatures obtained, and submitted to the Graduate School, prior to beginning research. Students whose research involves human subjects, animals, biohazards, or radiation must have their research proposals approved by the appropriate compliance committee BEFORE beginning their research. A copy of the appropriate committee approval must be included in the appendixes of the final thesis or dissertation. Research involving human subjects must be approved by the University and Medical Center Institutional Review Board (UMCIRB). Students whose research involves animals must have their proposals approved by the Institutional Animal Care and Use Committee (IACUC). Research involving radiation/biohazards must be reviewed by the Office of Prospective Health to insure compliance.

Copies of the thesis/dissertation must be presented by the student to his or her faculty advisor for the use of the examining committee not later than one week prior to the date on which the examining committee will conduct the oral examination and defense of the thesis. At this oral defense of the thesis, the examining committee may ask the student questions regarding the subject matter in the major field. A student may attempt to defend the thesis or dissertation no more than twice.

After the thesis or dissertation has been successfully defended, the student must submit the approved thesis/dissertation electronically via the electronic submission site, www.etdadmin.com/ecu according to directions found on the Graduate School Web site. It must be delivered at least ten days prior to the last day of classes of the student's intended semester of graduation.

Prior to or at the time of electronic submission, the student must complete and sign the ECU ETD Non-Exclusive Distribution Agreement granting ECU a limited, nonexclusive, royalty-free, license to reproduce the thesis or dissertation in electronic form and make available to the general public at no charge, subject to the embargo choice/publishing restrictions of the student. This form should be delivered to the Graduate School along with the original copy of the signature page bearing signatures of committee chair, department chair and/or dean of the school. Once these are delivered, the student begins electronic submission of the approved thesis/dissertation on the submission site: www.etd.admin/ecu for format check and review by the Graduate School. Once revisions requested by the Graduate School are completed by the student and the final document is approved by the dean of the Graduate School, the Graduate School will notify the registrar and the department of completion. Upon verification of student's graduation, the Graduate School will submit the final approved document to ProQuest and Joyner Library Institutional Repository. Students may order bound copies of the thesis/dissertations from ProQuest at the time of submission or later through other commercial binderies. Both ProQuest and Joyner Library are the repositories for the final electronic versions of theses/dissertations.

For any other requirements and procedures for PhD dissertations, see Curricula at www.ecu.edu/cs-acad/grcat/curricula.cfm.

CHANGE OF PROGRAM

In order to change graduate degree programs, a student must file a petition to change programs on forms obtained from the Graduate School Web site at www.ecu.edu/gradschool. The student's credentials will be sent to the new school or department for evaluation and recommendation. The petitioning student will be notified by the program concerning the outcome of the petition. The accepting program will notify the Graduate School, the Office of the Registrar and the former graduate program director of a change of program. A student who petitions successfully for transfer to a new degree program must complete new program requirements in force at the time of the change of program. Any courses credited from the old program must meet the time frame requirements for completion of the new program.

ALTERNATIVE PROGRAMS

DUAL DEGREE PROGRAMS

Dual degree programs are those in which a student can enroll concurrently in two degree programs offered in two different academic units (e.g., mathematics and mathematics education).

Individualized dual degree programs may be designed in response to student requests; however, only academic programs have the authority to propose and receive approval for new dual degree programs. Dual degree programs must balance structural efficiency with individual program integrity. They result in the awarding of two degrees from two different disciplines, generally at the master's degree level, however, exceptions (e.g., MD/MBA) are possible. Note that a master's degree student continuing on for a PhD in the same academic program is not considered a dual degree student under these guidelines.

Students must apply to and be accepted by both programs individually before beginning in the dual degree program. In a practical sense, this means that students should apply to both academic programs at the same time or apply to the second

SECTION 4: ACADEMIC REGULATIONS

program no later than during their first year of the first program. Dual degrees will not be awarded after the curricular requirements have already been met without initial application.

Course credit transfers allowed above the normal 20 Percent Rule (see the Transfer Credit Policy) are specified in the dual degree program approvals from the Graduate School. Students who do not apply to both programs before beginning the curricular requirements will be subject to the 20 Percent Rule. In no case will more than 30 percent of a graduate program or 15 semester hours, whichever is greater, be counted in common between two degree programs. No credit hours completed as part of a previously earned master's degree can be counted towards a second master's degree.

Students in officially recognized dual degree programs, other than the MD/PhD program, must apply to graduate for both degrees at the same time, even if the requirements for one degree are completed sooner than the second degree. Academic programs are asked to provide flexibility so students may be able to walk ceremoniously with their cohort even if they do not earn the degree that semester.

To earn two degrees students register in one school or department and, with the cooperation of the second school or department, work out their program to cover the requirements for both. An application to the Graduate School must be submitted for each degree. The application fee need only be paid once.

Individualized dual degree proposals should first be created and approved by the appropriate hierarchy in each participating unit. Aside from the general principles above, materials should include: a description of the participating units/degrees, an overview of the existing academic course of studies, the rationale and demand for the new dual degree, the structure and resource support for the new dual degree, guidelines for academic eligibility and meeting Graduate School regulations, any other supporting materials to assist with a thorough review of the request. A letter of support from the chair or director of each participating unit stating faculty support must also accompany the proposal.

Proposals should be submitted to The Graduate School for review:

1. In cases where the "exchange" (i.e., double-counting) of courses involves less than 20%, Graduate School senior staff will review the proposal and approve it.
2. In cases where the course credit exchange is greater than 20%, but less than 30%, the process is the same as above, though senior staff will bring the proposal before the Graduate Curriculum Committee for review and approval as necessary.
3. In cases where the exchange is greater than 30%, senior staff will coordinate the review process by the Graduate Curriculum Committee and the Graduate School Administrative Board.
4. After its review of a submitted proposal, the Graduate School will determine whether to approve the proposal and inform the requesting units.

INTERDISCIPLINARY DEGREE PROGRAMS

Interdisciplinary Degree programs award a single degree for courses of study that involve work in multiple disciplines, but are not identified with any specific academic unit (for example, the PhD in Coastal Resource Management). Academic units are encouraged to develop new interdisciplinary programs that respond to changing social, economic and circumstances. Proposals must originate by academic units and follow the regular institutional and UNC system processes for the approval of new degree programs.

JOINT DEGREE PROGRAMS

Joint Degree programs are those from which a single degree is awarded by two or more UNC constituent institutions or a UNC institution and a non-UNC educational institution who are participating in a joint degree program (e.g., PhD in Technology Management with Indiana State University).

Proposals must follow the regular institutional processes for the approval of new degree programs at each participating institution within the UNC system before being submitted to the Board of Governors for approval.

A joint degree will carry the name of each participating institution on student diplomas. Each student who will receive a joint degree must be approved by the institutional process for certifying a student to receive a degree by each UNC institution

whose name will appear on the diploma. Information regarding UNC System policies on joint degrees may be found at: <http://intranet.northcarolina.edu/docs/legal/policymanual/400.1.1.pdf>.

RESIDENCE AND GRADUATION REQUIREMENTS

RESIDENCE REQUIREMENT

The residence requirement for a graduate degree program is met when a student has earned at least eighty percent of the required degree credit for his or her program (a program is defined as 30 or more s.h.) through enrollment in courses offered by East Carolina University. Individual graduate programs may specify additional residence requirements.

CONTINUOUS ENROLLMENT (OR REGISTRATION)

Graduate students who have previously registered for all credits in a graduate degree program but who have not completed all requirements (e.g., thesis, professional paper, internship, etc.) must continue to register each semester (except summer terms) until all degree requirements are completed and filed with the registrar. Students must be enrolled for at least one credit hour during the semester of graduation except summer, if registered for the prior spring semester. Students who complete all degree requirements prior to the first day of the term of graduation may petition the Graduate School for an exception to the registration requirement for that term.

In special circumstances, students may request a leave of absence from their program of study. They must notify their graduate program director and file a readmission application prior to returning. During a leave of absence, students will not be permitted to utilize university resources. Students readmitted after a leave of absence will be required to meet the continuous enrollment requirement.

For information on leave of absence, view Absence and Readmission found at www.ecu.edu/cs-acad/grcat/admission.cfm#LOARadmit.

RESEARCH SKILLS REQUIREMENT

Programs require completion of a research skills component. How the research skills requirement is completed is defined by the academic program.

TIME LIMITATIONS

The time limit for completing all credit (including transfer credit) in nondoctoral programs is six years (except for the master of science in social work which is limited to four years for full- and part-time students). College, school, and departmental petitions for time extensions for completion of degrees will be reviewed and acted upon by the Graduate School. The Graduate School is empowered to establish the length of time for extensions that are granted and to specify the conditions governing time extensions that student petitioners must meet. No program content over 10 years old can be applied toward a graduate degree.

Students in the EdD program must complete their course work in six years. An extension may be granted with the approval of the faculty of the Department of Educational Leadership and the Graduate School.

For information about PhD program time limitations view Curricula found at www.ecu.edu/cs-acad/grcat/curricula.cfm.

APPLICATION FOR GRADUATION

Application for graduation must be made on a form provided by the registrar at least one semester prior to completion of the requirements of the degree. Students who complete the degree requirements after the last day of final exams in the intended term of graduation will be certified for graduation in a subsequent term.

OFFICIAL WITHDRAWAL AND READMISSION

For information on withdrawal and readmission, view Admission and Readmission at www.ecu.edu/cs-acad/grcat/admission.cfm.

STUDENT EDUCATIONAL RECORDS

POLICY ON POSTING GRADES

As soon as they are determined at the end of each semester or summer term, grades are posted electronically. Students may secure their grades via Banner Self Service. In compliance with the Family Educational Rights and Privacy Act, faculty are not allowed to post grades by social security number or any other personally identifiable characteristic. Upon receipt of a written request to the Office of the Registrar, a report of grades is sent to the student at his or her permanent home address. Questions about final examination grades should be directed to the instructor who determined the grade.

TRANSCRIPTS OF RECORDS

Requests for transcripts of a student's record should be submitted electronically via OneStop, addressed in writing or in person with a photo ID to the Office of the Registrar. For each copy, there is a fee of \$5. A transcript will not be issued for a student who is financially indebted to the university.

PRIVACY OF STUDENT EDUCATIONAL RECORDS POLICY

The university policy for the administration of student educational records is in accordance with the provisions of the Family Educational Rights and Privacy Act, also known as the Buckley Amendment or FERPA. This policy provides that the student has a right of access to student educational records maintained by the university or any department or unit within the university. The policy also protects the confidentiality of personally identifiable information in student records. Except to the extent allowed by applicable law, personally identifiable information contained in a student educational record will not be disclosed. A copy of the university policy regarding the privacy of student educational records is maintained by the University Registrar. Each member of the faculty should be thoroughly familiar with this policy and comply with its provisions.

ACCESS TO STUDENT EDUCATIONAL RECORDS

In compliance with the Family Educational Rights and Privacy Act of 1974, it is the policy of the university that students have the following rights in regard to official educational records maintained by the university.

1. Each student has the right to inspect and review official educational records, files, and data maintained by the university and directly related to the student and not related to other students. Some exceptions to this include: sole possession notes, law enforcement or campus security records, employment records (unless employment is contingent upon student status), records relating to treatment by physician, psychiatrist, psychologist, etc.
2. The university will comply with the request from a student to review his or her records within a reasonable time, but in any event not more than forty-five days after the request is made. Any inquiry pertaining to student records should be directed to the Office of the University Registrar.
3. Students may request a hearing to challenge the content of his or her education record on the grounds that the information contained in the education records is inaccurate, misleading or in violation of the privacy rights of the student. Any complaint pertaining to student records should be made directly to the Office of the University Registrar, telephone 252-328-6747.
4. Legitimate educational interest is a demonstrated "need to know" by those officials of an institution who act in the student's educational interest. They include: faculty, administration, clerical and professional employees, student workers, and other persons who need student record information for the effective functioning of their office or position. The following criteria shall be taken into account in determining the legitimacy of a University official's access to student's records:
 - a. The official must seek the information within the context of the responsibilities that he or she has been assigned, and
 - b. The information sought must be used within the context of official university business and not for purposes extraneous to the official's area of responsibility to the university.
5. The university will not release any information from student records to anyone (except those agencies noted as permitted by the Act—34 CFR § 99.31) without the prior written consent of the student. The consent must specify the records or information to be released, the reasons for the release, and the identity of the recipient of the records.

6. Information from the student's records may be released without the written consent of the student in the following situations:
 - a. in compliance with a court order or lawfully issued subpoena;
 - b. requests from school officials who have a legitimate educational interest in the information (a school official is a person employed by the university in an administrative, supervisory, academic or research, or support staff position, as determined by the Office of the University Registrar, including student workers);
 - c. requests from other departments or educational agencies who have legitimate educational interest in the information, including persons or companies with whom the University has contracted (such as an attorney, auditor, collection agent, Higher One or The National Student Clearinghouse);
 - d. requests from officials of other colleges or universities at which the student intends to enroll or has enrolled, provided the student is furnished with a copy, if he or she so requests, so that he or she may have an opportunity to challenge the contents of the record;
 - e. requests in connection with a student's financial aid;
 - f. requests from parents of a dependent student as defined in Section 152 of the Internal Revenue Code of 1986;
- or
- g. requests from appropriate persons in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of the student or other persons.
 - h. additional circumstances may exist to permit the release without student consent within the applicable regulations.

A student has the right to file a complaint at any time with the US Department of Education. However, it is expected that the student normally would exhaust the available administrative remedies for relief according to the university grievance procedures before filing such a complaint.

CHANGE OF NAME AND ADDRESS

It is the obligation of every student to notify the Office of the Registrar of any change in name or address in writing. Students may change their address via Self Service Banner (www.onestop.ecu.edu, then click on the Banner Self Service link) using their Pirate ID and passphrase. Failure to do so can cause serious delay in communication with the student.

RELEASE OF DIRECTORY INFORMATION

The university routinely makes available, in an on-line directory, certain information about its students. This policy is for the convenience of students, parents, other members of the university community, and the general public. In compliance with the Family Educational Rights and Privacy Act of 1974, the university will continue this policy of releasing directory information, including the following: the student's name, address (including e-mail address), telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institute attended by the student. If any student does not wish this directory information released without prior consent, the student must notify the Office of the Registrar in writing within seven days after registration day of the current term of enrollment.

INTERNATIONAL PROGRAMS

East Carolina University views the creation of international awareness as an essential component of today's university. It provides academic and co-curricular programming which allows students to gain the knowledge and skills to comprehend the world within a broad, flexible, and responsive framework that takes into account the reality of interdependence among countries and of international structures. The university aims to produce educated citizens of this and other countries capable of coping with the complexity and diversity of the world. The International House is located at 306 East 9th Street and may be contacted by calling 252-328-4829.

INTERNATIONAL ADMISSIONS AND SERVICES

The Office of International Affairs coordinates ECU's international student recruitment and admissions program, working with its own staff and others within the university to expand the international representation within its degree-seeking student body. Additionally, the office offers all students and faculty a variety of opportunities to participate in international travel and learning experiences through summer, semester, or year-long programs. Fulbright and other scholarship or fellowship opportunities, teaching and research, or work experiences are a few of the activities addressed for students and faculty.

Students from countries other than the United States may apply to the chairperson of the Department of Foreign Languages and Literatures for a departmental certificate of American studies. (See Department of Foreign Languages and Literatures for requirements.)

ECU LANGUAGE ACADEMY

The ECU Language Academy (ECULA) provides high quality intensive language instruction to international students and professionals seeking to improve their English skills for both academic and professional purposes. There are opportunities for students to engage in American culture through on campus classes and the use of ECU facilities. Upon successful completion of the highest level of classes offered at the ECULA, students will have satisfied the language requirement for admission to ECU; however, all other academic requirements for admission will still need to be met.

ECULA classes will range from advanced beginner level to superior level and will meet five days per week, four hours per day. Topics will include: reading and vocabulary building; note-taking and study skills; oral communication skills; and writing for college.

For more information, please access the program Web site at <http://www.ecu.edu/cs-acad/intlaffairs/ECULanguageAcademy.cfm>.

EXCHANGE PROGRAMS

The Office of International Affairs offers a full range of semester-long exchange programs at universities around the globe. With 27 bilateral exchange partners, as well as membership in the UNC Exchange Program (UNCEP) and the International Student Exchange Program (ISEP), ECU students can spend a semester or full academic year studying abroad at more than 200 institutions in 41 countries.

Reciprocal tuition/fee exchanges make studying abroad quite affordable. Students studying on exchange through ECU, UNC-EP, or ISEP programs pay their usual tuition and fees to ECU and receive equivalent benefits at the host institution. Students may use their financial aid to pay for their exchange programs and are encouraged to apply for scholarships through the Rivers Endowment Fund, designed to support ECU students who wish to study abroad.

Studying abroad is available to students with strong foreign language skills, as well as students interested in sites where English is used as the primary language of instruction. Students are enrolled full-time at their host schools and are free to choose coursework that complements their program of study at ECU. With proper planning and close consultation with their academic advisors, students are able to take courses that count toward major/minor requirements or foundations curriculum. Study abroad participants earn credits toward their ECU degree program without losing time or delaying graduation.

Acquiring a global perspective through foreign study is an important component of your education. It is a strong addition to a resume, and a point of interest that sets students apart in job interviews or graduate/professional school applications. Ultimately, the value of studying abroad is measured through personal growth. Combined with opportunities for academic enrichment and professional development, studying abroad is an exciting, life changing and beneficial experience.

THE THOMAS W. AND IZABEL B. RIVERS ENDOWMENT FUND

The endowment fund established by Thomas and Izabel Rivers promotes the internationalization of ECU by providing financial support for study abroad students. Awards are made for the fall and spring semesters, as well as summer sessions. All applicants are evaluated by a faculty panel. Information and applications are available on the Office of International Affairs Web site.

International Affairs coordinates the Thomas W. Rivers Distinguished Professorship in International Affairs (Rivers Chair). Each academic year, this program brings outstanding foreign scholars who live in residence. The Rivers Chair assists schools, departments and faculty in the internationalization process through teaching, research, and conferences.

GLOBAL ACADEMIC INITIATIVES

The Global Academic Initiatives program provides personal international experiences to any student on the ECU campus through the use of real-time video, audio, and internet technologies. The global understanding course (ANTH 1050, PSYC 2250, SOCI 2250, INTL 1050), is jointly taught with three other countries and is centered around topics ranging from family to cultural traditions to the meaning of life. In this foundation curriculum course, students are partnered with their colleagues from partner universities in 22 countries to explore these and other topics. Partner institutions are located on five continents and include many universities in diverse cultures. ECU's global understanding project is the winner for the 2008 Andrew Heiskell Award for Innovative International Education, given by the Institute of International Education and has been recognized worldwide for its pioneering efforts to create structured, meaningful discussion between students from diverse cultures. ECU students also benefit from the International Lecture Exchanges, the International Course Module Exchanges, the International Course Exchanges, and the International Research Exchanges. These virtual exchanges are offered across the curriculum in a wide variety of courses and disciplines. The Many Voices: Student Discussions provides an opportunity to students enrolled in the COAD classes with an introductory experience through the use of structured discussions based on diverse student vignettes.

LEADERSHIP PROGRAMS

BB&T CENTER FOR LEADERSHIP DEVELOPMENT

The BB&T Center for Leadership Development advocates and facilitates the incorporation of leadership development as an important dimension of intellectual attention, inquiry and activity at East Carolina University and in higher education. Major emphasis is placed on the proposition that every university student is being prepared as a leader; and therefore being empowered as an agent of positive change in society.

The Center's mission is to serve as a catalyst for leadership development throughout the University. A major goal is to encourage and assist academic units and faculty to prepare students with leadership capacities to positively influence and impact their lives, their families, their communities and the larger society. That goal is pursued by providing opportunities for leadership-related projects, programs and initiatives through financial grants for leadership development agendas.

By encouraging and assisting units to embed leadership development components into courses and programs, the Center seeks to advance East Carolina University's extant service culture and its intention as a leadership development community.

Requests for further information should be addressed to the Director, BB&T Center for Leadership Development, 1100 Bate Building, East Carolina University, Greenville, NC 27858-4353; telephone 252-328-6190; beardenj@ecu.edu.

CENTER FOR STUDENT LEADERSHIP AND CIVIC ENGAGEMENT

The Center for Student Leadership and Engagement (CSLE) is located in 109 Mendenhall Student Center within the Department of Student Involvement and Leadership. The mission of the center is to foster leadership practices and engagement experiences that transform and empower students through pedagogy, research, and co-curricular experiences. The center provides a central location for student leadership experiences and opportunities that foster their leadership development.

The CSLE operates under five core premises and a matrix of guiding principles which aligned with the university's strategic plan to "Distinguish itself by the ability to train and prepare leaders for our state and nation." The first and foundational premise is that leadership is a continual process of understanding who you are and using that knowledge to positively influence yourself, others, and society. Secondly the CSLE is driven by the premise that engagement is a powerful vehicle for developing students' leadership skills. The third operating premise is that leadership is a collaborative process, and the fourth states that leadership is value-based. The final premise around which the center functions is that all students (not just those in formal positions) have the ability to apply leadership practices to real life situations.

SECTION 5: INTERNATIONAL AND LEADERSHIP PROGRAMS

Programs and activities will be designed to encourage development in three learning stages; they will Discover, Design, and then Deliver. Within each stage, students will explore three phases of leadership – Self, Others, and Society.

In the Discover phase, students start by recognizing the self--who they are, what they want, what they value, how they operate as individuals and as members of groups, and how they can contribute to the betterment of society.

During the Design phase, students develop a personal strategic vision and develop strategies for motivation and self-discipline. Plans for promotion and collaboration with others are made. In this stage, students personally respond to societal challenges.

The Deliver phase is structured to be transformative. At this point in their development, students will have the opportunity to transform themselves and society by performing service to the public.

The CSLE offers students points of entry into leadership development activities throughout their collegiate career. The center serves as a clearinghouse for multiple programs and hosts the Elite Pirate, Leadership Challenge Institute, Emerging Leaders Program, Advanced Leaders Program, Leadership Reading Circles, L.E.A.P. workshops, iLEAD Student Leadership Conference, Leadership Extreme Trips, Pop into Leadership Movie Series, Character of Leadership, Leaving Your Legacy, Co-Curricular Student Profile, and the Walter & Marie Williams Leadership Award Program to name a few. To find out more about our programs and initiatives, visit our website at www.ecu.edu/studentleadership or e-mail at studentleadership@ecu.edu. You also may contact our office at feel free to give us a call at 252-737-2002, 252-737-2091.

ONLINE DISTANCE EDUCATION

East Carolina University has been a leader in distance education in North Carolina for more than sixty years. In the years since the inception of its first distance education program, the university has expanded both its offerings as well as the areas that it serves. Early on, ECU recognized the potential of online learning, and was one of the first universities in the nation to develop and offer a degree entirely over the Internet. Since then, ECU has worked to offer more than sixty degrees and certificate programs online, in fields such as education, business, health care, and technology, among others.

East Carolina University's online distance education degree programs allow students to access their coursework twenty-four hours a day, seven days a week. Online courses are taught by the same faculty that teach on-campus courses, and the level of coursework, required readings, and examinations are the same for online courses as there are for their on-campus counterparts. Programs are designed with the student in mind, and the instruction is focused on active participation and academic success.

DISTANCE EDUCATION STUDENTS

Online learning is ideal for a number of people, particularly those who are concerned about balancing the rigors of an academic workload with full-time employment or family obligations.

Online courses are typically delivered using course management systems that have been selected due to their ease of use for both student and instructor; and they have been used extensively for delivery of distance education coursework. As with on-campus sections, syllabi and schedule of assignments for online courses are made available to students within the first few days of the semester for online courses. Assignments and homework are submitted electronically via e-mail or the class Web site, usually on a weekly basis, with all necessary materials made available via folders within the course management system. When administered electronically, examinations are taken by students during a prescribed timeframe, using a proctor when necessary.

In an online course, students and instructors communicate via text-based discussion forums, where students can access their coursework, as well as read and respond to information presented by the instructor. Some courses include real-time electronic discussions that take place at a scheduled time, with students engaging their peers and instructor in conversation about course material.

Students opting to complete their degrees with online distance education typically increase their skills and comfort level with technology and online delivery of information, while strengthening their self-discipline, and organizational and time management skills. The format is ideal for giving students heightened independence in the pursuit of their higher education, while simultaneously providing the guidance and mentorship that are traditionally associated with on-campus instruction. Though convenience and flexibility are emphasized with distance education coursework, the same amount of effort and participation are required from both student and instructor as required for face-to-face courses.

Full-time campus students who elect to add distance education course(s) to their schedule will incur additional tuition and fees for such coursework, in addition to their regular on-campus tuition. Graduate rates will apply to those students who are admitted to East Carolina University as non-degree seeking graduate students or those students who are pursuing graduate degrees or certificates of advanced study.

Tuition rates and up-to-date listings of distance education course offerings by semester can be found at www.options.ecu.edu.

ONLINE DEGREE AND CERTIFICATE PROGRAMS

GRADUATE DEGREES

Business Administration (MBA)	Music Education (MM) **
Communication Sciences and Disorders (MS) **	Nursing (MSN)
Construction Management (MCM)	Adult Nurse Practitioner Concentration**
Educational Administration and Supervision (EdS)	Clinical Nurse Specialist in Adult Health Concentration
English (MA)	Family Nurse Practitioner Concentration**
Multicultural and Transnational Literatures Concentration	Neonatal Nurse Practitioner Concentration
Technical and Professional Communication Concentration	Nurse Midwifery Concentration**
Environmental Health (MSEH)	Nursing Education Concentration
Health Education (MA)	Nursing Leadership Concentration
Instructional Technology (MS)	Nutrition (MS)
Library Science (MLS)	Occupational Safety (MS)
Master of Arts in Education (MAEd)	Psychology, General (MA) **
(Must hold a current North Carolina teaching license)	Software Engineering (MS)
Art Education	Technology Systems (MS)
Birth-Kindergarten Education	Computer Networking Management Concentration
Business Education	Digital Communications Concentration
Family and Consumer Sciences Education	Industrial Distribution and Logistics Concentration
Health Education	Information Security Concentration
Instructional Technology Education	Manufacturing Systems Concentration
Physical Education	Performance Improvement Concentration
Science Education	Quality Systems Concentration
Special Education	Vocational Education (MS)

GRADUATE CERTIFICATE PROGRAMS

Assistive Technology	Multicultural and Transnational Literatures
Community College Instruction	Physical Education Clinical Supervision
Community Health Center Administration	Performance Improvement
Computer Network Professional	Professional Communication
Distance Learning and Administration	Security Studies
Health Care Administration	Special Endorsement in Computer Education
Health Care Management/MBA	Substance Abuse Counseling
Health Informatics	Virtual Reality in Education and Training
Information Assurance	Web Site Developer
Lean Six-Sigma Black-Belt	

POST-MASTER'S CERTIFICATES

Adult Nurse Practitioner**	Nurse Midwifery**
Clinical Nurse Specialist	Nursing Education
Family Nurse Practitioner**	Nursing Leadership
Neonatal Nurse Practitioner	

ADD-ON LICENSURE

Driver's Education	Special Endorsement in Computers Education
Preschool	

** Some on-campus attendance required.

GRADUATE DEGREES

East Carolina University awards 25 different types of graduate degrees, the majority of which are master of arts (MA) and master of science (MS). The 25 types of graduate degrees includes:

Master of Arts (MA)	Master of Science in Environmental Health (MSEH)
Master of Arts in Education (MAEd)	Master of Science in Nursing (MSN)
Master of Arts in Teaching (MAT)	Master of Science in Occupational Therapy (MSOT)
Master of Business Administration (MBA)	Master of Social Work (MSW)
Master of Construction Management (MCM)	Certificate of Advanced Study (CAS) (Sixth Year)
Master of Fine Arts (MFA)	Educational Specialist (EdS)
Master of Library Science (MLS)	Doctor of Audiology (AuD)
Master of Music (MM)	Doctor of Dental Medicine (DMD) *
Master of Public Administration (MPA)	Doctor of Education (EdD)
Master of Public Health (MPH)	Doctor of Medicine (MD)
Master of School Administration (MSA)	(See catalog of the Brody School of Medicine.)
Master of Science (MS)	Doctor of Philosophy (PhD)
Master of Science in Accounting (MSA)	Doctor of Physical Therapy (DPT)

*Classes begin in Fall of 2011

GRADUATE MINORS

Statistics

Women's Studies

GRADUATE CERTIFICATES

Adult Nurse Practitioner	Hydrogeology and Environmental Geology
Advanced Performance Studies	Information Assurance
Applied Economics	International Management
Aquatic Therapy	International Teaching
Assistive Technology	Lean Six-Sigma Black-Belt
Autism	Management Information Systems
Biofeedback	Multicultural and Transnational Literatures
Child Welfare Studies	Neonatal Nurse Practitioner
Clinical Nurse Specialist	Nurse Anesthesia
Community College Instruction	Nurse Midwifery
Community Health Administration	Nursing Education
Community Health Center Administration	Nursing Leadership
Computer-based Instruction	Performance Improvement
Computer Network Professional	Physical Education Clinical Supervision
Deaf-Blindness	Professional Communication
Development and Environmental Planning	Professional Investment Management and Operations
Distance Learning and Administration	Rehabilitation Counseling
Economic Development	School Business Management
Electronic Commerce	Security Studies
Elementary Mathematics Education	Special Endorsement in Computer Education
Employee Assistance Program Counseling	Sport Management
Ethnic and Rural Health Disparities	Statistics
Family Nurse Practitioner	Substance Abuse (Social Work)
Finance	Substance Abuse Counseling
Geographic Information Science and Technology	Supply Chain Management
Gerontology	Suzuki Pedagogy
Health Care Administration	Tax
Health Care Management	Teaching English to Speakers of Other Languages (TESOL)
Health Informatics	Virtual Reality in Education and Training
Hispanic Studies	Vocational Evaluation
Hospitality Management	Website Developer

GRADUATE DEGREE PROGRAMS

Course of Study
Accounting
MSA
Adult Education
MAEd
Anatomy and Cell Biology
PhD
Anthropology
MA
Art
MFA
Art Education
MAEd
MAT
Athletic Training
MS
Audiology
AuD/PhD
Biochemistry and Molecular Biology
PhD
Bioenergetics and Exercise Science
PhD
Biology
MS
MS(Molecular Biology and Biotechnology)
Biomedical Physics
PhD
Biomedical Science
MS
Birth through Kindergarten (BK) Education
MAEd
Business Administration
MBA
Business Education
MAEd
Business and Marketing Education
MAT
Chemistry
MS
Child Development and Family Relations
MS
Coastal Resources Management
PhD
Communication
MA
Communication Sciences and Disorders
MS
PhD
Computer Science
MS
Construction Management
MCM
Counselor Education
MS

Course of Study
Criminal Justice
MS
Dental Medicine
DMD (Classes begin fall of 2011)
Economics
MS (Applied and Resource Economics)
Education, Secondary (See academic subject.)
Educational Administration and Supervision
EdS
Educational Leadership
EdD
Elementary Education (K-6)
MAEd
MAT
English
MA
PhD (Technical and Professional Discourse)
English Education
MAEd
MAT
Environmental Health
MSEH
Exercise and Sport Science
MS
Family and Consumer Sciences Education
MAEd
MAT
Geography
MA
Geology
MS
Health Education
MA
MAEd
MAT
Health Psychology
PhD
Hispanic Studies
MAT
History
MA
History Education
MAEd
MAT
Instructional Technology (Non-Licensure)
MS
Instructional Technology Education
MAEd
Interdisciplinary Biological Sciences
PhD
International Studies
MA
Library Science
MLS

Course of Study

Maritime Studies

MA

Marketing Education

MAEd

Marriage and Family Therapy

MS

Mathematics

MA

Mathematics, Secondary Education

MAEd

Medical Family Therapy

PhD

Medicine

MD (See BSOM Catalog)

Microbiology and Immunology

PhD

Middle Grades Education

MAEd

MAT

Molecular Biology and Biotechnology

MS

Music Education

MM

MAT

(Music) Performance

MM

(Music) Theory-Composition

MM

Nursing

MSN

PhD

Nutrition

MS

Occupational Safety

MS

Occupational Therapy

MSOT

Pharmacology and Toxicology

PhD

Physical Education

MAEd

MAT

Physical Therapy

DPT

Physician Assistant

MS

Physics

MS

PhD (Biomedical Physics)

Physiology

PhD

Course of Study

Psychology

MA (Clinical)

MA (General - Theoretic)

MA (School)

CAS (School)

PhD (Health Psychology)

Public Administration

MPA

Public Health

MPH

Reading Education

MAEd

Recreational Therapy Administration

MS

Recreation and Park Administration

MS

Rehabilitation Counseling

MS

PhD (and Administration)

School Administration

MSA

School Psychology

CAS

Science Education

MA

MAEd

MAT

Secondary Education (See academic subject.)

Security Studies

MS

Social Work

MSW

Sociology

MA

Software Engineering

MS

Special Education

MAEd

MAT

Special Education, Intellectual Disabilities

MAEd

Substance Abuse and Clinical Counseling

MS

Sustainable Tourism

MS

Teaching-MAT (See specific teaching area.)

Technical and Professional Discourse

PhD

Technology Systems

MS

Vocational Education

MS

Vocational Evaluation

MS

GENERAL REQUIREMENTS FOR DEGREES

The degrees described immediately below are offered in more than one college, school, or department, and the requirements set forth are limited to those that apply in every school and department offering these degrees. Additional requirements particular to each major field precede the list of courses offered in each academic unit. The description of a degree that is offered in only one academic unit is not included here. It precedes the list of courses in that academic unit.

Students should direct questions regarding specific course requirements to the dean, director, chairperson, or graduate adviser in their academic units. The Graduate School will assist in answering other questions.

Only 5000-level courses and other graduate-level courses apply toward graduate degrees or CAS programs. At least half of the credit for the master's degree must be earned in courses for graduates only, numbering 6000 or above.

Additional requirements applicable to all graduate students are explained in Section 4, Academic Regulations.

The university does not award degrees solely because a student successfully completed the required courses. Violations of the student Code of Conduct, including both academic and nonacademic violations, may result in a degree not being awarded. For example, when the student has disciplinary charges pending, the degree may be withheld or the awarding of the degree may be delayed.

MASTER OF ARTS AND MASTER OF SCIENCE

A minimum of 30 s.h. is required for the master of arts and master of science degrees.

The goal of the MA and MS degree programs is to provide the student with a well-rounded and indepth understanding of the subject matter. While there are not inflexible rules that govern course requirements in any part of the program, it is expected that the course work will be planned for the student to achieve career goals. In some programs students may take courses in a minor field or in several fields related to their major interest. The detailed course requirement for each program is left to the discretion of the departments and schools; the decision on these matters is to be made by the student's graduate committee in consultation with the student involved.

See Section 4, Academic Regulations, Research Skills Requirements and under the appropriate discipline below.

When required by a particular program, the thesis represents extended research in some area of the major field. Three to six semester hours of credit are allowed for the thesis, which may be a part of the semester hours from the major field. The writing of the thesis and distribution of copies must conform to the general requirements of the Graduate School. For more information, view *Thesis/Dissertation: Research, Examination, Preparation, and Delivery* found at www.ecu.edu/cs-acad/grcat/regulations.cfm#thesis.

MASTER OF ARTS IN EDUCATION

The master of arts in education degree (MAEd) is offered by the College of Education, the College of Fine Arts and Communication and the College of Human Ecology. The MAEd requires a minimum of 36-39 s.h. credits, depending on the teaching area. School and departmental program descriptions provide information on specific programs. The MAEd (other than the MAEd in adult education) leads to advanced teacher licensure if the candidate qualifies.

The consolidated MAEd offered in the College of Education comprises teaching areas as follows: business education, English education, elementary education, health education, history education (social studies licensure), instructional technology education, middle grades education, physical education, science education, and special education. The college also offers MAEds in adult education and mathematics education. The MAEd in art education is offered through the College of Fine Arts and Communication and the MAEd in family and consumer sciences through the College of Human Ecology. The master of music in music education is offered through the College of Fine Arts and Communication.

For most programs, a thesis is optional for the master of arts in education degree. However, a school or department may require theses in certain programs. If a thesis is written, it will count as 3 or 6 s.h. of credit and must meet the thesis requirements of the Graduate School. For more information, view *Thesis/Dissertation: Research, Examination, Preparation, and Delivery* found at www.ecu.edu/cs-acad/grcat/regulations.cfm#thesis.

MASTER OF ARTS IN TEACHING

The College of Education also offers the master of arts in teaching (MAT) with teaching field options as follows: business education, elementary education, English education, family and consumer sciences education, health education, history education, middle grades education, music education, physical education, and science education. The College of Fine Arts and Communication, the College of Health and Human Performance, the College of Human Ecology, and departments in the Thomas Harriot College of Arts and Sciences offers subject matter courses and content specific methods courses as well as supervises interns in specific teaching areas. The MAT is a 39 s.h. degree of which 9 s.h. are internship. The MAT is issued as a first license and successful completion of the MAT leads to teaching licensure at the A level.

MASTER OF SCHOOL ADMINISTRATION (MSA)

The master of school administration degree (MSA) is designed to prepare individuals to become school leaders. Program studies include positive impact on student learning and development, teacher empowerment and leadership, community involvement and engagement, organizational management, school culture and safety, school improvement, and leadership skill application. The program consists of 42-semester hours (including a one-year internship experience) and is designed to allow full-time or part-time study. With successful completion of the appropriate licensure exam, the MSA may lead to license in the areas of administration North Carolina principal license (012, class P) and supervision North Carolina curriculum instructional specialist level I license (113, class S).

Candidates for the MSA program should have entry-level school license and a minimum of three years teaching/public school experience. For additional information concerning admission, contact the Department of Educational Leadership or view the departmental Web site at <http://www.ecu.edu/cs-acad/grcat/programLEED.cfm>.

EDUCATIONAL SPECIALIST/CERTIFICATE OF ADVANCED STUDY

Intermediate degrees requiring at least 30 s.h. of work beyond the master's degree are offered in the areas of educational administration and supervision, and school psychology. Applicants must hold an appropriate master's degree from an accredited institution.

DOCTOR OF EDUCATION IN EDUCATIONAL LEADERSHIP (EDD)

The doctor of education in educational leadership (EdD) degree is designed to develop skills and abilities for individuals to resolve educational issues and problems. Program studies include leadership theory, human resource development, organizational theory, policy analysis, planning studies, curriculum and instructional leadership, and political systems analysis. The degree prepares senior level administrators for leadership positions in public schools or in higher education. A minimum of 60-semester hours beyond a master's degree is required. Requirements include a research-based dissertation completed under the direction of an appropriate faculty member, as well as a supervised internship experience.

Candidates seeking the EdD with a focus on public school administration must hold Level I licensure in administration or supervision. Upon completion of the program, individuals are eligible to upgrade previously held licenses. Individuals holding administration license (012, class M or class AP) and/or (011, class AS) are eligible for (012, class DP) and superintendent license (011, class DS). Individuals holding supervision license (113, class S) are eligible for curriculum-instructional specialist (113, class D). Candidates seeking the EdD with a concentration in higher education administration are not required to hold a previous license and are not eligible for North Carolina license in administration or supervision upon completion of the program.

In addition, it is desirable for all candidates for the EdD program to have three years of successful leadership experience. For additional information concerning admission, contact the Department of Educational Leadership or view the departmental Web site at <http://www.ecu.edu/cs-acad/grcat/programLEED.cfm>.

LICENSURE

Licensure for teachers in North Carolina is dependent upon a competency-based teacher education program. Licensure requirements may exceed degree requirements. Applicants adding a new area of certification to an existing license must take the appropriate specialty area exam of the PRAXIS. When the credits and experiences have been properly planned, coordinated, and implemented, the dean of the College of Education or his or her designee approves the issuance of the proper teaching, counselor, or administrative license. Out-of-state applicants who do not have a teaching license and instate

SECTION 7: DEGREES AND TEACHER LICENSURE

teachers who are changing, upgrading, and adding fields or subjects to their present licenses must submit their credentials to the appropriate academic department or school and to the dean of the College of Education for evaluation in terms of the competency-based teacher education program for North Carolina.

In order to be recommended for North Carolina licensure, initial and advanced teaching candidates must successfully complete an electronic evidence portfolio demonstrating proficiency on the NC Professional Teaching Standards.

GRAD: GRADUATE STUDIES

6665. Disciplinary Writing in Graduate Studies (3) Instruction in writing texts required of students in their graduate programs.

6999. Degree Completion (1) Open to students in a non-thesis option master's degree program who have previously enrolled for all course work for degree program but must meet Graduate School requirement that they be registered the semester they graduate.

7004. Research Ethics for a Complex World (2) Formerly GRAD 6000 May not receive credit for both GRAD 7004 and HUMS 6200. P: Current enrollment in master's or doctoral program. Introductory graduate course. Case studies, readings, policy review, assignments, and discussions with guest faculty examine areas of ethical concern for researchers. Areas include scientific misconduct, conflict of interest, abusive mentoring, improper authorship practices, and protection of human participants, animal subjects of research, and others.

OFFICE OF AGING STUDIES

Carol Jenkins, Director, 328 Rivers West Building

CERTIFICATE IN GERONTOLOGY

The graduate certificate in gerontology is a program of advanced study that is either free-standing or used to augment or focus a plan of study in several graduate degrees.

Curriculum

The School of Social Work in the College of Human Ecology offers graduate certification in gerontology (aging studies). The certificate requires completion of 15 s.h. of course work including: 1) GERO/SOCW/CDFR 5400, 2) one elective course from Aging and Social/Behavioral Science (SOCI 5600 or PSYC 5400), Aging and Health (SOCW 6326 or GERO/SOCI/MPH 6100), and Practice or Intervention in Aging (ADED 6453, ADED 6454, CDFR 5411, EXSS 5800, GERO/SOCW 6222, SOCW 6322 or GERO/SOCW 6022), and 3) GERO 6600. Those with significant work experience with an organization serving older adults may, with permission from the Center on Aging Associate Director for Educational Programs, substitute a course selected from those included in #2 above for GERO 6600. Up to 6 s.h. of coursework may consist of NC Gerontology Consortium distance education courses, provided that each course is consistent with the categories described in #2 above and that no more than one course is completed in each category.

GERO: GERONTOLOGY

5400. Seminar in Aging Studies (3) Same as CDFR 5400 and SOCW 5400 Entry point for graduate certificate in gerontology; exit course for undergraduate minor in gerontology. P: Consent of instructor. Topics include historical perspective on aging issues, normal aging and pathology, aging program administration, aging policy development, research in gerontology, rural aging, and aging and ethnicity.

5903. Readings in Aging Studies (3) Same as CDFR 5903 and SOCW 5903 May count maximum of 3 s.h. toward baccalaureate minor in GERO or graduate certificate in GERO. P: Consent of instructor and chair of instructor's home unit. Selected readings from monographs or journals. Focus on specialized areas in which student has taken one or more courses in either baccalaureate gerontology minor or graduate gerontology certificate.

6022. Perspectives on Death and Dying (3) Same as and SOCW 6022 Interdisciplinary exploration of issues related to death, dying and bereavement.

6100. Aging and Health (3) Same as SOCI 6100 and MPH 6100 P: Consent of instructor or director of the Center on Aging. Analysis of behavioral, social, and cultural influences on the health status of older adults and intervention strategies.

6222. Group Work with the Aged (3) Same as SOCW 6222 P: Graduate School admission. Case management, group work, and other techniques and approaches used in working with older people.

6600. Practicum in Aging Studies (3) Requires 130 hours per semester with an agency or organization providing institutional, community based, or in-home services to older adults.

CENTER FOR SUSTAINABLE TOURISM

Patrick T. Long, Director, RW-208A Rivers Building

The Center for Sustainable Tourism emphasizes analyses of tourism's net impact on economic, natural, and social issues to quantify such impacts, ascertain potential tradeoffs, and identify synergy among these dimensions of sustainable tourism. While many opportunities exist to promote economic, environmental, and social objectives simultaneously, it is also often necessary to make choices between them, especially in the short term. As planning horizons lengthen, protecting and enhancing the environment and socio-cultural objectives become more important in sustaining economic growth. Over time these three dimensions of sustainability, often referred to as the "Triple Bottom Line," reinforce each other by creating long-term approaches that simultaneously promote better jobs, higher profits, better natural environments, and stronger social/cultural dimensions.

MS IN SUSTAINABLE TOURISM

Joe D. Fridgen, Associate Director for Academic Programs, RW-214 Rivers Building

The MS in sustainable tourism is managed by the Center for Sustainable Tourism with oversight from an interdisciplinary faculty advisory committee. The sustainable tourism degree is designed for individuals interested in the tourism profession with a focus on sustainability as it applies to economic success, social and cultural vitality, environmental conservation, and long term health. The MS in sustainable tourism prepares students for managerial or regulatory positions in the profession and for relevant PhD programs.

The degree program requires a minimum of 33 (thesis) to 36 (non-thesis) semester hours. These include courses in the common core made up of required courses, research methods, and directed electives. Directed electives are chosen, in consultation with the student's advisor, from a range of disciplines which provide exposure to the examination of economic, social and environmental issues from a variety of perspectives. The listing of directed electives can be obtained from the director of the program. Students selecting the non-thesis option complete electives including at least three credits of independent study or directed research under the guidance of a faculty mentor. Other electives should be carefully chosen to enhance professional success within an area of the industry.

Common Core

Required SUTO 6000, 6100, 6200, 6300 - 12 s.h.

Research Methods - 6 s.h.

Choose a minimum of 6 s.h. (CRM 6200, ECON 6301, GEOG 6150, SOCI 6212, SOCI 6213, MATH 5031,

PSYC 6430, OMGT 6123, RCLS 6110, PLAN 6301)

Directed Electives - 9 s.h.

Choose a minimum of 9 s.h. electives from approved listing of courses.

Thesis Option

SUTO 7000 - 6 s.h.

Non-thesis Option

Independent study, research, internship - 3 s.h.

Complete directed study, research, internship under faculty mentor:

Electives - 6 s.h.

SUTO: SUSTAINABLE TOURISM

6000. Principles of Tourism and Sustainability (3) Theories of tourism and sustainable tourism; local and global applications of sustainable tourism practices.

6100. Environmental Systems and Sustainability (3) Integration of environmental science in sustainability and tourism; emphasis on environmental systems, impacts, and tourism; causes and consequences of environmental change.

6200. Development and Management of Sustainable Tourism (3) P: Admission to the graduate program or consent of instructor. Socially and environmentally responsible business practices in sustainable tourism.

SECTION 8: CURRICULA

6300. Policy and Planning for Sustainable Tourism (3) P: Admission to the graduate program or consent of instructor. Public policy issues and planning; strategies crucial to sustainable tourism.

6400. Sustainable Tourism Internship (3) P: SUTO 6000 or consent of program director. Application of advanced sustainable concepts within a community or industrial setting.

7000. Thesis (1-6) May be repeated. May count a maximum of 6 s.h.

COASTAL RESOURCES MANAGEMENT

Hans Vogel song, Program Director, 377 Flanagan Building

PhD IN COASTAL RESOURCES MANAGEMENT

The PhD program in coastal resources management (CRM) seeks to meet the need for scientifically trained specialists able to move effectively between the worlds of academia, research, policy, and management through an interdisciplinary program of study, experience, and research.

Each student focuses in one of the programs' three areas of concentration (coastal and estuarine ecology, coastal geosciences, social science and public policy), while developing a fundamental understanding of basic theory and methodology in one of the two other areas. The program provides specialized knowledge in one of these areas; general knowledge of theory and methodology in one related area; an introduction to the structures, processes, and implementation of coastal/marine policy and management; and understanding of the mechanisms by which scientific information is used in the formulation of public policy.

Curriculum

The doctoral program requires a minimum of **68 s.h.** of course work beyond a relevant baccalaureate degree, 44 s.h. of which are general requirements taken by all students. These courses, designed to provide background essential to all three areas are BIOL 7003; CRM 7005, 7006, 7007, 7008, and 9000; GEOL 7002; GRAD 7004; PADM 7004; and a minimum of 18 s.h. of dissertation.

In addition to the 44 s.h. of general requirements, students select a primary area of concentration of 18 s.h. and one complementary areas of 6 s.h.

Please contact the program director for details concerning application procedures, admission requirements, and academic expectations.

CRM: COASTAL RESOURCES MANAGEMENT

7005. Human Dimensions of Coastal Management (3) P: Graduate standing in coastal resources management PhD program or consent of instructor. Concepts, theories, and frameworks of human values, attitudes and behavior related to coastal resources.

7006. Seminar in Coastal Issues and Professional Development (1) Must be repeated for a maximum of 4 s.h. Topics include analysis of coastal issues, proposal and dissertation preparation, professional communications, and ethics in research.

7007. Research Design in Marine and Coastal Studies (3) Formerly CRM 6200 P: Graduate standing in coastal resources management PhD program or consent of instructor. Fundamentals of planning, evaluation, and implementation in marine research.

7008. Data Analysis (3) P: Graduate standing in coastal resources management PhD program or consent of instructor. Statistical, quantitative, qualitative, and spatial techniques for coastal research.

7010. Special Topics in Coastal Science and Policy (2,3) P: Consent of instructor. May be repeated for credit for a maximum of 9 s.h. Readings, presentations, and critical analysis of literature in coastal science and policy.

7011. Special Topics in Coastal Research and Methodology (1,2,3) P: Consent of instructor. May be repeated for credit for a maximum of 6 s.h. Readings, classroom, laboratory and field work on specific research instruments, measurements, and techniques.

7012. Directed Study (1, 2, 3) P: Consent of instructor. May be repeated for a maximum of 9 s.h. Individual student research under the guidance of a graduate faculty member.

7300. Case Studies of Coastal Management Issues (3) Formerly CRM 6300 P: Graduate standing in coastal resources management PhD program or consent of instructor. Teams of students with varying disciplinary backgrounds examine application of scientific data to specific coastal issues of concern to coastal management agencies and private sector organizations.

9000. Dissertation (1-9) May be repeated. May count maximum of 24 s.h.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

9400. Coastal Management Internship (3) P: Consent of program director. Supervised internship with government agency, private sector business or organization, or non-profit group that has coastal resources management responsibilities, concerns, or activities.

THOMAS HARRIOT COLLEGE OF ARTS AND SCIENCES

Alan R. White, Dean, 1002 Bate Building

Cindy Putnam-Evans, Associate Dean for Research, 2300 Bate Building

R. Todd Berry, Associate Dean for Resources, 2300 Bate Building

Heather Ries, Associate Dean for Graduate Studies, 2300 Bate Building

Don Bradley, Associate Dean for Planning, 2300 Bate Building

Holly Hapke, Associate Dean for Faculty Development and Distance Education, 2300 Bate Building

DEPARTMENT OF ANTHROPOLOGY

Linda Wolfe, Chair, 231 Flanagan Building

MA IN ANTHROPOLOGY

The graduate faculty reviews each candidate's undergraduate grades, GRE scores, a sample of writing, statement of purpose, and three letters of recommendation. Admission to the MA program in anthropology requires the equivalent of an undergraduate major in anthropology. Any student whose undergraduate preparation is deficient in the requirements for the degree program must complete the prescribed courses. Minimum degree requirement is 30-33 s.h. as follows:

1. Core requirements: ANTH 6101, 6102, 6103, 6104; choose one from the following: ANTH 5010, 5015, 6020.. 15 s.h.
2. Electives as specified by the student's advisor may include courses other than ANTH, with a maximum of 6 s.h. (3 s.h. for students pursuing non-thesis option) of ANTH 6501, 6502, 6503..... 12 s.h.
3. The student must pass a foreign language proficiency test or the equivalent or pass a minimum of 6 s.h. in research skills courses approved by the chairperson of the department with a minimum grade of B in addition to the regular curriculum. The student must pass a comprehensive examination covering each area of anthropology (archeology, cultural anthropology, and physical anthropology).
4. Options (Choose one of the following)..... 3-6 s.h.
Thesis option: ANTH 7000 3 s.h.

The student writes a thesis and presents a seminar based on the thesis research. The thesis proposal and the subsequent thesis must be approved by the student's advisor and committee composed of three anthropology faculty members and an outside reviewer; the departmental director of graduate studies, and the departmental chairperson.

Internship option: ANTH 6993 (ANTH 6994 optional) 3 s.h.

The student writes an internship report and presents a seminar based on the internship report. The internship and the subsequent report must be approved by the student's advisor and the committee composed of three anthropology faculty members and external internship supervisor; the departmental director of graduate studies, and the departmental chairperson.

Non-thesis option: Additional electives 6 s.h.

The student's advisor and committee, the departmental director of graduate studies, and the chairperson must approve the student's course of study.

ANTH: ANTHROPOLOGY

5005. Contemporary Latin American Cultures (3) Introduces varied and diverse cultural groups in modern Latin America.

5010. Advanced Archaeological Methods and Theory (3) P: ANTH 3077 or equivalent or consent of instructor. Advanced survey of methodology relevant to analysis of archaeological cultures. Emphasis on research design, processes of culture change, and theoretical applications.

5015. Advanced Ethnographic Methods and Theory (3) 3 hours per week and field research projects. P: ANTH 3050 or equivalent or consent of instructor. Advanced training in ethnographic field methods and theory. Emphasis on individual and group research.

5030. Economic Anthropology (3) P: ANTH 2200 or consent of instructor. Production, distribution, and consumption of goods and services from an anthropological perspective. Emphasis on ways in which society and culture influence economic behaviors in underdeveloped regions.

5065. Maritime Anthropology (3) P: ANTH 2200 or consent of instructor. Systematic study of human adaptations to marine environments around the world from prehistoric to contemporary periods. Emphasis on cross-cultural examinations of non-industrial societies.

5120. Archaeology of the Southeastern US (3) P: ANTH 2000 or consent of instructor. Intensive study of prehistoric cultures in Southeastern US. Emphasis on cultural dynamics and environmental relationships.

5125. Historical Archaeology (3) P: ANTH 2000 or consent of instructor. Development and practice of historical archaeology with theoretical and methodological contributions. Contemporary issues, including on-going projects in NC and Southeast.

5126. Public Archaeology (3) P: ANTH 2000 or consent of instructor. Pragmatic approach to archaeology beyond academic setting, including legislative mandates, contract archaeology, and public education.

5175. Advanced Archaeological Field Training (6) 40 hours of field research per week (summer). P: ANTH 3077 or 3175 or equivalent; or consent of instructor. Research methods applied to specific archaeological field problems.

5201. Special Topics in Archaeology (3) May be repeated for maximum of 6 s.h. P: Graduate standing or consent of instructor. Advanced level. Topics vary depending on student interest and current issues.

5202. Special Topics in Cultural Anthropology (3) May be repeated for maximum of 6 s.h. P: Graduate standing or consent of instructor. Advanced level. Topics vary depending on student interest and current issues.

5203. Special Topics in Physical Anthropology (3) May be repeated for maximum of 6 s.h. P: Graduate standing or consent of instructor. Advanced level. Topics vary depending on student interest and current issues.

6007. Medical Anthropology and Public Health: A Global Perspective (3) Same as MPH 6007
Explores the issues related to the fields of medical anthropology and public health leading toward developing global health interventions.

6020. Advanced Physical Anthropology Methods and Theory (3) P: Graduate standing or consent of instructor. Advanced training. Primate behavior, human genetics, anthroposcopy, anthropometry, dermatoglyphics, and osteometry.

6101. Core Course: Archaeology (3) P: Admission to anthropology graduate program or consent of instructor. Methodological concepts, cultural-historical applications, and theoretical orientations appropriate to contemporary research in archaeology.

6102. Core Course: Cultural Anthropology (3) P: Admission to anthropology graduate program or consent of instructor. Contemporary research in subfield of cultural anthropology.

6103. Core Course: Physical Anthropology (3) P: Admission to anthropology graduate program or consent of instructor. Contemporary research in subfield of physical anthropology.

6104. Anthropological Research Design (3) P: Admission to anthropology graduate program or consent of instructor. Analytical techniques most useful to anthropologists. Persuasive writing and organizational skills necessary to develop effective research program.

6106. Anthropological Perspectives of Security (3) P: Graduate standing or consent of instructor. Explores security and violence issues related to cultural anthropology.

6225. Battlefield Archaeology (3) Same as HIST 6225 Theoretical and practical approaches to the analysis of battlefields using archaeology, history, and material culture.

6501, 6502, 6503. Independent Reading and Research (1,2,3) May be repeated for maximum of 6 s.h. for thesis and internship option and 3 s.h. for non-thesis option. P: Consent of instructor. Intensive research in selected subdiscipline of anthropology.

6845. Advanced Archaeological and Museum Artifact Conservation (3) Same as MAST 6845 and HIST 6845 P: Consent of instructor. Advanced archaeological and curatorial artifact conservation, stabilization, and micro-excavation techniques and training.

SECTION 8: CURRICULA

6860. Archaeological and Museum Conservation Methods Internship (3) Same as MAST 6860 and HIST 6860 P: HIST 6840 and consent of instructor. Internship in Archaeological and Museum artifact conservation and artifact conservation laboratory operations.

6993, 6994. Internship (3,3) 140 hours of supervised field experience. P: Admission to ANTH graduate program.

7000. Thesis (1-6) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7007. Special Topics in Anthropological Research and Methodology (1,2,3) May be repeated for a maximum of 6 s.h. with change of topic. P: Consent of instructor. Emerging and specialized research techniques and methodologies for anthropological studies.

7008. Directed Studies in Anthropology (1,2,3) May be repeated for a maximum of 9 s.h. with change of topic. P: Consent of instructor. Independent study on selected topic. May include field work, lab work, directed readings, or some combination thereof.

9000. Dissertation Research (3-12) May be repeated. May count a maximum of 24 s.h.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

DEPARTMENT OF BIOLOGY

Jeffrey S. McKinnon, Chair, BN-108 Howell Science Complex
Terry L. West, Director of Graduate Studies, BN-108E Howell Science Complex

As a prerequisite to graduate study in a degree program, the Department of Biology requires that the applicant meet the admission requirements of the university, make satisfactory scores on the Graduate Record Examinations, and show competence in specific related areas. Each entering student should consult the director of graduate studies in biology prior to beginning graduate work.

Students must complete a minimum of 30 s.h. of course work (15 s.h. must be at the 6000-7000 level), a research-based thesis, a comprehensive defense of a thesis proposal, a seminar based on thesis research, a thesis defense and must show competence in teaching. Up to 20 percent of required credit hours may be earned at another institution. See the director of graduate studies for acceptable transfer courses or consent to take courses off campus. The department attempts to offer courses on a one- or two-year rotation. However, because of changing interests of graduate students, it is unlikely that all the courses listed below will be offered in a two-year period.

For the PhD in interdisciplinary biological sciences, see the Brody School of Medicine.

MS IN BIOLOGY

- 1. Core: BIOL 6880, 7000*; BIOL 7900 or BIOS 7021 or 7022; and 7 s.h. of electives..... 15 s.h.
- 2. Concentration area (Choose a minimum of 15 s.h. from one area.)..... 15 s.h.
 - Cell biology:*
BIOL 5450, 5451, 5630, 5631, 5800, 5810, 5821, 5870, 5890, 5900, 5901, 6030, 6082, 6083, 6100, 6120, 6130, 6200, 6230, 6231, 6250, 6251, 6300, 6301, 6504, 6900, 7080, 7090, 7091, 7130, 7170, 7180, 7181, 7190, 7210, 7211, 7212, 7213, 7240, 7345, 7370, 7480, 7481, 7870, 7880, 7881, 7890, 7895.
 - Environmental and organismic biology:*
BIOL 5070, 5071, 5150, 5151, 5200, 5201, 5220, 5221, 5230, 5231, 5260, 5261, 5270, 5351, 5400, 5401, 5550, 5551, 5600, 5601, 5640, 5641, 5680, 5730, 5731, 5740, 5741, 5950, 5951, 6010, 6040, 6041, 6071, 6210, 6220, 6514, 6700, 6800, 6820, 6821, 6850, 6860, 6910, 7020, 7021, 7300, 7350, 7360, 7630, 7920.

*BIOL 7000 may be repeated for registration status, but only 6 s.h. may count toward graduation.

MS IN MOLECULAR BIOLOGY AND BIOTECHNOLOGY

Applicants must complete courses or demonstrate competency in genetics, microbiology, and basic molecular technology. The degree requires 30 s.h. of credit as follows.

1. Required courses (12 s.h.): BIOL 5870 or 7870, 5800, 5821, 6880, 7000*.
2. A minimum of 14 s.h. (including two of the ** courses) must be taken from the following: BIOL 5260, 5261, 5510, 5511, 5520, 5521, 5890, 5900**, 5901**, 5930, 5931, 6030, 6082, 6083, 6100, 6120, 6200, 6230, 6231, 6250**, 6251**, 6504, 6514, 6992, 6993, 7080, 7180**, 7181**, 7190, 7210, 7211, 7212, 7213, 7480**, 7481**, 7880, 7881, 7890, 7895.
3. Electives: A maximum of 4 s.h. may be designated at the candidate's option as elective hours with the approval of the graduate director and the candidate's advisor; to complete graduation requirements of 30 s.h. for this degree.

*BIOL 7000 may be repeated for registration status, but only 6 s.h. may count toward graduation.

Internship Option: Qualified students will be encouraged to spend from six months to one year in an internship at an industrial or governmental research laboratory. From 2-5 s.h. of internship credit can be applied toward the degree.

BIOL: BIOLOGY

5070, 5071. Ornithology (4,0) 3 lecture hours and 1 3-hour lab per week. Field trips to observe native birds in natural surroundings required. P: 8 s.h. in BIOL. Survey of world's birds. Emphasis on ecology, evolution, and behavior: adaptive radiation, migration, flight mechanics, morphology, taxonomy, bird song, reproduction, population biology, and conservation of birds.

5150, 5151. Herpetology (4,0) 3 lectures and 1 3-hour lab per week. P: 8 s.h. in BIOL. Taxonomy, anatomy, physiology, distribution, phylogeny, natural history, and ecology of reptiles and amphibians of the world. Emphasis on species of NC and Atlantic Coastal Plain.

5200, 5201. Invertebrate Zoology (4,0) 3 lectures and 1 3-hour lab per week. P: 6 s.h. in BIOL. General comparative anatomical and physiological aspects of invertebrate groups. Emphasis on similarities, differences, and evolution.

5220, 5221. Limnology (4,0) 3 lectures and 1 3-hour lab per week. P: BIOL 2250, 2251; or consent of instructor. Physical, chemical, and biological factors of inland waters and their influence on aquatic organisms.

5230. Biology of Algae (3) 3 lecture hours per week. P: BIOL 1100, 1101 (or equivalent) or consent of instructor. Surveys physiology, ecology evolution, and importance to society of organisms commonly referred to as algae.

5231. Biology of Algae Laboratory (1) 1 3-hour lab per week. C: BIOL 5230 or consent of instructor. Surveys algal form and function, combined with a group project that uses molecular biotechnology to study some aspect of algal biology.

5260, 5261. Microbial Ecology (4,0) 3 lectures and 2 2-hour labs per week. P: BIOL 2250, 2251, 3220, 3221; or consent of instructor. Interactions between microorganisms and their physical, chemical, and biological environment. Microbial involvement in energy flow, nutrient cycling, and intra/inter-specific interactions. Introduces statistical analyses of biological and ecological data.

5270. Marine Community Ecology (3) P: BIOL 2250, 2251; or consent of instructor. Advanced examination of ecology of marine and brackish water communities based on principles of population biology and community ecology. Emphasis on current hypotheses concerning processes structuring major communities.

5351. Biological Processes and the Chemistry of Natural Water (2) 6 lab hours per week. P: BIOL 2250, 2251; 2 CHEM courses; or consent of instructor. Interactions of water quality and biological processes in aquatic ecosystems.

5370. Biological Effects of Radiation (3) P: BIOL 1100, 1101, 1200, 1201; or consent of instructor. Biological effects resulting from interactions of radiation and matter for scientifically, technically, and medically-oriented students.

5400. Wetland Ecology and Management (3) P: BIOL 2250, 2251; or consent of instructor. Marshes, swamps, bogs, fens, and other intermittently flooded ecosystems. Emphasis on classification, ecosystem processes, structure, and management of freshwater and saltwater wetlands.

SECTION 8: CURRICULA

5401. Wetland Ecology Laboratory (1) P: BIOL 2250, 2251; C: BIOL 5400. Application of methods to measure ecological properties, assess functioning, identify plant communities, and understand landscape interaction of wetland ecosystems.

5450, 5451. Histology (4,0) 2 lectures and 2 2-hour labs per week. P: 4 BIOL courses. Organization of cells, tissues, and organs at microscopic level.

5510, 5511. Transmission Electron Microscopy (4,0) 2 lecture and 6 lab hours per week. P for undergraduate students: Senior standing as BIOL major or consent of instructor. Introduces theory, design, and use of transmission electron microscope and preparation of biological materials for its use.

5520, 5521. Scanning Electron Microscopy and X-Ray Analysis (2,0) 1 lecture and 4 lab hours per week. P for undergraduate students: Senior standing as a BIOL major or consent of instructor. Introduces theory and techniques of scanning electron microscopy and X-Ray analysis and preparation of materials for both.

5550, 5551. Ichthyology (4,0) 2 lectures and 2 3-hour labs per week. Evolution and biology of world's major fish groups. Emphasis on NC species.

5600, 5601. Fisheries Techniques (3,0) For biology majors interested in marine biology. Field trips and field studies are integral. 2 lectures and 1 3-hour lab or field excursion per week. P: BIOL 2250, 2251; or equivalent. Practical training in field and lab experimental methods in fisheries techniques.

5630, 5631. Comparative Animal Physiology (4,0) 3 lectures and 1 3-hour lab per week. P: 2 BIOL and 2 organic CHEM courses. Principles of function of organ systems of major groups of animals. Nutrition, digestion, respiration, skin and temperature control, blood and circulatory systems, excretion, the muscular-skeletal system, nervous coordination, and endocrine system.

5640, 5641. Entomology (4,0) 3 lectures and 1 3-hour lab per week. P: 12 s.h. BIOL. General anatomy, physiology, ecology, and classification of insects.

5680. Current Topics in Coastal Biology (3) P: Consent of instructor. Seminar on environmental issues in coastal biology presented by directed reading, lecture, and discussion.

5730, 5731. Animal Physiological Ecology (4,0) 3 lectures and 1 3-hour lab per week. P: BIOL 2250, 2251; 3310, 3311 or 3320, 3321 or 5800, 5821; or consent of instructor. Physiological adjustments and responses of animals to their environment. Considers mechanisms involved and invertebrate, vertebrate, aquatic, and terrestrial animals.

5740, 5741. Behavioral Ecology (4,0) 3 lecture and 2 discussion hours per week. P: BIOL 4200, 4201. Animal behavior from evolutionary perspective. Readings from current scientific literature and weekly discussions.

5750, 5751. Introduction to Regional Field Ecology (2,0) (5750:WI) For science and environmental studies teachers. 20 hours of lecture and 32 hours of field trips. May not count toward MS in BIOL or molecular biology/biotechnology. Major regional ecosystems.

5800. Principles of Biochemistry I (3) 3 lecture hours per week. P: BIOL 3310, 3311; or consent of instructor; CHEM 2760, 2763. Intermediary metabolism, metabolic processes, and metabolic regulation of major groups of compounds in living cells.

5810. Principles of Biochemistry II (3) May be taken before BIOL 5800. P: BIOL 3310, 3311; or consent of instructor; CHEM 2760, 2763. Protein biochemistry. Structure and function of amino acids and proteins, including protein biosynthesis and kinetics. Structures illustrated using computer-modeling techniques.

5821. Principles of Biochemistry Laboratory (1) Required for biochemistry majors; recommended for biology majors. P/C for undergraduate students: BIOL 5800 or 5810. General biochemistry lab designed to complement BIOL 5800, 5810.

5870. Molecular Biology of the Gene (3) P: BIOL 2300. Genetics of prokaryotic and eukaryotic organisms at molecular level. Structure and function of nucleic acids; replication, recombination, and repair; control of gene expression; and other related topics.

- 5890. Virology (3)** P: BIOL 2100, 2101 or 7870; 3220, 3221. Plant, animal, and bacterial viruses. Emphasis on distinctive features of viruses as related to parasitism, disease, and basic research.
- 5900, 5901. Biotechniques and Laboratory (2,3)** 2 1-hour lectures and 2 4-hour labs per week. P: BIOL 2100, 2101, 7870; consent of instructor; RP: BIOL 5810, 5821; C for 5901: BIOL 5900. Theory and practice of modern genetic engineering technology. Topics include DNA purification, electrophoresis, restriction mapping, use of DNA modifying enzymes, basic cloning in plasmid vectors, and strain construction by conjugation and transduction.
- 5930, 5931. Microcomputer Applications in Molecular Biology (2,0)** 1 lecture and 1 3-hour lab per week. P: BIOL 3310, 3311; or 5810, 5821; or 5870. Techniques for analysis of biological characteristics of nucleic acid and protein molecules using BASIC with microcomputers.
- 5950, 5951. Taxonomy of Vascular Plants (4,0)** 1 2-hour lecture and 1 4-hour lab per week. P: 12 s.h. BIOL or consent of instructor; RP: BIOL 2250, 2251. Plant importance, identification, classification, and evolution as well as how plants interact with living and nonliving environments. Field experiences emphasize major communities and dominant floral elements of coastal NC.
- 5995. Internship (1)** 3 hours per week. May be repeated once for a maximum of 2 s.h. P: Consent of instructor. Lab experiences under direct supervision of a member of biology faculty.
- 6003. Seminar (1)** Student, staff, and guest speakers on current research.
- 6010. Estuarine Ecology (2)** P: BIOL 2250, 2251; or consent of instructor. Physical properties, energy flow, biogeochemical cycling, and biological patterns of estuaries.
- 6030. Topics in Cell Biology (3)** P: Consent of instructor. Some combination of current work in bioenergetics, membrane biology, immunobiology, cell/organelle differentiation, and functions of specialized cells. Other topics not routinely considered in undergraduate courses will be reviewed also. Content varies with instructor interests.
- 6040, 6041. Animal Behavior (4,0)** 3 lectures and 1 3-hour lab per week. P: Consent of instructor. Presentation of historical development of animal behavior as field of study through directed reading, discussion, and practical experience. Presentation of some current principles and experimental approaches to animal behavior.
- 6071. Human Gross Anatomy (4)** P: Consent of instructor. Dissection-based regional study of human cadaver.
- 6082, 6083. Fundamentals of Vertebrate Endocrinology (3,1)** 3 lectures and 1 3-hour lab per week. P: BIOL 3310, 3311; or 3320, 3321; or equivalent; C for 6083: BIOL 6082. Neurosecretions and endocrine glands. Emphasis on evolution, development, morphology, and physiology of endocrine system. Hormone biosynthesis and mechanisms of action.
- 6100, 6120. Advances in Molecular Biology (2,2)** May be repeated once for credit with consent of instructor. P: BIOL 5810, 5821; or 5870; consent of instructor. In-depth focus on problems of current interest in molecular biology and genetic engineering. Topics vary.
- 6110. Bioterrorism and Biosecurity (3)** Detection and identification of and defense against biological warfare agents, including international and domestic security programs.
- 6130. Advances in Developmental Biology (2)** P: Consent of instructor. Recent advances in animal and plant development. Specific discussion includes gene regulation, embryonic induction, hormone action, cell movement, cell growth, photoperiodism, etc., in relation to differentiation.
- 6200. Mechanisms of Genetic Recombination (2)** P: BIOL 3220, 3221; or 5870; 5810, 5821; consent of instructor. Aspects of genetic recombination, including general and site specific recombination, gene mapping methods, DNA and RNA sequence rearrangements, and transposable genetic elements. Emphasis on current developments in growing field.
- 6210. Phylogenetic Theory (3)** Theory and practice of modern phylogenetic methods. Topics include basic evolutionary concepts, reconstructing evolutionary relationships using molecular and other data, and statistical methods for assessing reliability of phylogenetic analyses. Emphasis on hands-on experience with phylogenetic computer programs.
- 6220. Evolution: Topics for Advanced Students (3)** P: A genetics course. Current concepts of evolution, presented by reading, lecture, and discussion.

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- 6230, 623 I. Advanced Techniques in Molecular Biology (2,3)** 2 lectures and 2 4-hour labs per week. P: BIOL 5900, 590 I; C for 623 I: 6230. Advanced genetic engineering techniques for basic and applied research.
- 6250, 625 I. Protein Purification Techniques (4,0)** P: BIOL 58 I0, 582 I. Purification methods used to isolate enzymes and other proteins from living cells. Recombinant DNA-based enzyme purification techniques.
- 6300, 630 I. Neurophysiology (3,0)** 2 lectures and 1 3-hour lab per week. P: BIOL 33 I0, 33 I I; or 3320, 332 I; or equivalent. Cellular physiology of neurons and interrelationships between neurons.
- 64 I0. Contemporary Molecular and Cellular Biology for Advanced Placement Teachers (2)** In-depth review of energy transformations in cells, cell division, molecular genetics, and enzyme systems. Emphasis on advances in knowledge during past decade. Course coordinator arranges lecturers on selected topics.
- 6420. Contemporary Organismal Biology for Advanced Placement Teachers (2)** In-depth review of plant structure and function. Emphasis on angiosperms, animal structure, and function. Vertebrates and reproduction and development of plants and animals. Course coordinator arranges lecturers on selected topics that emphasize advances in knowledge during past decade.
- 6430. Contemporary Population Biology for Advanced Placement Teachers (2)** In-depth review of genetics, evolution, behavior, ecology, and social biology. Emphasis on advances in knowledge during the past decade. Course coordinator arranges lecturers on selected topics.
- 6504, 65 I4. Research Problems in Biology (2,2)** 4 research hours per week. May be repeated for credit with change of topic. P: Consent of instructor. Research completed under supervision of faculty member.
- 6700. Plant Physiological Ecology (2)** P: One ecology course. Physiological mechanisms of plants relevant at individual, community, and ecosystem levels. Emphasis on higher plants in stressful environments.
- 6800. Population Ecology (2)** P: One ecology course; consent of instructor. Intrinsic and extrinsic controls of microbe, plant, and animal population dynamics.
- 6820, 682 I. Systems Ecology (3,0)** 2 lectures and 1 3-hour lab per week. P: One ecology course; consent of instructor. Ecosystem structure and function utilizing systems analysis methods and computer models.
- 6850, 6860. Advances in Ecology (2,2)** May be repeated for credit with change of topic. P: BIOL 2250, 225 I; or equivalent; consent of instructor. Advanced treatment of specialized topics in ecology. Emphasis on readings from primary literature.
- 6880. Introduction to Research (2)** Library reference services and cataloging systems. Writing techniques and problems encountered in preparation of thesis and research publications.
- 6900. Vertebrate Reproductive Biology (3)** P: One cell and developmental biology or physiology course or consent of instructor. Mechanisms involved in vertebrate reproduction. Morphology, physiology, and biochemistry of reproductive systems. Topics include neuroendocrine control, environmental, and other factors regulating reproductive cycles as well as current research in reproductive technology.
- 69 I0. Coastal Ecological Processes (4,0)** For PhD students without biology backgrounds and biology MS students. Provides PhD students in coastal resources management with fundamental concepts of ecology within context of coastal zone and with emphasis on local ecosystems.
- 6992, 6993. Internship in Applied Biology (3,2)** Variable classroom and/or lab hours per week. P: Completion of basic courses prescribed by joint screening committee composed of faculty from the biology department closely allied to proposed area of study and representatives from specific applied area (industry, government, etc.) Experience in classroom, research, governmental, or industrial applications of biology.
- 6994. Internship (I)** 3 contact hours per week. May be repeated for credit. P: Consent of instructor. Experience in classroom situations under direct supervision of biology faculty member.
- 7000. Thesis (I -6)** May be repeated. May count maximum of 6 s.h.

- 7001. Thesis: Summer Research (1)** May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during summer.
- 7010. Estuarine Ecology (3) Formerly BIOL 6010** P: Consent of instructor; Discussion of the physical and biological properties of estuaries, estuarine fisheries, and human impacts on estuaries.
- 7020, 7021. Marine Biology (3,0) Formerly BIOL 6020, 6021** P: Consent of instructor. Biology and ecology of marine organisms with at least one field trip to coast for collection and identification.
- 7080. Molecular Endocrinology (3)** P: Consent of instructor; Review of modern concepts, theories, techniques and frontiers of molecular endocrinology with emphasis on functions, structures, signaling and regulation of hormones and receptors.
- 7090, 7091. Experimental Embryology (4,0) Formerly BIOL 6090, 6091** 3 lecture and 1 3-hour lab per week. P: BIOL 4060, 4061. Historical and current understanding of molecular mechanisms underlying development. Applies experimental techniques to marine invertebrates, amphibian, and chick material.
- 7130. Current Literature in Development Biology (1)** P: Consent of instructor. Review of current research literature related to development biology. Emphasis on critical analysis.
- 7170. Immunology I (3)** P: 1 course in genetics and 1 course in microbiology, or consent of instructor. Introduces immunology. Emphasis on lymphocytes, antigen presenting cells, lymphoid tissue, and antibodies.
- 7180, 7181. Cell Culture and Hybridoma Technology (3,0) Formerly BIOL 6180, 6181** 1 lecture and 6 lab hours per week. P: BIOL 7170 or equivalent. Principles and mechanisms of producing monoclonal antibodies. Emphasis on basic science application of monoclonal antibodies and laboratory techniques in cell culture and construction of hybridomas. Includes discussion of recent literature that includes scientific application of monoclonal antibodies.
- 7190. Immunology II (3) Formerly BIOL 6190** P: BIOL 7170 or equivalent. Emphasis on MHC and T cell biology. Includes review and presentation of recent immunological literature.
- 7210, 7211. Transgenic Methodology and Application (2,3)** 2 lectures and 1 6-hour lab per week. P: BIOL 5900, 5901 or consent of instructor; C for 7211: BIOL 7210. Production of transgenic animals and evaluation of selected genetic engineered constructs.
- 7212, 7213. Gene Targeting and Knockout Animals (2,3)** 2 lectures and 1 6-hour lab per week. P: BIOL 5900, 5901, 6480, 6481; or consent of instructor; C for 7212: BIOL 7213. Gene manipulation and production of knockout animals.
- 7215. Advanced Topics in Phylogenetic Theory (3)** P: BIOL 6210 or consent of instructor. Current advanced topics in the theory and practice of modern phylogenetics presented by reading, lecture, and discussion.
- 7240. The Evolution of Genes and Genomes (3)** Recent advances in comparative genomics, focusing on the evolution of more complex eukaryotic genomes.
- 7300. Landscape Ecology (3)** P: Consent of instructor; RP: an ecology course; a statistics course. Interaction between spatial distribution of habitat patches and ecological processes at different scales.
- 7320. Ecological Dimensions of Coastal Management (3)** P: Consent of instructor. Key ecosystem perspectives and environmental policies associated with coastal management and land-use. Ecological and environmental framework of coastal cities as they pertain to the functioning of a healthy human ecosystem.
- 7330. Ecosystems of Coastal Cities (3)** P: Consent of instructor. Structure and function of coastal cities as an ecosystem. Political and economic framework of coastal cities as they pertain to the functioning of a healthy urban ecosystem.
- 7345. Cell Motility (2) Formerly BIOL 6345 Same as ANAT 7345; BIOC 7345** P: General chemistry, organic chemistry, general biology, and general physics; or consent of instructor. Multidisciplinary exploration of mechanism, structure, and function of motile systems essential for eukaryotic life.
- 7350. Current Literature in Fish Ecology (1)** P: Consent of instructor. Review of current research literature related to fish ecology, fisheries, and fisheries management with emphasis on critical analysis.

SECTION 8: CURRICULA

7360. Fisheries Management (3) P: BIOL 2250 or 3660; MATH 2121; consent of instructor. Introduces fisheries management topics, including exploited populations of living aquatic resources – fish, shellfish, and other harvestable organisms.

7480, 7481. Cell Biology (4,0) Formerly BIOL 6480, 6481 2 lectures and 6 lab hours per week. P: Consent of instructor. Investigates how cells develop, function, communicate, control their activities, and die.

7630. Fish Physiology (3) P: Consent of instructor. Emphasis on basic concepts and research frontiers related to fish physiology.

7870. Molecular Genetics (3) Formerly BIOL 6870 P: 1 course in genetics and 2 semesters of organic chemistry or consent of instructor. Introduces molecular mechanisms responsible for DNA replication, repair, and recombination as well as transcription and translation.

7890. Current Literature in Molecular Biology (1) Formerly BIOL 6890 P: Consent of instructor. Review of current research literature related to molecular biology. Emphasis on critical analysis.

7880, 7781. Bioinformatics (4,0) P: Course in biochemistry or consent of instructor. Bioinformatic skills necessary for routine molecular sequence analyses using computational programs.

7895. Current Literature in Cell Biology (1) P: Consent of instructor. Review of current research literature related to cell biology. Emphasis on critical analysis.

7900. Ecological Statistics (3) P: Consent of instructor; RP: an ecology course. Philosophy of statistical methods, principles of sampling and experimental design, and common approaches to the analysis of ecological data.

7920. Conservation Biology (3) Formerly BIOL 6920 P: Consent of instructor; RP: an ecology course. Applies principles of ecology, biogeography, population genetics, economics, sociology, anthropology, and philosophy to maintenance and restoration of biological diversity and management.

8810. Methods and Techniques (3) May be repeated for credit. P: Consent of instructor. One semester rotation through research laboratories supervised by IDPBS approved faculty members.

8815. Seminar in Biological Sciences (1) May be repeated for credit. P: Consent of instructor. Presentations on research or critical review of current literature topics by students in IDPBS program. Seminar presentation.

9000. Dissertation Research (3-12) May be repeated. May count a maximum of 18 s.h.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

BIOL Banked Courses

5050. Applied Ecology (3)

5880, 5881. Microbial Physiology (4,0)

5910, 5911. Vascular Plant Systematics (4,0)

5920, 5921. Vertebrate Systematics (4,0)

DEPARTMENT OF CHEMISTRY

Rickey Hicks, Chair, 300 Science and Technology Building

Andrew Morehead, Director of Graduate Studies, 564 Science and Technology Building

The Department of Chemistry offers the master of science degree with concentrations in six fields of chemistry (analytical, inorganic, organic, physical, industrial, and biochemistry) or in combinations of the six fields (i.e., physical-organic, etc.). The degree requires a minimum of 30 s.h. of graduate work, including the completion of a thesis.

Entrance examinations are administered in four traditional areas of chemistry for advisory purposes. Course selection is based on the student's performance on the entrance examinations, undergraduate background, and area of interest. Students will be required to remove undergraduate deficiencies.

The department of chemistry participates in the interdisciplinary PhD program in the biological sciences (IDPBS). For details and requirements see the Brody School of Medicine.

MS IN CHEMISTRY

- Students must show competence in three of the five basic course areas listed below for 8-10 s.h. credit.
Analytical: CHEM 5350 or 7524
Biochemistry: BIOC 7301 or BIOL 5800 or 5810; 5821
Inorganic: CHEM 5550
Organic: CHEM 5750 or 7532
Physical: CHEM 5970 or 7542
These courses can be waived on a course-by-course basis if a student has taken an equivalent course as an undergraduate student and demonstrates proficiency in that area, or by passing the entrance examination in that area.
- Six semester hours of electives in chemistry or in other natural sciences or mathematics approved by the thesis committee. Three semester hours of the electives must be at the 6000 or 7000 level in the student's major area in chemistry. Students in the biochemistry option must include a minimum of 3 s.h. from BIOC 7310 or BIOL 5800 or 5810 as part of their graduate work. Students in the industrial chemistry option must substitute CHEM 5993 or CHEM 7993 for 3 s.h. of electives.
- Two hours of seminar: CHEM 6103 (1 s.h. each; may be repeated). Degree students are required to attend all departmental seminars and to give two presentations on approved topics.
- Research: CHEM 6502, 6503, 6504, 6505 (a minimum of 10 s.h.)
- Thesis: CHEM 7000 (3 s.h.)
- Research Skill: Students must satisfy the research skill requirement by successfully completing the following:
 - Submit and orally present a thesis research plan to their thesis committee.
 - Complete the seminar program, CHEM 6103, which includes instruction on searching the chemical literature, including computer-assisted searching, attending all departmental seminars, and presenting two departmental seminars.

Students may select other appropriate graduate level courses by agreement of the research advisor and graduate program committee chair.

CHEM: CHEMISTRY

5350, 5351. Instrumental Analysis (3,1) (WI, WI) 3 lecture and 3 lab hours per week. P: CHEM 3960; C for 5350: CHEM 5351; C for 5351: CHEM 5350. Theory and practical uses of modern instrumental methods of chemical analysis.

5525, 5526, 5527. Special Topics (1,2,3) May be repeated for credit with change of topic. P: Consent of instructor. Selected topics of current interest in areas of analytical, inorganic, organic, and physical chemistry.

5550. Advanced Inorganic Chemistry (4) (F) P: CHEM 3950; C: CHEM 3451. Advanced treatment of atomic and molecular structure, molecular symmetry, group theory, MO theory, the solid state and ionic bonding, transition metal coordination and organometallic compounds, homogeneous catalysis, and acid-base, redox, and bioinorganic chemistry.

5750. Advanced Organic Chemistry (3) P: CHEM 2760; P/C: CHEM 3960. Physical organic topics, including aromaticity, acid/base chemistry, reactive intermediates, mechanisms of common organic reactions, and relationship between structure and reactivity.

5760. Organic Structure Elucidation (3) P: Consent of instructor. Applies modern instrumental methods to elucidation of structures of organic compounds, with particular regard to elucidation of complex structures from combined application of spectral tools.

5993. Industrial Internship in Chemistry (3) 25-30 lab hours per week. May be repeated. May count maximum of 3 s.h. toward CHEM major. P: Selection by joint Department of Chemistry/industry screening committee; CHEM 2250, 2760, 3950. Professional experience in industrial application of chemistry.

6103. Chemistry Seminar (1) May be repeated. Presentations of assigned topics on contemporary research and attendance at departmental seminars.

6502, 6503, 6504, 6505. Research (2,3,4,5) May be repeated.

SECTION 8: CURRICULA

6524, 6525, 6526. Special Topics in Analytical Chemistry (1,2,3) May be repeated for credit with change of topic for a given course number. P: CHEM 5350 or equivalent. Lectures in restricted area of contemporary analytical chemistry. Variable topics and content include spectrometry, chromatography, electrochemical techniques, mass spectrometry, chemometrics, and chemical instrumentation.

6527, 6528, 6529. Special Topics in Inorganic Chemistry (1,2,3) May be repeated for credit with change of topic for a given course number. P: CHEM 5550 or equivalent. Lectures in restricted area of contemporary inorganic chemistry. Variable topics and content include structure and bonding, transition metal organometallic chemistry and homogeneous catalysis, inorganic kinetics and mechanisms, and physical methods in inorganic chemistry.

6530, 6531, 6532. Special Topics in Organic Chemistry (1,2,3) May be repeated for credit with change of topic for a given course number. P: Consent of instructor. Lectures in a restricted area of contemporary organic chemistry. Variable topics and content include polymer chemistry, photochemistry, stereochemistry, physical-organic chemistry, and modern synthetic techniques.

6533, 6534, 6535. Special Topics in Physical Chemistry (1,2,3) May be repeated for credit with change of topic for a given course number. P: Consent of instructor. Lectures in restricted area of contemporary physical chemistry. Variable topics and content include kinetics, spectroscopy, thermodynamics, statistical mechanics, nuclear chemistry, quantum chemistry, and interfacial and colloid chemistry.

7000. Thesis (1-6) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7301. Teaching Laboratory (2) P: Consent of chair. Instruction in the methods of teaching laboratory.

7520. Pharmaceutical Analysis (3) P: Consent of chair. Theory and application of contemporary techniques for the analysis of pharmaceutical compounds and other relevant species.

7522. Current Good Manufacturing Practices (3) P: Consent of chair. Regulations, laws, and skills involved in good laboratory and manufacturing practices (GLP) and good manufacturing practices (cGMP).

7524. Advanced Analytical Chemistry (3) Formerly CHEM 6250 P: Consent of chair. In-depth study of theory and research applications of statistics, sampling and data analysis, spectroscopy, mass spectrometry, separation science, and quantitative organic analysis.

7530. Medicinal Chemistry (3) P: Consent of chair. Study of the mechanism of drug action and the application of organic chemistry methodologies to the synthesis of biologically active substances such as therapeutic drugs, toxins, and drugs of abuse.

7532. Organic Synthesis (3) Formerly CHEM 6750 P: CHEM 2760; or consent of chair. Synthetically useful organic reactions and strategies in organic synthesis.

7534. Natural Product Synthesis (3) P: CHEM 7532 or consent of instructor. Synthetic methodologies used in the synthesis of complex natural products.

7540. Biophysical Techniques for Studying Biological Structure (3) P: Consent of chair. Theory and application of techniques for the study of biological structure and function.

7541. Biomolecular Modeling; Theory and Applications (3) P: Consent of chair. Computational molecular modeling and quantum chemistry of biologically relevant systems.

7542. Advanced Theoretical Chemistry (3) Formerly CHEM 6950 P: Consent of chair. Discussion of quantum mechanics, molecular orbital theory, valence bond theory, chemical spectroscopy, and group theory.

7993. Pharmaceutical Internship (3) May be repeated. May count maximum of 6 s.h. P: Consent of chair. Professional experience in pharmaceutical application of chemistry.

8810. Methods and Techniques (3) Must be repeated for a minimum of 6 s.h. May count a maximum of 9 s.h. P: Consent of chair. Rotation through research laboratories supervised by program faculty members.

8815. Seminar (1) May be repeated. May count maximum of 3 s.h. P: Consent of chair. Seminar presentations on research or critical review of current literature topics by students in IDPBS.

8820. Special Topics in Pharmaceutical Chemistry (2) May be repeated for credit with change of topic. P: Consent of chair. Topics reflect new scientific developments in pharmaceutical chemistry.

8830. Introduction to Research (5) May be repeated. May count a maximum of 15 s.h. P: Consent of chair. Design of experimental protocols and participation in preceptor's research program.

9000. Dissertation Research (3-12) May be repeated. May count a maximum of 18 s.h.

COASTAL AND MARINE STUDIES

Tom Allen, Director, A-238 Brewster Building

COAS: COASTAL STUDIES

5001, 5002. Coastal Marine Resources Problem Analysis (3,3) Equivalent of 60 hours of research per semester. P: Research project approved by instructor. Analysis of recognized problem in coastal marine resources in consultation with assigned faculty.

6000. Scientific Diving and Underwater Research Techniques (3) Formerly COAS 5000 P: Basic SCUBA certification (or equivalent) and consent of instructor. Fundamentals of scientific diving, including the use of Nitrox, specialized diving equipment, emergency procedures, and sampling techniques. Successful completion of this course and scientific diver qualification may be used to meet AAUS and ECU scientific diver certification requirements.

DEPARTMENT OF ECONOMICS

Richard E. Ericson, Chair, A-428 Brewster Building

John A. Bishop, Director of Graduate Studies, A-436 Brewster Building

MS IN APPLIED AND RESOURCE ECONOMICS

Applicants to the MS in applied and resource economics must meet the admissions requirements of the Graduate School, submit three letters of recommendation, make an acceptable score on the general portion of the Graduate Record Examinations, and have had at least one undergraduate course each in introductory statistics and differential calculus. Non-native speakers must make an acceptable score on the TOEFL. Undergraduate courses in intermediate microeconomics and macroeconomics are strongly recommended.

Students in this degree program must complete a minimum of 33 s.h. of course work. Core requirements in economics theory, econometric technique, and research methodology constitute 21 s.h. with the remaining 12 s.h. being electives. Up to 6 s.h. of electives may be taken outside the department with the approval of the graduate director.

1. Core courses: ECON 5360, 5501, 6301, 6302, 6390, 6401, 6402.
2. A comprehensive examination is administered after completion of ECON 5360, 5501, 6301, 6302, 6401, 6402. The examination will test skills in applied theory and econometrics. Successful performance on this examination is necessary to continue in program.
3. Research skills: Four of the core courses listed above constitute 12 s.h. of research skills in quantitative methods and research methodology: ECON 5360, 6301, 6302, 6390.
Research project: The final component, ECON 6390 (research project) is the culmination of student's analytical work and is designed to demonstrate applied research skills.

CERTIFICATE IN APPLIED ECONOMICS

In addition to the MS in economics, the department offers a certificate in applied economics with five options: econometrics, forecasting/macroeconomics, health policy, public policy, and resource policy. Entry requirements include a degree application

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for regular admission and a letter to the graduate director, requesting enrollment in the program. The certificate will be awarded after completion of 9 s.h. of B or better work in the respective areas as follows:

Econometrics: ECON 630I and two electives

Forecasting: ECON 6353 and two electives

Health policy: ECON 5910 and two electives

Public policy: ECON 5800 and two electives

Resource policy: ECON 5170 and two electives

ECON: ECONOMICS

5000. General Topics (3) May be repeated for credit with change of topic. P for undergraduate students: ECON 3144, 3244. Considers new or advanced topics in economics.

5150. Development (3) P for undergraduate students: ECON 3144. Application of microeconomic analysis to investments in human resources, efficient organization of rural economics, intersectoral and international exchange, and interaction between politics and markets, especially in less developed countries.

5170. Resources I (3) P for undergraduate students: ECON 3144. Applies microeconomic analysis to allocation of natural resources.

5360. Mathematical Economics (3) P for undergraduate students: MATH 217I or equivalent. Mathematical analysis applied to economic theory. Structure and specification of quantitative models.

5501. Macroeconomic Theory (3) P for undergraduate students: ECON 3244; ECON 5360 or MATH 2172. Business cycle fluctuations. Emphasis on determinants of consumption and investment and effectiveness of monetary and fiscal policy.

5800. Public Economics (3) P for undergraduate students: ECON 3144. Applies microeconomic analysis to collective choice in democratic societies, government expenditure programs, and taxation.

5910. Health Economics (3) P for undergraduate students: ECON 3144, 3244. Organizational structure, financing, and regulation of health care delivery and economic measurement of performance.

6000. Advanced Topics (3) May be repeated for credit. Current advanced-level topics in economics.

6102. Labor Supply (3) P: ECON 630I, 640I. Theory and estimation of static labor supply models and general theory of allocation of time.

6125. Regulation (3) P: ECON 640I. Market failure rationale for nonmarket allocation. Causes and effects of regulatory action. Behavior of regulatory agencies and regulated firms.

6172. Resources II (3) Applies microeconomic analysis to environmental problems, such as air and water pollution and formation of environmental policy.

6300. Economics of Coastal Populations (3) Advanced introduction to application of microeconomic analysis of coastal environmental problems and issues and economic basis for formation of coastal and marine policies.

6301. Econometrics I (3) Statistical theory and its basic applications to analysis of economic data.

6302. Econometrics II (3) P: ECON 630I, 640I. Development of general linear model and its extensions for analysis of economic data.

6335. Discrete Choice Econometrics (3) P: ECON 630I, 640I. Advanced course in econometric. Focus on regression techniques for analysis of qualitative and limited dependent variables.

6353. Forecasting (3) P: ECON 550I, 630I, 640I. Advanced course in econometrics. Focus on regression and time series techniques for forecasting of economic variables.

6390. Research (3) May be repeated. May count a maximum of 6 s.h. P: ECON 630I, 640I; consent of graduate director. Objectives and structure of methodologies for formulation. Conduct empirical research in economics.

6401. Microeconomic Theory I (3) Economic theory of behavior of households and firms in market economy.

6402. Microeconomic Theory II (3) P: ECON 6401. Extensions of choice theory. Efficiency and equilibrium under conditions of uncertainty and imperfect information. Welfare under second-best constraints.

6910. Quantitative Methods in Health Economics (3) Applications of quantitative methods to selected health economics topics of current policy relevance.

DEPARTMENT OF ENGLISH

Jeffrey Johnson, Chair, 2201 Bate Building

Michele F. Eble, Director of Graduate Studies, 2211 Bate Building

As a prerequisite to graduate study in a degree program, the Department of English requires that the applicant meet the admission requirements of the university and submit satisfactory scores on the General Test of the Graduate Record Examinations (GRE) or, for the MA, the Miller Analogies Test (MAT). Applicants to the MA program should have an undergraduate major, minor, or equivalent record of study in English, or for those applying for the technical/professional communication, rhetoric and composition, linguistics, or TESOL concentrations, an appropriate undergraduate degree. Applicants to the PhD program should have an appropriate master's degree. Each entering student is to consult with the director of graduate studies in English at the beginning of graduate studies. At the consultation, the director of graduate studies will review curriculum requirements and options, including concentrations in literature, technical and professional communication, rhetoric and composition, creative writing, multicultural and transnational literatures, linguistics, TESOL, or English Studies, and will suggest appropriate courses. Students seeking a concentration in creative writing must submit a portfolio of poems, short stories, or essays to the creative writing faculty prior to admission to the concentration. Students seeking a concentration in English studies must submit a plan of study for approval by the Director of Graduate Studies.

MA IN ENGLISH

A minimum of 33 s.h. of course work is required, with a final examination on the thesis or comprehensive assessment project; subject matter from course work may also be a part of the examination.

A research methods course, selected from 6009, 6805, 7005, 7601, 7701 3 s.h.

Area of concentration (choose one of the following): 18 s.h.

- a. English studies: An approved, unified program of study, including at least 3 s.h. from each of three concentrations or areas of study, and an additional 9 s.h. of coursework chosen from ENGL courses.
- b. Creative writing: Maximum of 12 s.h. from ENGL 5840, 5850, 5860, 5890; and minimum of 6 s.h. from ENGL 6865, 6870, 6880.
- c. Linguistics: ENGL 7530; 15 s.h. from ENGL 6505, 6526, 6527, 6528, 6529, 6531, 7525, 7535, 7565, 7605, 7680.
- d. Literature: 6 s.h. from ENGL 5160, 5165, 6116, 6121, 6131, 6151, 6215; 6 s.h. from ENGL 5125, 5150, 5170, 5230, 5250, 5260, 5275, 5280, 6155, 6175, 6185, 6220, 6250, 6260, 6330, 6350, 6390; 6 s.h. from either of the previous two groups or from ENGL 5060, 5330, 6340, 6360, 6370, 6380, 6450, 6515, 6870, 7065, 7070, 7165, 7265, 7365
- e. Multicultural and transnational literatures: 18 s.h. from ENGL 6330, 6340, 6350, 6360, 6370, 6380, 6420, 6450, 6460, 7300, 7350, 7365, and a reading knowledge of a language other than English (FORL 6000 satisfies this requirement).
- f. Rhetoric and composition: ENGL 6625, 7615, 7630; 6 s.h. from ENGL 6000, 7665, 7950, 7960, 7975; 3 s.h. from linguistics, TESOL, or technical and professional communication concentration.
- g. Teaching English to speakers of other languages (TESOL): ENGL 6528, 6531, 7530; 9 s.h. from ENGL 6505, 6526, 6527, 6529, 7525, 7535, 7565, 7605, 7680.
- h. Technical and professional communication: ENGL 7702; 15 s.h. from ENGL 6700, 6715, 6721, 6725, 6740, 6741, 7701, 7705, 7710, 7712, 7716, 7730, 7745, 7746, 7750, 7765, 7766, 7780, 7785, 7790.

English electives or courses from another department 6 s.h.

A thesis, demonstrating the student's ability to gather, arrange, and interpret material which bears on a particular problem 6 s.h.

OR
A comprehensive assessment project and additional coursework in English 6 s.h.

SECTION 8: CURRICULA

MAEd AND MAT IN ENGLISH EDUCATION

Please refer to the College of Education, for the degree requirements for the master of arts in teaching and the master of arts in education, both of which lead to advanced certification.

PhD IN TECHNICAL AND PROFESSIONAL DISCOURSE

The PhD program in technical and professional discourse prepares researchers and scholars to assess discourse critically, develop innovative and interdisciplinary approaches to discourse issues, investigate and analyze discourse in a variety of academic and non-academic settings, and serve as faculty at various educational levels. This preparation is developed through a multidisciplinary program of traditional and online courses, seminars, internships, and dissertation research.

Students in the program take courses in three major research areas: discourses and cultures, writing studies and pedagogy, and technical and professional communication.

With the assistance of advisors selected by the students, doctoral students develop individualized plans of study drawing on the resources of the Department of English, affiliate departments, and internship sponsors.

CURRICULUM

The doctoral program requires a minimum of 60 s.h. of course work beyond the master's degree.

Required courses: ENGL 8601, 8605, 8615, 8630, 8780.....	15-18 s.h.
ENGL electives.....	15 s.h.
Electives in ENGL or affiliate departments.....	12 s.h.
ENGL 9000 (Dissertation).....	18 s.h.

Please contact the director of graduate studies in English for additional details concerning application procedures, admission requirements, and specific academic requirements.

CERTIFICATE IN MULTICULTURAL AND TRANSNATIONAL LITERATURES

The graduate certificate in multicultural and transnational literatures offers continuing education for post baccalaureate teachers, professionals, and potential graduate degree students in literatures from diverse ethnic and cultural groups that may have been excluded from mainstream literary studies. Course work is interdisciplinary, with emphases on genre, historical context, and critical methodologies, and a focus on ethnic American and world literatures written in English.

This certificate is offered only online. Completion requires 12 s.h., including ENGL 6340 and 6360 (required), and 6 s.h. to be selected from ENGL 6330, 6350, 6370, 6460, and 7365. Other special topics graduate courses in related areas may be approved on an individual basis.

For further information, please go to <http://www.ecu.edu/english/>, or contact the director of graduate studies.

CERTIFICATE IN PROFESSIONAL COMMUNICATION

Communication professionals work in a rapidly changing environment that requires them to update their abilities throughout their working career. Both conceptual and technological issues underlie those changes. This online certificate program is designed to help those communicators remain competitive.

The certificate requires 15 s.h. of courses in the area of technical and professional communication with a minimum B average in all certificate course work. Only 3 s.h. of a grade of C will count toward this certificate. Internship (ENGL 6740, 6741) and directed reading (ENGL 6725) courses cannot count toward the certificate. No hours in another discipline can be counted. Additional details can be obtained by contacting the director of graduate studies in the Department of English.

CERTIFICATE IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES (TESOL)

The TESOL Certificate is designed for qualified candidates who wish to further their education in the field of teaching English to speakers of other languages. The certificate helps prepare professionals planning to teach English language learners (ELLs) in public/private sectors in the US or English as a Foreign Language (EFL) in such contexts overseas.

Applicants seeking admission to this program must hold a BA, BS or an equivalent degree from an accredited college or university in the US or overseas. Nonnative speakers of English are required to submit a TOEFL (Test of English as a Foreign Language) score of 550 or higher. Students interested in pursuing the certificate can enroll as nondegree seeking students or pursue the certificate concurrently while enrolled in an ECU graduate program. Admission is based on completion of the ECU certificate application and approval by the program coordinator.

The certificate requires **9 s.h.** of graduate-level course work, including ENGL 6528 and 6531 (required), and 3 s.h. to be selected from ENGL 6009, 6526, 6527, 6529, 7525, 7530, 7535, 7605, and 7680.

ENGL: ENGLISH

5060. History of Literary Criticism (3) Major texts of literary criticism from Plato through Pater.

5125. The English Novel Through Hardy (3) Development of English novel: Defoe, Richardson, Fielding, Austen, the Brontes, Dickens, Thackeray, Eliot, Hardy, and others.

5150. The Twentieth-Century British and American Novel (3) Representative British and American novelists of twentieth century. Joyce, Woolf, Lawrence, Hemingway, Faulkner, and recent writers.

5160. English Drama to 1642 (3) Types and developments of English drama from beginnings in Middle Ages until 1642.

5165. English Drama: Dryden to Sheridan (3) Types and developments of English drama from Restoration to Romantic period.

5170. Modern Drama (3) Drama from Ibsen to present. Focus on British and American playwrights.

5230. Southern Regional Literature (3) Southern writing representing attitudes of region. Confined to literary genres.

5250. The American Novel, 1800 to 1920 (3) Development of American novel. Emphasis on Brown, Cooper, Hawthorne, Melville, Twain, Howells, James, Crane, Dreiser, and Cather.

5260. The Novel Since 1945 (3) Contemporary novel in English. Emphasis on American and British works.

5275. Nineteenth-Century Poetry (3) Major British and American poets.

5280. Twentieth-Century Poetry (3) Variety of voices that comprise poetry written in English.

5330. Studies in Women's Literature (3) May be repeated for credit by graduate students. Writings of women within the context of feminist scholarship and criticism. Focus on genre within a literary period or specific national/international context.

5350. Special Studies in Film (3) May be repeated for credit by graduate students. Aspects of world film literature. Topics announced by instructor.

5770. Advanced Editing (3) P: ENGL 3870 or consent of instructor. Advanced study of and practice in various editorial functions as applied to non-fiction books, periodicals, and corporate documents.

5780. Advanced Writing for Business and Industry (3) P: ENGL 3880 or consent of instructor. Advanced composition with extensive writing practice.

5840. Advanced Poetry Writing (3) Graduate students may repeat for a maximum of 9 s.h. P: ENGL 3840 or consent of instructor. Advanced poetry-writing practice.

5850. Advanced Fiction Writing (3) Graduate students may repeat for a maximum of 9 s.h. P: ENGL 3850 or consent of instructor. Practice in prose fiction writing. Emphasis on publication.

5860. Advanced Nonfiction Writing (3) Graduate students may repeat for a maximum of 9 s.h. P: ENGL 3860 or consent of instructor. Practice in non-fiction prose writing. Emphasis on publication.

SECTION 8: CURRICULA

- 5890. Advanced Script Writing (3)** Graduate students may repeat for a maximum of 9 s.h. P: ENGL 3830 or consent of instructor. Completion of one-act play or major portion of full-length play or screenplay.
- 6000. Critical Writing in English Studies (3)** P: 3 s.h. graduate credit or consent of instructor. Explores academic writing conventions.
- 6009. Research Methods in Language Study (3)** Research methods in study of language.
- 6116. Medieval English Literature (3)** Middle English literature from 1100 to 1500, exclusive of Chaucer.
- 6121. Shakespeare and Renaissance Literature (3)** Critical, historical, and bibliographical investigation of principal works of sixteenth century, two by Shakespeare. Some attention to forces shaping the age.
- 6131. Milton and Seventeenth-Century Literature (3)** English nondramatic literature from 1600-1660. Emphasis on metaphysical tradition and Milton's poetry.
- 6151. Eighteenth-Century British Literature (3)** British nondramatic literature from 1660-1800.
- 6155. Romantic Literature (3)** Major English Romantic writers and lesser known figures. Blake, Coleridge, Wm. Wordsworth, Keats, Byron, P. Shelley, Godwin, D. Wordsworth, M. Shelley, Wollstonecraft, and DeQuincey.
- 6175. Victorian Literature (3)** Major structural genres. Relationship among important works and writers of Victorian literature, and ideas, art, and culture they helped to express and shape. Founded upon three indispensable major writers: Carlyle, Tennyson, and Wilde.
- 6185. Twentieth-Century British Literature (3)** Development of British literature from 1900 to present.
- 6215. American Literature to 1830 (3)** Varieties of American literature from time of earliest European explorations and encounters to beginnings of US. Writings come from British, Spanish, Native-American, African-American, and other cultural traditions.
- 6220. The American Renaissance (3)** Major and minor writers include Poe, Emerson, Thoreau, Hawthorne, Melville, and such secondary figures as Margaret Fuller, Amos Bronson Alcott, and Christopher Cranch.
- 6250. American Realism (3)** Themes, problems, and works in American literature and culture from Civil War to World War I.
- 6260. Twentieth-Century American Literature (3)** Advanced study.
- 6330. Studies in Latino/a Literatures (3)** Explores Latino/a literatures in twentieth century.
- 6340. Ethnic American Literature (3)** Writers who have contributed to multicultural American literature, including African-American, Jewish-American, Native-American, Hispanic-American, and Asian-American.
- 6350. Studies in Native American Literature (3)** Explores Native American literatures of twentieth century.
- 6360. World Literature Written in English (3)** Comparative literatures. Focus on post colonial writers. Emphasis on anglophone texts from Africa, the Caribbean, South and Central America, Asia, and Pacific Rim.
- 6370. Caribbean Literature (3)** Critical examination of Caribbean literature.
- 6380. Studies in African Literature (3)** Explores African literature written in English in twentieth century.
- 6390. Advanced Studies of Science Fiction and Fantasy (3)** Historical trends, problems, and contemporary movements in science fiction and fantasy.
- 6420. Studies in Asian American Literature (3)** Explores Asian American literature.
- 6450. Studies in World Indigenous Literatures (3)** Explores world indigenous literatures written in English.
- 6460. Studies in African American Literature (3) Formerly ENGL 5360** Explores African American literature.

- 6505. Linguistic and Cultural History of the English Language (3) Formerly ENGL 5500** Cultural emergence and linguistic development.
- 6515. Advanced Studies in Children's Literature (3)** Sources of literature for children. Emphasis on excellence and suitability. Attention given to trends, problems, and recent research.
- 6520. Applied Linguistics for Language Teachers (3)** Pedagogical application of linguistic theory. Emphasis on pragmatics and sociolinguistics.
- 6526. The Structure of English: Phonology and Morphology (3) Formerly ENGL 5501** Contemporary linguistic theory and its practical application to teaching phonological and morphological components of English language.
- 6527. The Structure of English: Syntax and Semantics (3) Formerly ENGL 5502** P: Consent of instructor. Contemporary linguistic theory and its practical application to teaching syntactic and semantic components of English language.
- 6528. Teaching English as a Second Language: Theories and Principles (3) Formerly ENGL 5503** Current theories and principles of teaching English to non-native speakers or speakers of nonstandard dialects.
- 6529. Applied Linguistics for ESL Teachers (3) Formerly ENGL 5504** Pedagogical application of linguistic theory. Emphasis on teaching English as a second language.
- 6531. TESL: Methods and Practicum (3)** Approaches and methods in ESL teaching. Provides ESL teaching and classroom experience.
- 6540, 6541. Internship in Teaching English as a Second Language (3,3)** Supervised internship. P: Consent of instructor. Practical experience in ESL teaching environment. Parallel reading and study.
- 6625. Teaching Composition: Theory and Practice (3)** Composition theory and its applications to college writing instruction.
- 6700. Technical Editing and Production (3)** Theory and abilities needed to function as editor, particularly a managing and production editor. Culminates in project demonstrating that knowledge. Editing as part of document production process.
- 6715. Technical Writing (3)** Intensive study. Emphasis on style, writing modes, technical reports, instructional manuals, and technical proposals.
- 6721. Copyediting in Professional Communication (3)** Copyediting theory and basics. Covers variety of genres, both print and electronic. Review of electronic editing and style manuals.
- 6725. Directed Readings in Technical and Professional Writing (3)** P: Consent of instructor and approval of director of graduate studies. Advanced individual study of selected areas.
- 6740, 6741. Internship in Technical and Professional Communication (3,3)** Supervised internship. P: Consent of instructor. Practical professional writing in work environment. Parallel reading and study.
- 6805. Research: The Writer's Perspective (3)** Research methods used by creative writers.
- 6870. Literature: The Writer's Perspective (3)** Appropriate for students choosing literature or creative writing concentration. Advanced study of modern and contemporary works of poetry, fiction, and creative nonfiction. Emphasis on writer's craft.
- 6880. Directed Readings in Creative Writing (3)** P: Admission to graduate concentration in writing; consent of instructor. Directed individual study of selected areas of advanced creative poetry, fiction, or nonfiction writing.
- 6940. Film and English Studies (3)** Examines role of film in literary studies. Emphasis on film as literary and cultural artifact.
- 7000. Thesis (1-6)** May be repeated. May count maximum of 6 s.h.

SECTION 8: CURRICULA

- 7001. Thesis: Summer Research (1)** May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.
- 7005. Bibliography and Methods (3) Formerly ENGL 6005** Bibliographical tools and methods of research in English language and literature.
- 7070. Literary Theory (3) Formerly ENGL 5070** Major critical approaches of twentieth century.
- 7080. Cultural Studies Theory and Method (3)** Introduction to the interdisciplinary field of cultural studies.
- 7300. Directed Reading in Multicultural and Transnational Literature (3)** May be repeated for maximum of 6 s.h. credit. P: Consent of director of graduate studies in English. Directed studies in specific areas not covered by other courses.
- 7350. Seminar in Multicultural and Transnational Literature (3)** Advanced comparative study of literature and criticism.
- 7525. Language and Society (3) Formerly ENGL 6525** Language in relation to culture and society.
- 7530. Descriptive Linguistics (3) Formerly ENGL 6530** Contemporary models employed in linguistic analysis on all levels, practical applications of models to wide diversity of natural languages, and evaluation of models with respect to their descriptive and explanatory adequacy and their universal and cross-cultural application.
- 7535. Principles of Language Testing (3)** Principles and methods of performance and standardized language test design, implementation, and interpretation.
- 7601. Research Design in Rhetoric and Composition (3) Formerly ENGL 6601** Principles and techniques of research design.
- 7605. Discourse Analysis (3) Formerly ENGL 6605** Principles governing human communicative interaction in written and oral modalities.
- 7615. Rhetorical Theory (3) Formerly ENGL 6615** Classical and modern theories of rhetorical discourse.
- 7630. Cultural Rhetoric and Writing (3)** Study of how cultural values and assumption affect writing practices through genre, style, and conventions of argument.
- 7640. Discourse for Special Interests (3)** May be repeated for a maximum of 6 s.h. with change of topic. Focuses on analysis and production of discourse in variety of academic, professional, and public contexts.
- 7666. Teaching English in the Two-Year College Internship (3)** May be repeated for a maximum of 6 s.h. P: 18 s.h. graduate ENGL credit or consent of instructor. Supervised on-site research and instruction in rhetoric, composition, and theory.
- 7680. Writing Systems of the World (3)** Examines writing systems and their relationship to larger human phenomenon of spoken language.
- 7701. Research Methods in Technical and Professional Writing (3) Formerly ENGL 6701** Applied research in library, observation and investigation, experimentation, and survey.
- 7702. Research Design in Technical and Professional Communication (3)** Quantitative and qualitative empirical research methods.
- 7705. Ethical Issues in Professional Communication (3)** Overview of theories of ethics from classical to the present. Emphasizes impact of ethical systems on professional communicators preparing print and online documents in various organizations and industries.
- 7710. Professional Communication (3)** Study of effective, ethical, responsible, and professional communication by learning abilities, strategies, and conceptual knowledge needed to address a variety of communication tasks in a variety of work environments. Use of emerging technologies as tools for communication.

- 7712. Grant and Proposal Writing (3)** Study of grant and proposal funding resources and worksheets. Preparation of grant or proposal to be reviewed by at least two experts, revised accordingly, and then submitted to funding agency.
- 7716. Classics in Scientific and Technical Literature (3) Formerly ENGL 6716** Examines scientific and technical writing from classic times to present.
- 7730. Issues in Technical Communication (3) Formerly ENGL 6730** Traditions and trends in academic business and industrial theories and applications of technical communications.
- 7745. Teaching Professional Communication (3)** Designed for those teaching introductory professional communication courses, particularly service courses at undergraduate level in community colleges and universities. Addresses emerging technologies as tools for teaching such courses.
- 7746. Training in Professional Communication (3)** Theoretical concepts involved in preparation of training materials targeting adult learners, including instructional materials that allow users both to complete tasks and learn theoretical concepts. Review of methods of distributing training.
- 7750. Writing Public Science (3)** Study of writing about science and technology in public sphere. Examines how professional writers relate scientific topics to non-specialist audiences, finding models of effective public science writing, and preparing public science writing.
- 7765. Technical and Professional Communication (3) Formerly ENGL 6765** May be repeated for credit. May count maximum of 9 s.h. toward certificate program. Special studies seminars.
- 7766. Special Studies Seminars in Communication and Emerging Technologies (3)** May be repeated for a maximum of 6 s.h. with change of topic.
- 7780. Theory of Professional Communication (3)** Traces theories drawn from variety of fields that inform such topics as social context of technical communication, aims of technical discourse, readability, invention and audience, audience analysis, technical style, and graphics.
- 7785. History of Professional Communication (3)** Traces development of contemporary professional communication from print to electronic media.
- 7790. Public Interest Writing (3)** Professional, governmental, nonprofit organizational, and civic writing. Emphasis on public policy making and advocacy.
- 7950. Issues in Teaching Composition (3) Formerly ENGL 6950** Advanced composition theory and its applications to writing instruction.
- 7960. Methods of Teaching English in the Two-Year College (3) Formerly ENGL 6960** History and pedagogy of teaching writing in the two-year college. Emphasis given to the development of effective teaching methods.
- 7975. Developmental English in the Two-Year College (3) Formerly ENGL 6875** History and pedagogy of developmental writing in the two-year college. Emphasis given to the development of effective teaching methods.
- 8100. Directed Reading (3)** May be repeated for a maximum of 6 s.h. with a change of topic. Directed studies in specific areas not covered by other courses.
- 8200. Cooperative/Research Assignment (3)** May be repeated for a maximum of 6 s.h. Supervised research in technical and professional discourse.
- 8601. Advanced Research Methods (3)** Principles and techniques in research design.
- 8605. Advanced Discourse Analysis (3)** Principles governing human communicative interaction in written and oral modalities.
- 8615. Advanced Rhetorical Theory (3)** Classical and modern theories of rhetorical discourse.
- 8630. Advanced Cultural Rhetoric and Writing (3)** Study of how cultural values and assumptions affect writing practices through genre, style, and conventions of arguments.

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8780. Advanced Theory of Professional Communication (3) Traces theories drawn from variety of fields that inform such topics as social context of technical communication. Aims of technical discourse, readability, invention and audience, audience analysis, technical style, and graphics.

9000. Dissertation (3-12) May be repeated. May count a maximum of 18 s.h. Original research investigation of significant aspect in field of technical and professional discourse.

9001. Dissertation: Summer Research (1) May be repeated. May not count toward degree. Students conducting research may register for this course only during summer.

ENGL: ENGLISH, SPECIAL STUDIES SEMINARS

6865. Creative Writing (3) May be repeated with credit. Special studies seminars.

7065. Foundations of Literary Criticism (3) Formerly ENGL 6065 May be repeated for credit. Special studies seminars. Focus on literary criticism topics.

7165. English Literature (3) Formerly ENGL 6165 May be repeated for credit. Special studies seminars. Focus on author, genre, or period studies.

7265. American Literature (3) Formerly ENGL 6265 May be repeated for credit. Special studies seminar. Focus on author, genre, or period studies.

7365. Selected Topics in Multicultural and Transnational Literature (3) Formerly ENGL 6365 May be repeated for credit. Special studies seminars. Focus on topics in regional literatures, ethnic literatures, and English literatures from non-English-speaking countries.

7465. Folklore (3) Formerly ENGL 6465 May be repeated for credit. Special studies seminars. Focus on collection, classification, analysis, and/or archiving of traditional folk materials.

7565. Linguistics, Education, and ESL (3) Formerly ENGL 6565 May be repeated for credit. Special studies seminars.

7665. Rhetoric and Composition (3) Formerly ENGL 6665 May be repeated for credit. Special studies seminars.

7765. Technical and Professional Communication (3) Formerly ENGL 6765 May be repeated for credit. May count maximum of 9 s.h. toward certificate program. Special studies seminars.

ETHNIC STUDIES

Joyce Irene Middleton, Director, Bate Building, Room 2128

Su-ching Huang, Associate Director, Bate Building, Room 2150

Ethnic studies is an interdisciplinary program that uses cross-cultural comparative methods to explore the diverse histories and cultures of ethnic groups in the US to examine the formation of identities and societies in local, national, and global contexts, and to analyze the social, cultural, and political sources of bias and discrimination.

ETHN: ETHNIC STUDIES

5000. Directed Readings in Ethnic Studies (3) Graduate credit only. P: ETHN 2001 or 2002 or 2003; consent of director. In-depth exploration and written senior-level paper on topic relevant to ethnic studies.

5500. Studies in Ethnicity (3) Graduate credit only. P: ETHN 2001 or 2002 or 2003 or consent of program director. Theoretical and methodological issues.

DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURES

John A. Stevens, Interim Chair, 3324 Bate Building

MAT IN HISPANIC STUDIES

Please refer to Section 8, College of Education, for the degree requirements for the master of arts in teaching, which leads to advanced certification.

CERTIFICATE IN HISPANIC STUDIES

The graduate certificate in Hispanic studies provides students with opportunities to develop advanced/superior Spanish language skills as well as to deepen their understanding of Hispanic cultures, including literature. No particular configuration of courses is required. The certificate is flexible and allows students to design, in consultation with the program coordinator, a program that meets their personal and professional needs. The certificate requires 18 s.h. of credit, 12 s.h. of which must be at the 6000-level, chosen from the following courses.

Language studies: SPAN 5340, 5940, 6000, 6001, 6400

Culture studies: SPAN 5440, 5445, 6100, 6101

Literature: SPAN 5550, 6200, 6202

Pedagogy: SPAN 6600

Special topics: SPAN 5700, 6521, 6522, 6523

FORL: FOREIGN LANGUAGE

6000. Foreign Language for Reading Knowledge (3) Reading skills adequate to successfully conduct research utilizing scholarly texts.

FREN: FRENCH

5305. Advanced Syntax (3) P: FREN 3330 or graduate standing. Detailed and comprehensive study of most difficult points of French grammar. Directed practice in analyzing and writing exercises.

5700. Special Topics in French or Francophone Studies (3) May be repeated for maximum of 6 s.h. with change of topic. P: Consent of chair. Selected topics relating to language, literature, culture or civilization of France or another French-speaking region of the world.

6000. Advanced Language Skills I (3) In-depth exploration of varieties and styles of modern French usage.

6100. The Culture and Civilization of France (3) Detailed examination of formation of France from its beginnings to the present.

6101. The Culture and Civilization of the Francophone World (3) In-depth exploration of civilization and culture of French-speaking world outside of France.

FREN Banked Courses

6001. Advanced Language Skills II (3)

7000. Thesis (1-6)

GERM: GERMAN

5700. Selected Topics (3) May be repeated for maximum of 6 s.h. with change of topic. P: Consent of chair. Selected topics relating to language, literature, culture, or civilization of a German-speaking country. Topics vary.

6000. Advanced Language Skills (3) In-depth exploration of varieties and styles of modern German usage.

6100. The Culture and Civilization of the German-Speaking World (3) In-depth exploration of aspects of civilization and culture of German-speaking countries.

SECTION 8: CURRICULA

SPAN: SPANISH

5340. Advanced Translation I (3) P: SPAN 4340. Practice of translation skills with greater variety of style and subject matter.

5440. Contemporary Issues of the Hispanic World (3) May be repeated for maximum of 6 s.h. with change of topic. P: Consent of chair. Selected events, artistic trends, and currents of thought that significantly contribute to life in contemporary Hispanic societies.

5445. Hispanic Cinema (3) May be repeated for maximum of 6 s.h. with change of topic. P: Consent of chair. Films as cultural product reflecting social, political, and economic realities. Power to represent, inform, and create. Viewed and discussed by representative directors.

5550. Hispanic Women Writers (3) May be repeated for maximum of 6 s.h. with change of topic. May not be repeated for credit by students in WOST program. P: Consent of chair. In-depth study and discussion of representative writings by women in Hispanic countries from variety of genres. Emphasis on relationships between society and origin, content, and form of texts.

5700. Special Topics in Hispanic Studies (3) May be repeated for maximum of 6 s.h. with change of topic. P: Consent of chair. Topics relating to language, literature, culture, or civilization of Spain or Latin America.

5940. Advanced Translation II (3) Candidates who successfully complete this course may be allowed to take qualifying exams for award of the certificate in Spanish translation. P: SPAN 5340. Continuation of skills practiced in SPAN 4340, 5340 at advanced level. Translation of written texts in variety of styles and different topics, from Spanish into English and vice versa.

6000. Advanced Language Skills I (3) In-depth exploration of varieties and styles of modern Spanish usage.

6001. Advanced Language Skills II (3) Continuation of SPAN 6000.

6100. Cultural Studies, Spain (3) History, culture, and civilization of Spain. In-depth exploration of special topic or theme.

6101. Cultural Studies of Spanish America (3) Spanish American society and culture before 1492 and up to time of independence.

6200. Readings in Spanish Literature (3) Exhaustive study of masterpieces of Spanish literature from Middle Ages to present.

6202. Readings in Twentieth-Century Spanish-American Literature (3) Literary works by recognized Spanish-American writers of twentieth century. Major artistic movements and socioeconomic/political realities of various regions.

6400. Spanish Linguistics (3) Introduces nature of grammar and approaches to description of Spanish grammar. Emphasis on Chomsky's Principles and Parameters Model.

6521, 6522, 6523. Special Readings (3,3,3) Intensive reading in area where student may already have credit.

6600. Recent Trends in Foreign Language Teaching, Learning, and Acquisition (3) Current developments, issues, and research in teaching, learning, and acquisition of foreign languages.

SPAN Banked Courses

6410. Old Spanish I (3)

6411. Old Spanish II (3)

6412. Medieval Literature (3)

**6414. Lope de Vega and the Beginnings
of Spanish Drama (3)**

6415. Calderon and His Contemporaries (3)

6416. Poetry (3)

6420. Hispanic Civilization (3)

6425. Advanced Phonetics (3)

6428. Applied Linguistics (3)

6451. Romantic and Post-Romantic Drama (3)

6470. The Latin-American Novel (3)

6471. The Hispanic-American Short Story (3)

6488. Bibliography and Methods of Research (3)

6491. The Regional Novel (3)

6492. Galdos (3)

6494. The Generation of 1898 (3)

7000. Thesis (1-6)

DEPARTMENT OF GEOGRAPHY

Burrell Montz, Chair, A-227 Brewster Building

Paul Gares, Director of Graduate Studies, A-224 Brewster Building

Students wishing to pursue the MA in geography must present three letters of recommendation and meet the admission standards of the Graduate School.

MA IN GEOGRAPHY

The master of arts in the geography thesis option requires a minimum of 30 s.h. of 5000- and 6000-level courses, with 18 s.h. at the 6000 level. The non-thesis/internship option requires 36 s.h., with 21 s.h. at the 6000 level. The master of arts in geography with a planning concentration offers only the non-thesis/internship option and requires a minimum of 36 s.h. at the 5000 and 6000 levels with a minimum of 21 s.h. at the 6000 level.

1. Core courses: GEOG 6100, 6110.....6 s.h.
2. Research skills course.....3 s.h.
Choose a research skills/methods course related to the area of specialty and intended research:
ANTH 5015; GEOG 6150, 6160; HIST 5960; or other course selected in consultation with advisor.
3. Concentration (Choose one area.).....6-15 s.h.

Geography (6-15 s.h.):

Thesis option: Choose a minimum of 6 s.h. electives at the 5000 and 6000 levels in the major field areas (physical, human, techniques). Students are encouraged to take at least one course outside their selected major area of study. Courses in other departments may be selected in consultation with student's advisor.

Non-thesis/Internship option: Choose 12-15 s.h. electives at the 5000 and 6000 levels in the major field areas (physical, human, techniques). Students are encouraged to take at least one course outside their selected major area of study. Courses in other departments may be selected in consultation with student's advisor.

Planning (15 s.h.):

Choose two (6 s.h.) from the following: PLAN 6000, 6010, 6020

Choose one (3 s.h.) from the following: PLAN 6018, 6028, 6038

Choose 6 s.h. PLAN electives at the 5000 and 6000 levels

Rural development (12-15 s.h.):

GEOG 6350, 6355

Choose a minimum of 6-9 s.h. of 5000- and 6000-level courses in geography and other departments in an area of specialization

4. Electives.....9 s.h.
Choose a minimum of 9 s.h. electives at the 5000 or 6000 level in the area of specialization (human, physical, techniques).

5. Thesis or non-thesis/internship option.....3-6 s.h.

Geography (3-6 s.h.):

Thesis option: GEOG 7000 (3-6 s.h.) Students must pass the thesis defense.

Non-thesis/internship option: GEOG 6801, 6802, and/or 6803. Students must complete internship for minimum of 3 s.h. or maximum of 6 s.h. Student must present professional report and pass report defense.

Planning (3 s.h.):

Non-thesis/Internship option: Choose one (3 s.h.) from the following: GEOG 6801, 6802, 6803. Student must present professional report and pass report defense.

Rural development (3-6 s.h.):

Thesis option: GEOG 7000 (3 s.h.) Students must pass the thesis defense.

Non-thesis/internship option: GEOG 6801, 6802, and/or 6803. Students must complete internship for minimum of 3 s.h. or maximum of 6 s.h., present professional report, and pass report defense.

CERTIFICATE IN ECONOMIC DEVELOPMENT

The interdisciplinary graduate certificate in economic development provides students with opportunities to develop analytical, theoretical, and practical skills for both public and private sector careers in regional, economic, and community development. The certificate is open to students enrolled in graduate degree programs as well as nondegree applicants who have earned

SECTION 8: CURRICULA

baccalaureate degrees. For those who complete the certificate as nondegree students, a maximum of 9 s.h. may be used in a subsequent degree program. Some degree programs will permit fewer. The program offers a flexible design to provide students from diverse disciplinary backgrounds with the opportunity to acquire a foundation in regional, economic, and community development while specializing in their respective areas of interest.

The program requires completion of **15 s.h.** as follows:

Choose three of the five following core courses (9 s.h.): ECON 5150; GEOG 6350; GEOG 6355; PADM 6123; SOCI 6400.

Choose two elective courses (6 s.h.) in consultation with the certificate coordinator(s). Students are encouraged to choose an elective in an area of specialization. A list of appropriate electives is available from the certificate coordinator(s).

For further information, please contact the certificate coordinator.

CERTIFICATE IN GEOGRAPHIC INFORMATION SCIENCE AND TECHNOLOGY

The graduate certificate in geographic information science and technology (GIST) provides students with opportunities to develop analytical, theoretical, and practical skills for both public and private sector careers. The certificate is open to students enrolled in graduate degree programs, as well as nondegree applicants who have earned baccalaureate degrees in GIST related fields. For those who complete the certificate as nondegree students, a maximum of 9 s.h. may be used in a subsequent degree program. Some degree programs will permit fewer. Students with limited undergraduate training in GIST are encouraged to consult with the certificate coordinator before enrollment.

The program requires completion of **12 s.h.** as follows:

Core courses (9 s.h.) as follows: GEOG 6410, 6420, 6430.

Choose one of the following elective courses (3 s.h.): GEOG 6150 or 6400 or 6460.

For further information please contact the certificate coordinator.

GEOG: GEOGRAPHY

5220. Physical Geography Field Experience (3) 10 classroom hours of orientation and organization over a 2-week period followed by 3 weeks (15 working days) in a field location. P: GEOG 2200, 2250; or consent of instructor. Field-based introduction to basic aspects of physical geography research. Development of research questions, field techniques, use of modern instrumentation, and geographic analysis of field data.

5281, 5282, 5283. Selected Topics in Physical Geography (1,2,3) May be repeated for up to 6 s.h. P: Consent of instructor. Seminar on selected topic.

5393. Seminar in Human Geography (3) May be repeated for up to 6 s.h. P: Consent of instructor. Seminar on selected topic in economic-human geography.

6100. History and Philosophy of Geography (3) Major paradigms constituting discipline of geography. Research frameworks within these paradigms.

6110. Research Design in Geography (3) For beginning graduate student. P: Graduate standing. Analysis of research procedures. Research objectives, literature searches, data collection design, data analysis techniques, and modes of presentation.

6150. Quantitative Methods in Geography (3) P: Introductory course in statistics or GEOG 3400. Advanced statistical methods related to geography.

6160. Field Geography (3) P: Dept consent. Advanced inquiry into development of field techniques and research methods in geography. Data collection, analysis, and writing from field sources.

6200. Research Methods in Physical Geography (3) Introduces field and lab methods typically used in research in geomorphology and other disciplines of physical geography.

- 6210. Advanced Fluvial and Hydrological Processes (3)** Comprehensive examination of principles of surface water hydrology and fluvial geomorphology and their application to environmental problems.
- 6220. Advanced Coastal Geomorphology (3)** Advanced examination of principles of coastal processes and geomorphology, and their application to environmental problems.
- 6230. Earth Surface Processes on the Coastal Plain (3)** Detailed examination of the dominant geomorphic processes and sediment dynamics involved in the creation of landforms and the redistribution of sediments and contaminants in coastal plain environments. Emphasis on laboratory experimentation.
- 6270. Advanced Water Resources Management and Planning (3) Same as PLAN 6270.** Advanced investigation of spatial and temporal characteristics of water. Consideration of hydrologic, engineering, economic, and institutional aspects of water management.
- 6291, 6292, 6293. Independent Study in Physical Geography (1,2,3)** May be repeated for maximum of 6 s.h. May not count toward thesis research. P: Consent of instructor. Analysis of specific problem in physical geography under direct supervision of graduate faculty member.
- 6300. Seminar in Cultural Geography (3)** For beginning graduate students. Comprehensive exposure to concepts, principles, and terminology of cultural geography. Problem solving and research through required papers.
- 6310. Seminar in Economic Geography (3)** For beginning graduate students. Comprehensive exposure to concepts, principles, and terminology of economic geography. Problem solving and research through required papers.
- 6315. Advanced Geographic Images (3)** Social and cultural images of space, place, and environment as produced and consumed through various media and at a variety of scales.
- 6320. Feminist Theories of Economy (3)** Economy and development from feminist and geographical perspective.
- 6325. Advanced Population and Development (3)** Demographic issues and population policies in relation to resource use and economic development.
- 6330. Global Restructuring of Agro-Food Systems (3)** Contemporary trends in global restructuring of agro-food systems of industrialized and developing nations.
- 6335. Tourism Development (3)** Traditional and emerging forms of tourism development as they transform economic, social, cultural, and environmental landscapes inside and outside the US.
- 6340. Advanced Medical Geography (3)** Topics range from geographic patterns and processes of disease to locational aspects of health care delivery systems. GIS used to describe and analyze problems in medical geography. Students become acquainted with current research literature.
- 6345. Human Migration and Global Restructuring (3)** Causes and consequences of human migration processes associated with political and economic restructuring in different regions of the globe.
- 6350. Seminar in Rural Development (3)** Geographic theories and approaches used to study issues and problems facing rural areas.
- 6355. Rural Development Practicum (3)** Contemporary approaches to project design, implementation, management, and evaluation. Applies course in grant writing, problem solving, community analysis, participatory action research, group facilitation, and project evaluation.
- 6390. Political Geography (3)** Geographic factors in current national and world problems at advanced level.
- 6391, 6392, 6393. Independent Study in Human Geography (1,2,3)** May be repeated for maximum of 6 s.h. P: Consent of instructor. Analysis of specific problem in human geography under direct supervision of graduate faculty member.

SECTION 8: CURRICULA

6400. Seminar in Geographic Information and Analysis (3) P: Consent of the instructor. Comprehensive exposure to concepts, principles, applications, and social implications of remote sensing, geographic information systems, and cartography.

6410. Advanced Cartography (3) P: Undergraduate course work in digital cartographic methods or consent of instructor. Readings, discussion, and independent investigation of cartography topics. Analytic cartography, spatial analysis, and visualization techniques.

6420. Advanced Remote Sensing (3) P: GEOG 3420 or consent of instructor. Interpretation of environmental phenomena recorded in digital data formats by remote sensing instruments. Advanced techniques of digital image processing for remotely sensed images.

6430. Advanced Geographic Information Systems (3) P: GEOG 3430 or consent of instructor. Advanced topics.

6440. Spatial Analysis of Coastal Environments (3) P: GEOG 3410 or equivalent. Applications of geographic information science to research in coastal environments.

6460. Advanced Digital Terrain Analysis (3) P: GEOG 2410 or equivalent; or consent of instructor. Advanced investigation of digital topographic analyses that focuses on topographic data acquisition, development of digital elevation models, topographic analyses, and terrain visualization.

6491, 6492, 6493. Independent Study in Geographic Techniques (1,2,3) May be repeated for maximum of 6 s.h. P: Consent of instructor. Analysis of specific problem in geographic techniques under direct supervision of graduate faculty member.

6510. Meteorological Measurement Systems (3) 2 lecture and 3 lab hours per week. Principles of meteorological instruments and measurement techniques; basic and advanced methods in data logging, processing, quality analysis and quality control; hands-on experience in labs, and practical training via independent field project.

6520. Atmosphere Turbulence (3) Mechanisms and characterization of atmospheric turbulence in terms of fluid dynamics and mathematical methods. Modeling and measurement techniques in study of atmospheric turbulence.

6530. Advanced Micrometeorology (3) Advanced measurement and modeling techniques and their use in micrometeorological research; estimation of exchange of momentum, mass and energy between Earth's surface and lowest atmosphere, and their representation in large-scale meteorological models.

6540. Advanced Coastal Storms (3) Advanced dynamics, analysis, and forecasting of extratropical and tropical storms. History of storms in the Carolinas and current mitigation plans.

6550. Synoptic Meteorology and Forecasting (3) (S) Analysis and forecasting of mid-latitude weather systems as characterized by large-scale dynamics. Includes advanced techniques of weather analysis, map interpretation, and satellite and radar analysis.

6560. Applied Urban Climatology (3) (F) Impact of urbanization upon atmospheric processes, including energetic balance, precipitation, atmospheric circulation, and pollution.

6570. Advanced Hydrometeorology (3) Theory of atmospheric processes related to surface hydrology. Measurement, prediction, and climate analysis techniques of hydrometeorological variables and associated weather and hydrologic events.

6580. Advanced Radar and Satellite Meteorology (3) P: Consent of instructor. Theoretical basis for weather observations with radar and satellite instruments.

6590. Advanced Tropical Meteorology (3) P: Consent of instructor. Tropical atmosphere as key component of global weather and climate and climate prediction.

6801, 6802, 6803. Internship in Geography (1,2,3) 60 hours of work responsibility required per semester hour of credit. P: 18 s.h. of graduate work in GEOG; consent of director of geography must be obtained during semester prior to internship. Application of advanced geographic principles in industrial, governmental, or business setting.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7300. Seminar in Geography of Heritage (3) Geographic perspective on the nature of heritage and its cultural, political, and economic uses.

GEOG Banked Courses

5020. Spatial Efficiency Analysis (3)

MBA WITH DEVELOPMENT AND ENVIRONMENTAL PLANNING CERTIFICATE

MBA students interested in pursuing the MBA with the development and environmental planning certificate must choose PLAN 6301, 6305 and two from the following: PLAN 6000, 6009, 6010, 6019, 6020, 6029 as electives in the MBA program. A certificate of completion will be issued by the Department of Geography.

MPA WITH PLANNING CONCENTRATION

For the requirements of the master of public administration with a planning concentration, see the Department of Political Science.

MS IN INDUSTRIAL TECHNOLOGY WITH ENVIRONMENTAL PLANNING AND DEVELOPMENT CONCENTRATION

For the requirements of the master of science in technology systems with an environmental planning and development concentration, see MS in technology systems in the College of Technology and Computer Science portion of Section 8.

PLAN: PLANNING

5025. Coastal Area Planning and Management (3) 2 classroom and 3 studio hours per week. P: Consent of instructor. Conceptual approach to planning and management problems, policies, and practices in coastal area.

5035. Community Planning for Health Facilities (3) Theories, methodologies, and principles essential to establishing effective community planning process for health facilities.

5045. Environmental Resources Planning and Management (3) P: PLAN 3010 or equivalent or consent of instructor. Frame of reference for studying natural resources for purpose of development.

5065. Land Use Planning (3) 2 lecture and 2 lab hours per week. Social, economic, physical, and environmental aspects of urban land use and planning. Other tools for effective planning.

5121, 5131. Problems in Planning (2,3) (5131:WI) 3 hours per week per credit hour. P: Consent of instructor. Analysis of specific problem in planning to be approved prior to registration.

5985. Historic Preservation Planning (3) Same as HIST 5985 Historic preservation planning. Examines theoretical, legal, historical, and design bases of preservation planning.

6000. Seminar in Urban Planning (3) Critical analysis of urban planning process as related to future development of urban areas.

6003. Design For The Built Environment (3) (F) Urban design theories, tools and determinants of urban form.

6009. Research in Urban Planning (3) Advanced course involves research problems of increasing complexity.

6010. Seminar in Regional Planning (3) Detailed analysis and discussion of advanced regional planning concepts and methods.

6015. Emergency/Disaster Planning (3) Integrate techniques of emergency management planning for technological and natural disasters. Special emphasis on vulnerability assessment and risk management for terrorism and other disaster threats.

SECTION 8: CURRICULA

6018, 6028, 6038. Internship in Planning (1,2,3) May count maximum of 3 s.h. P: Undergraduate degree in PLAN or equivalent; 6 s.h. of graduate PLAN courses; undergraduate planning degree or its equivalent or a minimum of 12 s.h. of graduate work in planning prior to registering for an internship. Supervised internship experience with professional planning personnel in approved agency/organization.

6019. Research in Regional Planning (3) Advanced course in regional planning involving research problems of increasing complexity.

6020. Seminar in Environmental Planning (3) P: Consent of advisor and instructor. Environmental concepts and their relationship to various planning and management scenarios. Environmental issues, policies, strategies, tasks, and plans.

6029. Research in Environmental Planning (3) P: PLAN 6020; consent of instructor. Specific problem in environmental planning and management under direct supervision of planning graduate faculty member.

6046. Advanced Planning and Design Studio (3) P: PLAN 6003 or consent of instructor. Analysis and development of sustainable solutions for real world urban and suburban developments

6050. Seminar on World Architecture and Urbanism (3) Survey and critical analysis of world architectural styles and urban patterns.

6270. Advanced Water Resources Management and Planning (3) Same as GEOG 6270. Advanced investigation of spatial and temporal characteristics of water. Consideration of hydrologic, engineering, economic, and institutional aspects of water management.

6301. GIS and CAD Application for Planning (3) P: Consent of instructor. Theories, models, and techniques for spatial data management, decision support, and design. CAD, GIS, and spatial quantitative methods for effective development and environmental planning.

6305. Developmental Planning and the Environment (3) P: PLAN 6301 or consent of instructor. Process of planning for development of sites. Environmental limitations and constraints, environmental regulations, and site design standards.

DEPARTMENT OF GEOLOGICAL SCIENCES

Stephen J. Culver, Chair, 101 Graham Building

Terri L. Woods, Director of Graduate Studies, 103 Graham Building

MS IN GEOLOGY

The department offers a master of science in geology with both a thesis and non-thesis option. In the non-thesis option, a major paper is substituted for the thesis and 3 s.h. additional course work is required. Course prerequisites listed are for ECU courses; equivalent courses from other schools will be accepted. The Department of Geological Sciences is a participating department in the East Carolina University Institute for Coastal Science and Policy and in the coastal resources management PhD program. The degree requires a minimum of 30-33 s.h. of credit as follows.

Thesis option requirements are as follows:

1. Equivalent of the East Carolina University BS degree in geology or progress toward elimination of deficiencies defined at the time of entrance into the Graduate School.
2. Passing a graduate qualifying examination.
3. A total of 30 s.h. of course work, of which a maximum of 6 s.h. may be from outside the department. At least 15 s.h. must be above the 5999-level.
4. Completion of a 6 s.h. research skills option is required. The research skills option consists of GEOL 6900, 7000. (GEOL 7000 may be repeated, but a maximum of 6 s.h. can be counted toward degree.)

Non-thesis option requirements are as follows:

1. Equivalent of the East Carolina University BS degree in geology or progress toward elimination of deficiencies defined at the time of entrance into the Graduate School.
2. Passing a graduate qualifying examination. (See geology MS degree guidelines, available from the office of the Department of Geological Sciences.)

3. A total of 33 s.h. of course work, of which a maximum of 6 s.h. may be from outside the department. At least 17 s.h. must be above the 5999-level.
4. GEOL 5400, 5401.
5. Choose one sequence from GEOL 6040, 6041; GEOL 6020, 6021; GEOL 6200, 6201.
6. Completion of a 6 s.h. research skills option is required. The research skills option consists of GEOL 6900, 6998.

Certificate in Hydrogeology and Environmental Geology

The certificate in hydrogeology and environmental geology prepares students for employment and future studies in the environmental field. This post-baccalaureate program provides students with experience in water and soil sampling techniques, hydrologic measurement techniques, chemical analyses, scientific writing, data presentation, and data analysis. Trained environmental professionals are necessary to solve problems concerning drinking water supplies, wastewater treatment, water resources availability, subsurface contaminant transport, stream habitat and water quality assessment, the effects of climate and land-use change on water and wetland resources, and many other environmental issues. Employment opportunities may include work dealing with: environmental regulations, hydrogeologic investigation, wetland mitigation, flood prediction, pollution abatement and bioremediation, and environmental site audits.

Coursework includes a minimum of **15 s.h.** in the geological sciences. The certificate requires completion of 9 s.h. in hydrogeology and environmental geology (3 of the following courses: GEOL 5150, 5700, 5710, 7710, 7711, 7920), 3 s.h. in geochemical processes (GEOL 5450 or 7930), and 3 s.h. in geological characterization and quantitative analysis (GEOL 6250, 6550, 6705, 6950, 7910 or a 3 s.h. elective). A list of the appropriate courses is available from the certificate coordinator. The certificate is open to degree and nondegree graduate students.

GEOL: GEOLOGICAL SCIENCES

5000, 5001. Geomorphology (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 1500, 1501; an additional 4 s.h. in introductory GEOL sequences; or consent of instructor. Advanced study of landforms, stages of their development, and agencies that shaped them.

5150. The Geologic Component of Environmental Science (3) P: Introductory GEOL course or consent of instructor. Basic geologic knowledge and insights that support sound, rational, and science-based environmental decisions and policies in regard to land and water use. Topics include pollution abatement, clean up, and prevention; resource extraction, use, and conservation; and hazardous geologic processes.

5300. Geology of Coastal Processes and Environments (3) May include field trips to various coastal systems. P: GEOL 1550, 4010, 4011; or consent of instructor. Modern coastal systems. Diversity and distribution, complexity and dynamics of interacting processes and responses, origin and evolutionary history, and role of man as major modifying force.

5350. Marine Geology (3) P: GEOL 1550, 4010, 4011; or consent of instructor. Geology of world's ocean basins. Impact of geophysical, geochemical, and geobiological principles on concepts of origin and evolution of ocean basins; source, transportation, and deposition of marine sediments and formation of marine stratigraphic record; and role of oceanographic processes affecting earth history such as sea level fluctuation, plate tectonics, paleogeography, and paleoclimatology.

5400, 5401. Optical Mineralogy (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 3050, 3051. Theory and basic techniques for determining optical constants of crystals using a polarizing microscope and thin sections.

5450. Introduction to Aqueous Geochemistry (3) 2 lectures and 1 3-hour lab per week. P: CHEM 1150, 1151, 1160, 1161; or equivalent. Application of chemical principles to study of elements at earth's surface; their transportation in aqueous solutions; and weathering, groundwater, and surface water chemistry, geochemical cycles, and distribution of stable isotopes.

5500, 5510, 5520. Directed Studies in Geology (2,2,2) P: Senior or graduate standing in GEOL or consent of instructor. Independent study on selected topic. May include field work, directed readings, or some combination thereof. Occasionally special field study or course offered using one of these course numbers.

5600, 5601. Economic Geology (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 3050, 3051. Genesis, mode of occurrence, and utilization of mineral resources. Metals, nonmetals, and basic energy resources such as petroleum, coal, and uranium. Emphasis on geology of these resources and their relationship to modern technological society.

SECTION 8: CURRICULA

5700, 5701. Geohydrology of Drainage Basins (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 1500, 1501; or consent of instructor. Drainage basin geology and hydrology. Emphasis on quantitative analysis, evaporation, streamflow, and hydrologic parameters of surface water and ground water basins.

5710, 5711. Ground Water Hydrology (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 1500, 1501; or consent of instructor. Origin, occurrence, movement, quality, regional analysis, and management of ground water. Interrelationship of ground and surface water. Lab emphasis on aquifer test data collection and interpretation.

6020, 6021. Magmas and Igneous Rocks (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 5400, 5401; or equivalent. Magmas from generation to emplacement as intrusive and volcanic rocks. Lab includes recognition and textural interpretations utilizing rock thin sections and polarized-light microscopes.

6040, 6041. Metamorphic Petrology (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 5400, 5401; or equivalent. Advanced course. Emphasis on chemical systems, pressure and temperature of mineral formation, and tectonic significance of metamorphic assemblages. Lab emphasis on petrographic studies.

6200, 6201. Sedimentary Petrology (3,0) 2 lectures and 1 3-hour lab per week. Field trip. P: GEOL 5400, 5401; or consent of instructor. Terrigenous and carbonate rocks using hand specimen and optical petrographic techniques.

6220, 6221. Carbonate Petrology (3,0) P: GEOL 6200, 6201; or consent of instructor. Description, classification, and origin of sedimentary carbonate rocks. Examines roles played by various groups of animals and plants in carbonate sediment formation. Special emphasis on sedimentary processes and environments that control deposition of modern carbonate sediments.

6250. Stratigraphic Analysis (3) P: GEOL 4020, 4021; or equivalent. Interpretation of stratified sedimentary rocks. Emphasis on principles and methodology.

6300, 6301. Sedimentary Environments (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 4010, 4011, 4200, 4201; or consent of instructor. Emphasis on recent environments of sediment deposition. Products of sedimentary processes as related to their analogs in stratigraphic record.

6310, 6311. Principles of Paleoecology (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 4200, 4201. Interpretation of ecological relationships of ancient organisms and their environments. Emphasis on principles and methodology. Importance of ecological studies of modern animals and plants and extrapolation of such information to similar ancient groups.

6350. Environmental and Global Change (3) Field trips required. P: GEOL 4010, 4011; or consent of instructor. Geologic history of past two million years. Emphasis on global and regional environmental changes associated with Quaternary glaciations and sea-level fluctuations. Investigation of interactions between land, sea, and ice; geologic evidence used for reconstructing Quaternary environments; dating methods; and ways in which living organisms (including humans) have responded to past environmental change.

6400. Geochemistry (4,0) 3 lectures and 1 3-hour lab per week. P: CHEM 1150, 1151, 1160, 1161; or equivalent. Introduces principles that determine distribution, organization, and abundance of elements.

6500. Tectonics (3) Features, styles, and processes of deformation and tectonic evolution studied in plate-edge terranes and intraplate tectonic regions.

6522, 6532. Readings in Selected Geology Topics (1,1) P: Graduate standing in GEOL or consent of instructor. Directed readings of topics not covered in regular course offerings or advanced study of previously covered topic.

6523, 6533. Readings in Selected Geologic Topics (2,2) P: Graduate standing in GEOL or consent of instructor. Directed readings of topics not covered in regular course offerings or advanced study of previously covered topic.

6550, 6551. Principles of Geophysics (3,0) 2 lectures and 1 3-hour lab per week. P: GEOL 3300, 3301; PHYS 1250, 1260 or equivalent. Seismology, gravity, rock magnetism, and heat flow as applied to earth. Emphasis on relationships between large scale features of earth and their geophysical characteristics. Lab introduces geophysical instrumentation, data processing, and interpretation.

6703. Seminar in Geology (1) P: Graduate standing in GEOL or consent of instructor. Selected topics of current geological interest.

6704. Seminar in Geology (2) P: Graduate standing in GEOL or consent of instructor. Selected topics of current geological interest.

6705. Seminar in Geology (3) P: Graduate standing in GEOL or consent of instructor. Selected topics of current geological interest.

6900. Preparation of Geological Manuscripts (3) P: Consent of instructor. Emphasis on grammatical style, syntax, and organization of manuscripts. Supplementary exercises develop skills in preparing illustrations (computer graphics, drafting, photographic techniques). Steps of publication process presented in detail.

6950. Geological Data Analysis (3,0) 2 lectures and 1 3-hour lab per week. P: Graduate standing in GEOL or consent of instructor. Discusses and implements various methods of geological data analysis. Emphasis on methods most applicable to research topics in geology. Topics include data collection and project design, box models, and uni- and multi-variate analysis of geological data, and time-series analysis.

6998. Research Project (3) May be repeated once. May count a maximum of 3 s.h. P: Non-thesis GEOL major; consent of advisor. Formulate research project demonstrating principles and procedures used to recognize, state, solve, and write problems of geological importance. Requires formal seminar presentation of completed project and paper.

7000. Thesis (1-6) May be repeated. May count a maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during summer.

7002. Coastal Geoscience (4) P: Consent of instructor. For PhD students and natural science MS students. Fundamental concepts of geological and physical oceanographic principles of coastal systems.

7007. Special Topics in Coastal Research and Methodology (1,2,3) May be repeated for a maximum of 6 s.h. P: Consent of instructor. Emerging and specialized research techniques and methodologies for coastal studies.

7008. Directed Studies in Geology (1,2,3) May be repeated for a maximum of 9 s.h. P: Consent of instructor. Independent study on selected topic. May include field work, lab work, directed readings, or some combination thereof.

7500. Marine Isotope Geochemistry (3) P: CHEM 1150, 1151, 1160, 1161; or equivalent; or consent of instructor. Fundamental principles behind the use of stable and radioactive isotopes, techniques of measurement, and a broad spectrum of marine-related research to which these nuclides are applied.

7710, 7711. Groundwater Modeling (4,0) 3 lectures and 1 3-hour lab per week. P: GEOL 5710, 5711; or consent of instructor. Principles and procedures for numerical modeling focusing on design and practical applications of groundwater models in hydrogeology.

7830. Principles of Biogeochemical Interactions (3) Formerly GEOL 6830 P: CHEM 1160. General introduction to life's effects on chemistry of Earth's surface. Examines interactions between atmosphere, land surface, and oceans. Stresses human impact on global environmental chemistry.

7910. Sediment Transport and Depositional Processes (4) P: GEOL 4010; or consent of instructor. Examines processes involved in transport and deposition of sediment. Focus on fundamental principles and how they apply to active processes, recent sediment, and environmental applications.

7920, 7921. Advanced Surface Water/Groundwater Hydrology (4,0) P: GEOL 5710, 5711; or consent of instructor. Advanced hydrologic topics with emphasis on computer applications and modeling. Evaluates steady-state and nonsteady-state models and applied aspects of hydrology related to management of water resources.

7930. Biogeochemical Processes (4) Formerly GEOL 6930 P: CHEM 1160. Overview of life's effects on chemistry of Earth's surface. Examines interactions between atmosphere, land surface, and oceans. Biotic mechanisms in these habitats followed by synthesis of global cycles of biologically relevant elements (C, N, O, P, and S).

9000. Dissertation Research (3-12) May be repeated. May count a maximum of 12 s.h. per semester.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

GEOL Banked Courses

- 5750, 5751. Introduction to Engineering
Geology (3,0)**

**6100, 6101. Igneous and Metamorphic
Petrology (4,0)**
- 6230, 6231. Clay Mineralogy (3,0)**

6340, 6341. Micropaleontology (3,0)

DEPARTMENT OF HISTORY

Gerald J. Prokopowicz, Chair, A-315 Brewster Building
Carl E. Swanson, Director of Graduate Studies, A-319 Brewster Building

As a prerequisite to graduate study in a degree program, the Department of History requires that the applicant meet the admission requirements of the university and make a satisfactory score on the entrance examination designated for the program selected: Graduate Record Examinations aptitude section for the MA in history; and the Graduate Record Examinations aptitude section for the MA in maritime studies. Each entering student should consult with the director of graduate studies in history prior to beginning graduate work.

MA IN HISTORY
American, European, Military, Atlantic World, or Public History

The master of arts in history requires a total of 30 s.h. of course work. The department offers five areas of concentration as follows: American history, European history, military history, Atlantic World history, and public history. The student is required to take a minimum of 24 s.h. in one of these areas to which the historiography course, the seminar, and the thesis will contribute 12 s.h. of credit. (The concentration in public history requires successful completion of an internship in lieu of the seminar.) The student must also take a total of 6 s.h. either in a related field of history outside of the major concentration or (at the recommendation of the advisor and director of graduate studies, and with the approval of the chairperson of the Department of History) outside the Department of History.

In addition to the 30 s.h. of course work described above, students must fulfill the department's research skills requirement by: a) successful demonstration of reading knowledge in a foreign language (FORL 6000 satisfies this requirement); or b) successful completion of HIST 5950, 5951 (Introduction to Quantitative History/Directed Readings and Research in Quantitative History); or c) CSCI 5774 (Programming for Research) or CSCI 2600 (Introduction to Digital Computation). If HIST 5950, 5951 are used to satisfy the research skills requirement, they may not be counted toward the 30 s.h. requirement for the degree. Students who intend to pursue a PhD program are strongly advised to fulfill the foreign language requirement.

An oral comprehensive examination will be a component of the thesis defense. Candidates will be required to demonstrate their knowledge of their field of concentration as well as establish how their thesis contributes to that field of study.

Minimum degree requirement is 30 s.h. of credit as follows:

1. Core courses: HIST 6900, 7000 9 s.h.

2. Seminar or Internship 3 s.h.
American, European, Military, and Atlantic World History Concentrations: HIST 6910, 6920, or 6930
Public History Concentration: Internship

3. Area of concentration (American, European, Military, Atlantic World, or Public History) 12 s.h.

4. Related history outside area of concentration 6 s.h.

5. Research skills requirement.

MA IN MARITIME STUDIES

The master of arts in maritime studies requires a total of 36 s.h. of course work, 26 s.h. of which must be taken in history. The student may take the additional 10 s.h. in history or related fields outside the Department of History. Course work is divided into three broad areas of inquiry as follows: core courses in maritime history and nautical archaeology and the thesis, which account for 15 s.h. History electives account for 3-18 s.h., and professional phase courses account for 3-18 s.h.

In addition to the 36 s.h. of course work described above, students must fulfill the department's research skills requirement by one of the following: a) successful demonstration of reading knowledge in a foreign language (FORL 6000 satisfies this

requirement); b) successful completion of HIST 5950, 5951 (Introduction to Quantitative History/Directed Readings and Research in Quantitative History); or c) CSCI 5774 (Programming for Research) or CSCI 2600 (Introduction to Digital Computation). If HIST 5950, 5951 are used to satisfy the research skills requirement, they may not be counted toward the 36 s.h. requirement for the degree. Students who intend to pursue a PhD program are strongly advised to fulfill the foreign language requirement.

An oral comprehensive examination will be a component of the thesis defense. Candidates will be required to demonstrate their knowledge of their field of concentration as well as establish how their thesis contributes to that field of study.

Minimum degree requirement is 36 s.h. of credit as follows:

- I. Core courses 15 s.h.
 - a. Maritime History (Choose two from the following) 6 s.h.
HIST 5505, 5520, 5525, 6010, 6525
 - b. Nautical Archaeology 3 s.h.
HIST 6805
 - c. Thesis: HIST 7000 6 s.h.
2. History electives* 3-18 s.h.
3. Professional phase electives* (Maximum of 10 s.h. in courses other than HIST may be counted toward the degree) 3-18 s.h.
4. Research Skills Requirement

*The director of graduate studies in history maintains a list of history electives and professional phase courses.

HIST: HISTORY

5005. Selected Topics (3) (WI*) May be repeated with change of topic. May count maximum of 3 s.h. toward graduate or undergraduate HIST major or minor. Intensive study of selected topics from historical perspective.

5122. Social and Cultural History of the United States Since 1865 (3) Selected main currents in American thought. Social and intellectual activity since 1865.

5125. American Political Development in the Nineteenth Century (3) Evolution of major political party conflict from mellowing of first party system to 1890s realignment.

5130. Comparative History of New World Slavery and Race Relations (3) (WI*) Origin and development of slavery and race relations in US and various societies in Western Hemisphere.

5135. Problems in North Carolina History (3) (WI*) P: HIST 1050, 1051; or consent of instructor. Process by which NC evolved from isolated English colony into part of modern US. Emphasis on bibliographic work. Research in archival and manuscript sources.

5140. The Old South (3) Development of southern US to outbreak of Civil War.

5141. The South Since 1877 (3) (WI*) Development of southern US from end of Civil War to recent years.

5220. Selected Topics in US Women's History (3) In-depth exploration of topics. Analysis of major themes, documents, and theoretical work.

5230. Themes in African American History (3) Intensive examination of pivotal themes and writings.

5300. Comparative History of Non-Western Civilizations (3) (WI*) Evolution of major civilizations of Asia, Africa, and Middle East. Emphasis on comparative cultural foundations of civilizations.

5310. Intellectual History of Europe (3) Major themes of modern European thought. Analysis of selected readings from representative nineteenth- and twentieth-century thinkers.

5340. The Ancient Near East (3) Civilizations from lower paleolithic age to conquest of Persia by Alexander the Great.

SECTION 8: CURRICULA

- 5350. The Renaissance in European History (3)** Cultural and intellectual developments of western Europe from about 1300 to about 1600.
- 5360. The Reformation, 1450-1598 (3)** European history from 1450 to 1598. Renaissance materials as background.
- 5440. Twentieth-Century England (3)** England in two great wars—World Wars I and II. Development of socialism. Breakup of British Empire. British Commonwealth of Nations. English development since 1945.
- 5450. Tudor-Stuart England (3)** Emergence of England into world leadership. Internal developments which shaped its political, economic, and social life in sixteenth, seventeenth, and early eighteenth centuries.
- 5470. History of Soviet Russia Since 1917 (3)** Russian revolutions of 1917 and rise of Soviet Union to superpower status.
- 5480. Weimar and the Rise of Hitler (3)** Society, culture, and politics of Germany during Weimar Republic. Failure of democracy and establishment of Nazi state.
- 5505. Maritime History of the Western World to 1415 (3)** Designated as European history. Maritime activities from classical antiquity through Middle Ages. Emphasis on development of maritime commerce, piracy, and naval warfare.
- 5520. Maritime History of the Western World Since 1815 (3)** Designated as American history. Impact of maritime activities on political, diplomatic, economic, and military affairs. Emphasis on technology.
- 5530. Field School in Maritime History and Underwater Research (2) (S)** 20 classroom/lab hours per week. P: Scientific diving certification; consent of instructor. Early field experience.
- 5555. Constitutionalism and Kingship in Early Modern Europe (3)** Royal absolutism as dominant philosophy in seventeenth-century state building. Role of Continental political ideologies in development of English constitutional government.
- 5660. Imperialism in Theory and Practice, 1800 to the Present (3) (WI*)** Theoretical and empirical perspectives on European expansion, primarily in Africa and Asia. Political, economic, social, and non-European origins of imperialism.
- 5670. Diplomatic History of Europe, 1815 to the Present (3)** Survey of international relations of great European powers.
- 5680. Diplomatic History of Modern Asia (3)** Role of diplomacy. Emphasis on conflict between East and West since 1800.
- 5765. Latin America, 1492 to the Present (3) (WI*)** Selected historical problems in Latin-American society and economy. Conquests and settlement, role of indigenous people in the formation of Latin-American society, reform and revolution, independence, and organization of nation states.
- 5910. Introduction to the Administration of Archives and Historical Manuscripts (3)** Background, preservation, and use of archives and historical manuscripts. Emphasis on historical evolution of archival profession and administration of archives and manuscript repositories.
- 5920, 5921. Techniques of Museum and Historic Site Development (3,0) (F)** History and theory of museology and techniques of museum and historic site management.
- 5930, 5931. Field and Laboratory Studies in Museum and Historic Site Development (3,0)** Development of practical methods for operation and management of history museums and historic sites.
- 5950. Introduction to Quantitative History (2)** P: 20 s.h. of undergraduate history. Categories of quantitative history. Role of computer and techniques of its implementation in historical research.
- 5951. Directed Readings and Research in Quantitative History (1)** P: HIST 5950. Intensive examination of special historical field in area of student's interest. Research projects limited to quantitative assessments of historical eras.

- 5960. Introduction to Oral History (3)** Theory and methodology of oral history interviewing and interpretation of oral history materials. Emphasis on fieldwork projects.
- 5970. Living History (3)** P: Consent of instructor. Interpretations of past events. Focus on seventeen- through nineteenth-century event specifics, world view, clothing, and accouterments.
- 5985. Historic Preservation Planning (3) Same as PLAN 5985** Historic preservation planning. Examines theoretical, legal, historical, and design bases of preservation planning.
- 6010. Maritime History of the Atlantic World, 1415-1815 (3) Formerly HIST 5515** Designated as European and Atlantic World history. European voyages of exploration, expansion of maritime commerce, establishment of overseas possessions, and domination of Atlantic sea-lanes.
- 6020. American Colonial History (3)** In-depth consideration of selected aspects of the period.
- 6025. American Revolution and Early Republic (3)** Evolution of Federal Union out of events and experiences of colonial, revolutionary, and confederation periods.
- 6030. Jefferson, Jackson, and the Atlantic World (3)** Emergence of the new nation in the context of the Atlantic World, focusing on the interaction of British, Spanish, French, African, and Native American peoples in the social, economic, and political development of the United States.
- 6035. Civil War (3)** Selected political, military, economic, and diplomatic problems of Civil War.
- 6040. United States History, 1865-1898 (3)** In-depth study of selected topics between Civil War and Spanish-American War.
- 6045. Progressive Movements and the Age of Normalcy in American History (3)** US domestic history from 1900 to 1929. Covers Progressive Era and the twenties.
- 6050. The Great Depression, New Deal, and World War II (3)** Historical assessment of US history between 1929 and 1945.
- 6055. The United States Since 1945 (3)** Detailed study of selected topics covering history of US since 1945.
- 6080. Studies in European Maritime History and Archaeology (3)** Shipwrecks and results of archaeological research from Vikings through age of Atlantic exploration and colonization.
- 6155. Gender and the Cold War (3)** Development of US Cold War foreign relations and domestic policy from a gender perspective. Research in archival and manuscript sources.
- 6180. Diplomatic History of the United States to 1898 (3)** Major episodes, principal interpretative conflicts, and significant personalities.
- 6181. Diplomatic History of the United States Since 1898 (3)** Major episodes, principal interpretative conflicts, and significant personalities.
- 6205. Topics in Military History (3)** May be repeated with change of topic. May count maximum of 3 s.h. toward degree. Intensive study of selected military topics from historical perspective.
- 6210. War and Society (3)** Interrelationship between society and warfare from the dawn of civilization to the present.
- 6221. American Military History to 1900 (3)** May not be taken by students who have earned credit for HIST 3121. History of military thought and institutions in US from era of American Revolution through nineteenth century. Interrelationship between war and society. Political, economic, and social aspects of military affairs.
- 6222. American Military History Since 1900 (3)** May not be taken by students who have earned credit for HIST 3122. History of American military thought and institutions since 1900. Interrelationship between war and society. Political, economic, and social aspects of military affairs.

SECTION 8: CURRICULA

- 6225. Battlefield Archaeology (3) Same as ANTH 6225** Theoretical and practical approaches to the analysis of battlefields using archaeology, history, and material culture.
- 6230. Warfare and Society in Ancient Greece and Rome, 750 BC to 500 AD (3)** War as common phenomenon.
- 6260. The United States and the Middle East, 1783 to the Present (3)** History of American interests and involvement in the Middle East since 1783.
- 6280. Eighteenth-Century Warfare (3)** Land sea warfare between 1650 and 1790. Global perspective. Emphasis on European and North American military, social, and political experiences.
- 6350. History of Ancient Greece (3)** Detailed study of certain selected aspects.
- 6355. History of Ancient Rome (3)** Detailed study of certain aspects.
- 6360. Medieval History (3)** Detailed study of certain selected aspects.
- 6365. Early Modern Europe, 1598-1815 (3)** Selected topics in history of continental Europe from beginning of seventeenth century to Congress of Vienna.
- 6370. Nineteenth-Century European History (3)** Intensive study of selected crucial issues.
- 6375. Twentieth-Century European History (3)** Emphasis on social and intellectual processes and effects of two world wars.
- 6444. The Old Regime, the French Revolution, and Napoleon (3)** Intensive study of society of orders, its disintegration and destruction by the French Revolution, and new order implemented by Napoleon.
- 6450. Imperial Britain, 1651-1965 (3)** History of Britain during its period of Empire. Focus on ideological, political, social, and economic impact of Empire on Britain itself from Cromwell to Churchill.
- 6525. Sea Power, 480 BC to the Present (3) Formerly HIST 5525** Nature of warfare at sea and the changing roles of sea power during peace and war.
- 6610. Legal and Professional Issues in Maritime Studies (3) Same as MAST 6610** Legal cases, legislation, professional standards, grant writing, and scholarship.
- 6620. Public Policy and Management of Cultural Resources (3) Same as MAST 6620** Public laws and policies concerning local, state, national, and international regulations and practices for management of cultural resources of maritime and coastal environment.
- 6630. Seminar in Maritime Studies (3) Same as MAST 6630** Selected topics.
- 6640. Maritime Cultural Resources (3) Same as MAST 6640** Coastal environmental resources (both under and above water), public presentation and display in museums or other public facilities, and impact on tourism and oceanic development.
- 6650. Management of Coastal Cultural Resources (3) Same as MAST 6650** Management of submerged cultural resources, museums, aquariums, science or other public or private local, state, and federal educational agencies.
- 6660. Maritime Heritage of the Coast (3) Same as MAST 6660** Focus on NC. Comparative examples from other regions provide foundation of understanding of coastal maritime heritage, including submerged cultural resources.
- 6805. History and Theory of Nautical Archaeology (3)** P: Consent of instructor. Detailed introduction to historical and theoretical foundations.
- 6810. History of Marine Architecture and Ship Construction (3)** Development of marine architecture tracing the evolution of ship design from its Mediterranean origins through twentieth century. Emphasis on traditions influencing and/or developed in US. Associated construction techniques examined in detail and modeled.

- 6820. Research Methodology in Nautical Archaeology (3)** P: Consent of instructor. Detailed introduction to current research methods and equipment.
- 6825. American Maritime Material Culture (3)** P: Consent of instructor. Culture and various approaches used to examine material objects within the human maritime experience.
- 6830. Maritime Cultural Landscapes (3) Same as MAST 6830** P: Consent of instructor. Landscape archaeology theory; techniques for reconstructing landscapes; examination of maritime sites in terrestrial contexts.
- 6835. Advanced Methods for Maritime Archaeology (3) Same as MAST 6835** P: HIST 6820; consent of instructor. High-tech field equipment and software currently employed in maritime archaeology.
- 6840. Introduction to Archaeological and Museum Artifact Conservation (3)** 3 lecture and 3 lab hours per week. P: Consent of instructor. Comprehensive introduction and preliminary laboratory experience.
- 6845. Advanced Archaeological and Museum Artifact Conservation (3) Same as ANTH 6845 and MAST 6845** P: Consent of instructor. Advanced archaeological and curatorial artifact conservation, stabilization, and micro-excavation techniques and training.
- 6850. Field Research in Maritime History (6)** P: HIST 5530; consent of instructor. Closely supervised on-site investigation of one or more selected underwater archaeological sites during first half of semester and laboratory cleaning, cataloging, analysis, and conservation of material from test site during second half. Historical, field, and lab research data developed for project report.
- 6860. Archaeological Museum Conservation Methods Internship (3) Same as ANTH 6860 and MAST 6860** P: HIST 6840 and consent of instructor. Internship in archaeological and museum artifact conservation and artifact conservation laboratory operations.
- 6875. Seafaring: Above Water Nautical Archaeology (3) Same as MAST 6875** 3 weeks intensive shipboard instruction. P: HIST 5505 or 5520 or 6010 or 6850; consent of instructor. Relationship of vessel to crew. Daily work as related to archaeological elements recovered from submerged sites. Documentary record.
- 6885. Recording Watercraft (1)** P: HIST 6810; consent of instructor. Practical instruction in documentation of watercraft. Traditional measurement, photogrammetry, and computer-assisted drawing in accordance with national agency standards.
- 6890. Ship Reconstruction (3)** P: HIST 6810. Theory of ship reconstruction: ethical considerations; methods for reconstructing vessels from archaeological remains; manual and computer aided drafting.
- 6900. Historiography: Introduction to Research (3)** Required of all candidates for HIST MA and MAEd. Problems of historical analysis. Major historians, historical writings, and trends in field of history.
- 6910. Seminar in American History (3)** Introduces research methodology and writing.
- 6920. Seminar in European History (3)** Introduces research methodology and writing.
- 6930. Seminar in Atlantic World History (3)** Introduces research methodology and writing.
- 6940, 6941, 6942. Graduate Internship in Archives and Historical Records Administration (3,6,9)** May count 3 s.h. toward internship (HIST 6940-6948). P: Consent of instructor. Supervised practical field experience in archival and manuscript agencies.
- 6943, 6944, 6945. Graduate Internship in Museum Administration (3,6,9)** May count maximum of 3 s.h. toward internship (HIST 6940-6948). P: Consent of instructor. Supervised practical field experience.
- 6946, 6947, 6948. Graduate Internship in Historic Site Administration (3,6,9)** May count 3 s.h. toward internship (HIST 6940-6948). P: Consent of instructor. Supervised practical field experience.
- 6990, 6991, 6992. Directed Studies in History (1,2,3)** Maximum of 10 percent of required hours in HIST can be taken by directed study courses. P: Consent of director of graduate studies in history and supervising professor. Advanced in-depth study on special topics under direction of graduate faculty member.

SECTION 8: CURRICULA

6993. Directed Research Project (3) May be repeated. May count maximum of 3 s.h. Directed reading and research program for history MAEd candidates.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

HIST Banked Courses

5120. American Social and Cultural History to 1787 (3)

5121. American Social and Cultural History, 1787-1865 (3)

5150. The American West (3)

5210. History of American Urban Life (3)

5770. The Relation of Latin America to World History (3)

6405. Proseminar in the History of England (3)

MAST: MARITIME STUDIES

6610. Legal and Professional Issues in Maritime Studies (3) Same as HIST 6610 Legal cases, legislation, professional standards, grant writing, and scholarship.

6620. Public Policy and Management of Cultural Resources (3) Same as HIST 6620 Public laws and policies concerning local, state, national, and international regulations, and practices for management of cultural resources of maritime and coastal environment.

6630. Seminar in Maritime Studies (3) Same as HIST 6630 Selected topics.

6640. Maritime Cultural Resources (3) Same as HIST 6640 Coastal environmental resources (both under and above water), public presentation and display in museums or other public facilities, and impact on tourism and oceanic development.

6650. Management of Coastal Cultural Resources (3) Same as HIST 6650 Management of submerged cultural resources, museums, aquariums, science or other public or private local, state, and federal educational agencies.

6660. Maritime Heritage of the Coast (3) Same as HIST 6660 Focus on NC. Comparative examples from other regions provide foundation of understanding of coastal maritime heritage, including submerged cultural resources.

6830. Maritime Cultural Landscapes (3) Same as HIST 6830 P: Consent of instructor. Landscape archaeology theory; techniques for reconstructing landscapes; examination of maritime sites in terrestrial contexts.

6835. Advanced Methods for Maritime Archaeology (3) Same as HIST 6835 P: HIST 6820; consent of instructor. High-tech field equipment and software currently employed in maritime archaeology.

6845. Advanced Archaeological and Museum Artifact Conservation (3) Same as ANTH 6845 and HIST 6845 P: Consent of instructor. Advanced archaeological and curatorial artifact conservation, stabilization, and micro-excavation techniques and training.

6860. Archaeological and Museum Conservation Methods Internship (3) Same as ANTH 6860 and HIST 6860 P: HIST 6840 and consent of instructor. Internship in archaeological and museum artifact conservation and artifact conservation laboratory operations.

6875. Seafaring: Above Water Nautical Archaeology (3) Same as HIST 6875 3 weeks intensive shipboard instruction. P: HIST 5505 or 5520 or 6010 or 6850; consent of instructor. Relationship of vessel to crew. Daily work as related to archaeological elements recovered from submerged sites. Documentary record.

INTERNATIONAL STUDIES

Sylvie Debevec Henning, Director, 116B Ragsdale Building

The master of arts in international studies is a multidisciplinary program designed to prepare students for professional careers in international business, the foreign service, the military, international humanitarian agencies, international programs for colleges and universities and other settings involving interaction with people from other cultures. The program provides a sound foundation in intercultural communication and understanding as well as global perspectives on a variety of issues. Students acquire skills in a foreign language, communicating across cultures, decision making, and conflict resolution and choose a concentration in a professional or academic specialty or area studies.

MA IN INTERNATIONAL STUDIES

The minimum requirement for the degree is 36 s.h. of credit as follows:

1. International Studies Core: INTL 6005, 6105, 6500, 6510.
2. Complete 12 s.h. in an academic, professional, or geographic concentration approved by the international studies director prior to taking.
3. Complete 6 s.h. of international field experience, INTL 6930, 6940. Waiver may be granted by international studies director.
4. Complete comprehensive examination after completion of 18 s.h.
5. Complete international studies foreign language requirement.
6. Option (Choose one of the following options.)

Advanced language and culture option (6 s.h.):

6 s.h. of Spanish, French, German, or English at the 5000-level or higher, including at least 3 s.h. at the 6000-level. Not available to native speakers of the language selected.

Business option (6 s.h.):

ENGL 5780 or ENGL 7710; MKTG 6992. Available only to students who choose a concentration in business.

Economic development option (6 s.h.):

Two 6000-level courses chosen from an approved list in consultation with the MAIS director not included in the student's concentration.

International administration option (6 s.h.):

PADM 6220; 3 s.h. from PADM 6163, POLS 6330, or POLS 6440.

Available only to students who choose a concentration in political science.

International education administration option (6 s.h.):

ADED 6690; ENGL 5780 or ENGL 7710

Professional Communication option (6 s.h.):

Two 6000 or 7000-level courses chosen from an approved list in consultation with the MAIS director not included in the student's concentration.

Public health option (6 s.h.):

MPH 6020 and one additional 6000-level course chosen from an approved list in consultation with the MAIS director.

Security studies option (6 s.h.):

Two 6000-level courses chosen from an approved list in consultation with the MAIS director not included in the student's concentration.

Thesis option (6 s.h.):

INTL 7000 (repeat once for a total of 6 s.h.) The student must satisfactorily defend the thesis.

CERTIFICATE IN INTERNATIONAL TEACHING

The graduate certificate in international teaching is an interdisciplinary certificate program coordinated by the director of the MA in International Studies. Participating students must register for special sections of the courses delivered electronically.

The certificate requires 9 s.h. of credit as follows: HIST 5005; INTL 6930; TCHR 6001

SECTION 8: CURRICULA

INTL: INTERNATIONAL STUDIES

5000. Senior Seminar in International Studies (3) (S) P: Consent of instructor or graduate standing. Diverse contemporary international issues. Topics determined by instructor may include ethical/normative perspectives in world community; demographic trends of population, food, and health; energy policies; environmental hazards such as climate and pollution; economic development; selected regional conflicts; and initiatives in transnational cooperation.

6005. Communication Across Cultures (3) P: Consent of instructor. Different modes of human communication as related to varying cultural contexts.

6105. Global Issues (3) P: Consent of instructor. History and contemporary dynamics of globalization, including economic integration and restructuring, political relations among state and non-state actors, and social and cultural change.

6500. International Problem Solving and Decision Making (3) P: Consent of instructor. Focus on understanding and application of process at organizational level. Analytical models appropriate to public and private sectors may include project management, cost/benefit analysis, mathematical programming, and simulation in international settings.

6510. Global and Multicultural Discourse (3) P: Consent of instructor. Analysis of international and intercultural discourse with a view toward the enhancement of global and multicultural understanding.

6930, 6940. International Field Experience (3,3) Second-culture study, practical training, internship, research, and/or employment in student's field of study and professional activities.

7000. Thesis (I-6) May be repeated. May count a maximum 6 s.h.

7001. Thesis: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

DEPARTMENT OF MATHEMATICS

Johannes Hattingh, Chair, 124 Austin Building

Chal Benson, Director of Graduate Studies, 215 Austin Building

The Department of Mathematics requires that the applicant meet the admission requirements of the Graduate School, have an undergraduate major in mathematics or its near equivalent, and submit satisfactory scores on the Graduate Record Examinations or the Miller Analogies Test. Each applicant's credentials will be reviewed by the director of graduate studies, who will determine if undergraduate deficiencies are present and, if so, will prescribe the method of their removal and determine a precondition for admission.

MA IN MATHEMATICS

The MA in Mathematics comprises three concentrations: *Mathematics*, *Statistics* and *Mathematics in the Community College*. Full time students enrolled in the *Mathematics in the Community College* concentration generally hold teaching assistantships to gain experience as they complete their MA program. The degree requirements are as follows.

1. The Graduate School's research skills requirement is satisfied by demonstrating competency in an appropriate foreign language or by completing certain courses depending on the concentration. Students should see the Graduate Director for information specific to their concentrations.
2. All students complete at least 24 s.h. of coursework including required courses specific to each concentration area as detailed below. Specific course requirements may be waived for students who have previously taken equivalent courses.
Mathematics: MATH 5101, 5102, 6011, 6111, 6121, 6651, 5311 or 5801 or 6401 or 6411; plus electives to equal at least 24 s.h.
Statistics: MATH 5031, 5101, 5102, 5801, 6001, 6802, 5000 or 6804, 5774.
Mathematics in the Community College: MATH 5101, 5102, 5031, 6011, 6111, 6121, 6271, 6651 and at least one of MATH 5021, 6022 or 6802, plus electives to equal at least 26 semester hours (if some of the preceding courses were taken before graduate work was begun).
3. Students must score satisfactorily on a comprehensive examination.

4. Students specializing in *Mathematics* or *Statistics* must either write a thesis or complete a research project under the direction of a member of the graduate faculty. Students electing the thesis option enroll in MATH 7000 for 6 s.h. Students electing the non-thesis option are required to complete an additional 9 s.h. of course work prefixed MATH and numbered above 4999.
5. Students pursuing the *Mathematics in the Community College* concentration must prepare a teaching portfolio under the direction of a faculty mentor. They must also give a presentation to an undergraduate audience and complete an additional 9 s.h. of course work prefixed MATH and numbered above 4999.

STATISTICS MINOR

Twelve s.h. of graduate course work for the statistics minor is required as follows: MATH 5031, 5801, 6802; one additional graduate-level statistics course.

CERTIFICATE IN STATISTICS

The statistics certification requires a minimum of 9-15 s.h. credit as follows:

Students who have successfully completed MATH 3307, 3308 must complete 9 s.h. as follows: CSCI 5774; MATH 5000, 5031.

Students who have successfully completed MATH 3307 must complete 12 s.h. as follows: CSCI 5774; MATH 5000, 5031, 6802.

Students who have not successfully completed MATH 3307 must complete 15 s.h. as follows: CSCI 5774; MATH 5000, 5031, 5801, 6802.

MATH: MATHEMATICS

5000. Introduction to Sampling Design (3) (F) P: MATH 3308 or 3229 or consent of instructor. Fundamental principles of survey sampling. Data sources and types, questionnaire design, various sampling schemes, sampling and nonsampling errors, and statistical analysis.

5002. Logic for Mathematics and Computer Science (3) (S) Same as CSCI 5002 P: CSCI 3510 or MATE 3223 or 2775 or MATH 2427 or 2775 or 3256 or PHIL 3580 or equivalent. Methods of mathematical logic that have important applications in mathematics and computer science.

5021. Theory of Numbers I (3) P: MATH 3263 or consent of instructor. Topics in elementary and algebraic number theory such as properties of integers, Diophantine equations, congruences, quadratic and other residues, and algebraic integers.

5031. Applied Statistical Analysis (3) (WI) May not count toward mathematics hours required for the mathematics concentration of the MA. P: MATH 2228, 3584; or equivalent; or consent of instructor. Topics include analysis of variance and covariance, experimental design, multiple and partial regression and correlation, nonparametric statistics, and use of computer statistical package.

5064. Introduction to Modern Algebra II (3) May not be taken for credit by those having completed MATH 6011. P: MATH 3263 or consent of instructor. Continuation of development of topics begun in MATH 3263. Normal subgroups, factor groups, homomorphism, rings, ideals, quotient rings, and fields.

5101. Advanced Calculus I (3) P: MATH 2173 or consent of instructor. Axioms of real number system, completeness, sequences, infinite series, power series, continuity, uniform continuity, differentiation, Riemann integral, Fundamental Theorem of Calculus.

5102. Advanced Calculus II (3) P: MATH 3256, 5101; or consent of instructor. Mathematical analysis of functions of several real variables. Includes limits, continuity, differentiation, and integration of multivariable functions.

5110. Elementary Complex Variables (3) May not be taken for credit by those having completed MATH 6111. P: MATH 2173. Complex numbers, analytic functions, mapping by elementary functions, integrals, residues, and poles.

SECTION 8: CURRICULA

5121. Numerical Analysis in One Variable (3) P: MATH 2173. Numerical analysis of problems with one independent variable. Solution of nonlinear equations in one unknown, interpolation and approximation of functions of one variable, numerical integration, and numerical differentiation and optimization.

5122. Numerical Analysis in Several Variables (3) P: MATH 2173, 3256, 4331. Numerical analysis of problems with several independent variables. Numerical solution of ordinary differential equations, systems of linear equations, numerical linear algebra and matrix algebra, systems of nonlinear equations, and systems of ordinary differential equations.

5131. Deterministic Methods in Operations Research (3) P: MATH 2173; 3307 or 5801. Mathematical models; linear programming; simplex method, with applications to optimization; duality theorem; project planning and control problems; and elementary game theory.

5132. Probabilistic Methods in Operations Research (3) P: MATH 2173, 3256; 3307 or 5801. Introduces stochastic processes. Queuing theory with applications to inventory theory and forecasting, Poisson and Markov processes, reliability simulation, decision analysis, integer programming, and nonlinear programming.

5270. Pascal Using the Microcomputer (3) May not be taken by students who have successfully completed CSCI 2610. May not count toward MATH or CSCI major or minor. P: MATH 1065 or equivalent. Pascal language and use in problem solving utilizing a microcomputer.

5311. Mathematical Physics (3) Same as PHYS 5311 P: MATH 4331; PHYS 2360; or consent of instructor. Mathematical methods important in physics. Emphasis on application. Functions of complex variables, ordinary and partial differential equations, integrals and integral transforms, and special functions.

5322. Foundations of Mathematics (3) (WI) P: MATH 3233, 3263; or equivalent. Fundamental concepts and structural development of mathematics. Non-Euclidean geometries, logic, Boolean algebra, and set theory. Construction of complex number systems. Transfinite cardinal numbers and study of relations and functions. Topics developed as postulational systems.

5521. Readings and Lectures in Mathematics (3) Individual work with student.

5551. The Historical Development of Mathematics (3) P: MATH 3233; C: MATH 2172 or consent of instructor. History of mathematics from antiquity to present. Emphasis on study of significant problems which prompted development of new mathematics. Uses computer resources and library for research of topics and solutions.

5581. Theory of Equations (3) P: MATH 2173 or consent of instructor. Topics include operations with complex numbers, De Moivre's Theorem, properties of polynomial functions, roots of general cubic and quartic equations, methods of determining roots of equations of higher degree, and methods of approximating roots.

5601. Non-Euclidean Geometry (3) P: MATH 3233 or consent of instructor. Non-Euclidean geometries, finite geometries, and analysis of other geometries from point of view of properties which remain invariant under certain transformations.

5774. Programming for Research (3) Same as CSCI 5774 For graduate student who wishes to use computer science to meet required research skills of his or her dept. May not count toward MATH major or minor. P: General statistics course or consent of instructor. Emphasis on minimum-level programming skill and use of statistical packages.

5801. Probability Theory (3) P: MATH 2173 or 3307. Axioms of probability, random variables and expectations, discrete and continuous distributions, moment generating functions, functions of random variables, Central Limit Theorem, and applications.

6000. Introduction to Graduate Mathematics (3) May not be taken for credit after MATH 5101 or 6011. P: Consent of director of graduate studies or advisor. Introduces advanced mathematics for beginning graduate students. Covers various proof methods and provides rigorous introduction to topics in logic, number theory, abstract algebra, and analysis.

6001. Matrix Algebra (3) P: MATH 3256 or consent of instructor. Properties of vectors and matrices and their applications.

6011, 6012. Modern Algebra I, II (3,3) P for 6011: MATH 3263 or equivalent; P for 6012: MATH 6011. Basic algebraic structures. Groups, rings, modules, integral domains, and fields.

6022. Theory of Numbers II (3) P: MATH 502I. Advanced topics in algebraic and analytic number theory.

6100. Mathematics of Risk Analysis (3) P: MATH 2172, 3307, 3308; or consent of instructor. Single-period mathematical risk theory is covered, including approaches to modeling and measuring (insurance) risks. Topics include (univariate) distribution theory; exponential dispersion models, elliptical distributions, (a,b,k) class, heavy-tailness; risk measurement: value-at-risk, expected shortfall, coherency; policy modifications: deductibles, (co)insurance, limits. Students are prepared to take the Society of Actuaries Exam P "Probability" and Exam C "Construction and Evaluation of Actuarial Models".

6111, 6112. Introduction to Complex Variables I, II (3,3) P for 6111: MATH 5102; P for 6112: MATH 6111, I. Analytic functions, mapping of functions, differentiation and integration, power series, and residues. II. Integral functions, infinite products, Mittag-Leffler expansion, maximum modulus theorem, convex functions, the Schwarz-Christoffel transformation, analytic continuation, Riemann surfaces, and selected topics in functions of a complex variable.

6121, 6122. Real Variables I, II (3,3) P for 6121: MATH 5101 or consent of instructor; P for 6122: MATH 6121 or consent of instructor. I. Study of functions of one real variable and convergence of sequences and series of functions: functions of bounded variation, measures, measurable sets, measurable functions, convergence almost everywhere, absolutely continuous functions, Lebesgue integration, differentiation, and the Fundamental Theorem of the Calculus. II. Lebesgue spaces and associated inequalities, measures in \mathbb{R}^n , measure spaces and the associated theory of integration and differentiation; the Radon-Nikodym Theorem with applications to probability and statistics.

6150. Graph Theory (3) P: MATH 2300 or consent of instructor. Structure of graphs, trees, connectivity, Eulerian and Hamiltonian graphs, planar graphs, graph colorings, matchings, independence, and domination.

6251, 6252. Advanced Placement Mathematics for Secondary Teachers I, II (3,3) May count toward certificate renewal or certification in teaching gifted and talented students. May not count toward MA in mathematics. Intensive study of topics covered in Calculus AB and Calculus BC of advanced placement mathematics.

6271. Teaching Collegiate Mathematics (2) P: Consent of instructor. Curricula and methods of teaching mathematics to adults in colleges and technical schools.

6401, 6402. Introduction to Partial Differential Equations I, II (3,3) P for 6401: MATH 4331 or consent of instructor; P for 6402: MATH 6401 or consent of instructor. I. Linear and nonlinear partial differential equations of the first order with emphasis on formal aspects of these equations. Use of partial differential equations in analysis, geometry, and physical sciences is considered where appropriate. II. Continuation of MATH 6401 to include nonlinear partial differential equations of the second order and higher orders. Certain theoretical aspects of partial differential equations and a limited amount of Fourier Series, Fourier transforms, Laplace transforms, and boundary value problems are included.

6411, 6412. Ordinary Differential Equations I, II (3,3) P for 6411: MATH 4331 or consent of instructor; P for 6412: MATH 6411 or consent of instructor. I. Existence, uniqueness, and technique of solutions to first and second order differential equations are considered. Bases for linear equations, stability, and series solutions about an ordinary point are considered. II. Autonomous systems, series solutions about a regular singular point, and Sturm-Liouville Systems are examined.

6500. Special Topics (3) May be repeated for credit with change of topic. P: Consent of instructor. Selected topics of current interest.

6561. Properties of Infinite Series (3) P: Consent of instructor. Infinite series beyond advanced calculus level.

6571. Elements of Probability (3) May not count toward mathematics requirement for MATH MA. P: Consent of instructor. Axiomatic development of probability from set operations viewpoint. Use of probability measures.

6601. An Introduction to Differential Geometry (3) P: MATH 2173, 3256. Basic ideas of differential geometry through study of curves and surfaces in three-dimensional space. Regular curves, regular surfaces, Gauss Map, and intrinsic and global differential geometry of surfaces.

6611, 6612. Introduction to Higher Geometry I, II (3,3) P for 6611: MATH 3233 or consent of instructor; P for 6612: 6611, I. Homogeneous linear equations and linear dependence; projections and rigid motions, homogeneous Cartesian coordinates; linear dependence of points and lines; point geometry and line geometry; harmonic division and cross ratio; one- and two-dimensional projective transformations. II. Continuation of study of projective coordinates in the plane; introduces various types of geometries; study of point curves and line curves with intensive study of point conics and line conics.

SECTION 8: CURRICULA

6651. Introduction to Topology (3) P: MATH 5101. Metric spaces and basic point-set topology, open sets, closed sets, connectedness, compactness, and limit points.

6802. Statistical Inference (3) P: MATH 3307 or 5801; consent of instructor. Estimation and hypothesis testing from both classical and Bayesian points of view. Use of t, F, and chi-squared distributions. Least squares procedures.

6803. The Linear Model (3) P: MATH 3256, 5801. Topics include general linear model, regression models, design models, estimation of parameters, theory of least squares, and testing general linear hypotheses.

6804. Stochastic Processes (3) P: MATH 3256, 5801. Most widely used models for random phenomena which vary with time. Topics include Markov, Poisson, birth and death, and stationary processes.

6805. Topics in Mathematical Statistics (3) P: MATH 3256, 5801. Mathematical theory of certain topics in statistics outside range of MATH 6802. Topics vary by faculty and student interests.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

MEDIEVAL AND RENAISSANCE STUDIES

Kevin N. Moll, Director, 313 Fletcher

MRST: MEDIEVAL AND RENAISSANCE

5000. Medieval and Renaissance Studies Seminar (3) P: 9 s.h. in MRST or consent of director. Interdisciplinary seminar.

DEPARTMENT OF PHILOSOPHY

George Bailey, Chair, A-327 Brewster Building

The members of the Department of Philosophy encourage graduate students to consider the possibility of completing a minor program of study. Each member of the department is willing to discuss such a possibility with graduate students from any area of study.

PHIL: PHILOSOPHY

5531, 5532, 5533. Directed Readings (1,2,3) (F,S,SS) May be repeated for credit with consent of instructor and dept chair. P: Consent of directing professor and dept chair.

DEPARTMENT OF PHYSICS

John Sutherland, Chair, C-209A Howell Science Complex

Michael Dingfelder, Assistant Chair for Graduate Studies, E-203 Howell Science Complex

MS IN PHYSICS

The Department of Physics offers the master of science in physics with concentrations in applied physics, health physics, and medical physics. Students seeking a MS degree must apply and be admitted into one of these three concentrations. A satisfactory knowledge of an acceptable computer language or of an acceptable foreign language is required. Attendance at a minimum of one-half of the regular Department of Physics seminars given during the student's residence in the graduate program is required.

The applied physics concentration requires a minimum of **34 s.h.** of courses and the completion of a thesis. The health physics concentration requires a minimum of 39 s.h. of courses, and, in addition, students must complete a 10-16 week rigorous practicum in applied health physics in an industrial, university or national laboratory setting in lieu of a thesis. The medical physics concentration requires a minimum of **38 s.h.** of courses that include a minimum of 6 s.h. of clinical study in lieu of a thesis.

- I. Core.....16-22 s.h.
 PHYS 5410*, 5600, 5601, 5900, 5901, 6816
Applied physics concentration:
 PHYS 7000 (repeated once); minimum of 6 s.h. electives from: PHYS 6250, 6700, 6715, 6900
Health physics concentration:
 EHST 5164, 5800; PHYS 6900; minimum of 3 s.h. electives from: EHST 6700, PHYS 6200, 7450
Medical physics concentration:
 PHYS or RONC 6992, 6993; minimum of 3 s.h. electives from: PHYS 6300, 7992
2. Concentration (Choose one area.)..... 12-19 s.h.
Applied physics (12 s.h.):
 PHYS 5311, 6200, 6300, 7450
Health physics concentration:
 EHST 5164, 5800; PHYS 6900; minimum of 3 s.h. electives from: EHST 6700, PHYS 6200, 7450
Medical physics (19 s.h.):
 RONC 7370; PHYS 6700, 6710, 6715, 6720; PHYS or RONC 6718

*Students in the medical physics concentration who have had an undergraduate course in quantum mechanics may substitute the 3 s.h. elective, listed above, for PHYS 5410.

In addition, a student in the medical physics concentration must demonstrate a satisfactory knowledge of medical terminology through taking BIOL 2130 (preferred) or HIMA 3000.

Termination rules:

1. A student must receive a minimum final grade of B in each of the required courses in the medical physics option.
2. A student, because of inappropriate behavior in a clinical setting, will be immediately suspended by the instructor. A review by the Graduate Committee will determine if the student is eligible to continue in the medical physics option.

PHD IN BIOMEDICAL PHYSICS

The primary objective of the PhD program in biomedical physics is to graduate scientists who can apply the tools and concepts of physics to solve significant biological and medical problems and advance our understanding of fundamental biomedical processes. Core curricula in both applied physics and biomedical areas are designed to provide training for students with diverse backgrounds in physics, applied physics, biochemistry, and engineering. All students are required to complete a dissertation project under supervision of a faculty advisor.

Admission

The applicant must have a master's degree in physics, applied physics, medical physics, or related fields or must have shown a significant progress towards obtaining a master's degree in the above fields. Acceptable performance on the GRE and a minimum cumulative GPA of 3.0 on a 4.0 scale in graduate work are required.

The following documents are required before final admission is approved: completed application form for admission to Graduate School, official transcripts from colleges and universities attended, official or certified copy of score reports of the GRE and TOEFL (if applicable), letters of reference from three persons who can attest to the applicant's academic competence, and an essay describing the applicant's career goals and research interests which are consistent with the educational opportunities offered in the PhD program.

Course and Residence Requirements

The PhD program requires a minimum of 30 s.h. of courses beyond the master's degree. The student will take a minimum of 6 s.h. of courses from a physics core, a minimum of 6 s.h. of courses from a biomedical core, and a minimum of 18 s.h. of dissertation research courses. Additional courses may be required by the executive committee, depending on the individual student's preparation. Students must demonstrate a working knowledge of at least one high-level computer language, such as FORTRAN or C. Students must pass doctoral candidacy exam and write and successfully defend a doctoral dissertation.

Students must complete at least five consecutive semesters in residence (excluding summers).

Transfer Credits

Because of the broad interest and collaborative nature of the PhD program, the executive committee will evaluate transfer credits on a case-by-case basis. A maximum of 6 s.h. of transfer credit may be accepted.

If a student enrolls in this program and already has the equivalent of the 12 s.h. beyond the master's degree, he or she may petition the executive committee for a waiver of or substitution for these courses. After a majority of the core courses have been completed, students in this program must pass the doctoral candidacy examination before being admitted to candidacy for the PhD in biomedical physics.

Other Requirements

The PhD program should be completed by the end of three years following the student's initial enrollment. With the endorsement of the advisory committee, a student having deficiencies in preparation may request an extension of no more than two years.

PHYS: PHYSICS

531 I. Mathematical Physics I (3) Same as MATH 531 I P: MATH 433I; PHYS 2360; or consent of instructor. Mathematical methods important in physics. Emphasis on application. Functions of complex variables, ordinary and partial differential equations, integrals and integral transforms, and special functions.

5410. Introduction to Quantum Mechanics (3) P: PHYS 4416, 4560; or consent of instructor. Survey of the fundamental principles of quantum mechanics and their application to the solution of selected problems in atomic, molecular, condensed matter, and biological physics.

5600, 560 I. Modern Electronics (3,0) 2 lecture and 2 lab hours per week. P: PHYS 4610. Theory and application of modern electronic devices. Circuit design using linear, nonlinear, and hybrid integrated circuits and their application in a graphical (GUI), computer-based environment for scientific instrument and process control.

5900, 590 I. Computational Physics (3,0) 1 lecture and 4 lab hours per week. P: MATH 433I; PHYS 2360 or 531 I. Applies modern computer program with symbolic, numerical, and graphical capabilities to problems in physics.

6200. Thermodynamics and Statistical Physics (3) P: Intermediate thermodynamics. Classical thermodynamics with applications and introduction to statistical thermodynamics. Topics include heat engines, thermodynamic potentials, Maxwell relations, phase changes, ideal gases, kinetic theory of gases, and quantum statistics.

6250. Classical Mechanics (3) P: Intermediate mechanics. Theoretical classical mechanics including Lagrange's equations, central force motion, rigid body motion, special relativity, and oscillations.

6300. Electrodynamics I (3) P: Intermediate electromagnetic theory. Boundary value problems in electrostatics. Emphasis on use of Green's functions and special functions, multipoles and dielectrics, magnetostatics Maxwell's equations, and plane EM waves, wave guides and resonant cavities.

6410. Quantum Mechanics I (3) Formerly PHYS 5400 P: PHYS 5410; or consent of instructor. Intermediate study of the principles of quantum mechanics and their application to selected subfields of physics.

6526, 6527, 6528. Readings in Physics I, II, III (1,2,3) Equivalent of 1 classroom hour per week, per credit hour. P: Consent of chair. Intensive readings or problem research in some physics-related field under supervision of faculty.

6620, 662 I. Advanced Techniques in Experimental Physics (2,1) 2 classroom and 3 lab hours per week. P: Graduate standing in PHYS or CHEM. Experimental techniques in radio frequency spectroscopy (NMR, ESR, and NEQR), microwave applications, and accelerator-based atomic physics (trace element analysis using x-rays), which includes theory of phenomena and operation of lab instruments.

6700. Health Physics (3) Formerly PHYS 5700 P: Consent of instructor. Broad spectrum of topics in radiation protection. Emphasis on interactions of radiation with matter, methods of radiation detection, dosimetry, principles of shielding, and regulations pertaining to work with radiation.

6710. Nuclear Medicine Physics (3) P: PHYS 4417 or consent of director of medical physics. Comprehensive overview of physical aspects of diagnostic and therapeutic applications of radionuclides, radiation beams and measurements, imaging systems, and related equipment with lab activities in facility design, instrumentation essentials, quality assurance, and survey techniques.

6715. Biomedical Physics (3) Formerly PHYS 5715 P: Consent of instructor. Applies physics principles in biology and medicine.

6718. Therapeutic Radiological Physics (3) Same as RNC 6718 P: Consent of director of medical physics. Production, application, and measurement of electromagnetic radiation and high energy particle beams in therapeutic practice. Emphasis on conceptual, instrumental, and methodological aspects of therapeutic radiology.

6720. Physics of Medical Imaging (3) P: PHYS 6710 or consent of director of medical physics program. Physical principles of diagnostic radiology. Analog and digital x-ray radiography (including mammography), fluoroscopy, and computed tomography. Principles and applications of ultrasound and magnetic resonance imaging, diagnostic calibration, radionuclide sources, counters, scanners, cameras, dosimetry, recording media, film densitometry, non-film media, and image evaluation.

6750. Risk Assessment, Risk Communication and Regulations (3) P: Consent of instructor. Risk assessment and communication including relative risks, voluntary and coerced risks with focus in the nuclear industry.

6810. Topics in Atomic Collisions (3) P: Consent of instructor. Review of processes in atomic collisions and their quantitative understanding. Introduces theories required to describe experimentally-observed behavior in electron-atom, ion-atom, and/or molecule collisions, and methods of observations. Emphasis on general topics of interest as found in current literature and particular areas of research at ECU Accelerator Laboratory.

6816, 6817. Seminar (1,1) Equivalent of 1 lecture hour per week. Areas of research in progress in physics department.

6900. Introduction to Research (3) Literature and lab research on individual problems in major field.

6992. Radiation Therapy Physics (3) Same as RNC 6992 P: PHYS 6718 or RNC 6718. Radiation dose calculation and measurement of high energy photon and electron beams, high and low dose rate brachytherapy sources in clinical radiation therapy, cavity theory in ion chamber calibrations of photon and electron beams. Quality assurance, acceptance testing, and commissioning of equipment for clinical radiation therapy (linear accelerators, HDR, TLD, simulator, CT scanner).

6993. Clinical and Medical Dosimetry (3) Same as RNC 6993 P: PHYS 6992 or RNC 6992. Practical patient dosimetry problems in radiation oncology. Irregular field calculations, two-and three-dimensional treatment planning, isodose distribution, high and low dose rate brachytherapy planning for intracavitary, and interstitial radioactive sources.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7110. Mathematics Physics II (3) Formerly PHYS 6100 P: MATH 5311 or PHYS 5311; or consent of instructor. Math methods important in physics. Emphasis on application, including conformal mapping and other applications of functions of complex variables, eigenfunctions, eigenvalues, and Green's functions, special functions, partial differential equations, boundary value problems, integral equations, calculus of variations, numerical methods, probability and statistics, and group theory.

7310. Electrodynamics II (3) Formerly PHYS 6310 P: PHYS 6300. Advanced electromagnetic theory and related numerical methods, including plane wave and wave propagation, waveguides and resonant cavities, radiating systems, multipole fields and radiation, scattering and diffraction, dynamics of relativistic particles, collisions between charged particles, finite-difference methods, moment methods, and finite element method.

7410. Quantum Mechanics II (3) Formerly PHYS 6400 P: PHYS 6410; or consent of instructor. A rigorous, advanced study of the principles of quantum mechanics and their application to selected subfields of physics.

SECTION 8: CURRICULA

7450. Solid State Physics (3) Formerly PHYS 6450 P: PHYS 6410; or consent of instructor. Coherent picture for understanding complex properties of solids. Topics include periodic structure of crystal lattice, phonons, electronic properties in framework of energy band theory, basic concepts of quasiparticles and their interactions in solid materials.

7715. Biomedical Optics (3) P: Consent of instructor. Fundamental concepts in optics and spectroscopy and to acquire basic skills for modeling and experimental research in selected biomedical applications.

7730. Radiation Instrumentation (3) 1 lecture and 4 lab hours per week. P: PHYS 6700; or consent of instructor. Laboratory study of fundamental concepts in radiation detection and the use of health physics monitoring equipment.

7740. Special Problems in Radiation Dosimetry and Modeling (3) P: Consent of instructor. Advanced study of external and internal dosimetry. Assessment of dose from internal and external radiation exposure using analytic and statistical models.

7992. Clinical Rotation in Radiation Therapy Physics (8) 1 lecture and 21 practicum hours per week. P: PHYS 6992 or RONC 6992 and consent of assistant chair for graduate studies. Students participate in all aspects of clinical radiation therapy physics, gaining practical expertise in the major clinical applications of radiation to the treatment of disease.

8526, 8527, 8528. Advanced Readings in Physics I, II, III (1,2,3) May be repeated for a maximum of 12 s.h. Equivalent of 1 classroom hour per week, per credit hour. P: Consent of assistant chair for graduate studies. Intensive readings at the advanced PhD level in a physics field under supervision of faculty.

8910. Research Problems in Biomedical Physics (3) Formerly PHYS 6910 May be repeated. P: Consent of instructor and dept chair. Research on specialized topic or topics related to biomedical application of physics under supervision of faculty member.

9000. Dissertation (3-12) May be repeated. May count maximum of 18 s.h.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

PHYS Banked Courses

5060. The Conceptual Development of Physics (3)

5350. Modern Optics (3)

5630. Gaseous Conductors (3)

5800. Biophysics (2)

6991. Clinical Rotation in Diagnostic Physics (3)

DEPARTMENT OF POLITICAL SCIENCE

Brad E. Lockerbie, Chair, Brewster A-124

Robert Thompson, Director of Graduate and MPA Program Studies, Brewster A-101

Jalil Roshandel, Director of Security Studies Program, A-116 Brewster

MPA

The master of public administration program is designed to provide students with basic administrative skills which can be utilized in a variety of administrative careers. It is based on a core curriculum of required public administration and quantitative analysis courses with a variety of related electives that will provide students with a choice of emphases depending upon career objectives.

All students applying for the MPA program are expected to take the GRE. Requests for exceptions will be considered only if the student presents recent acceptable scores on a comparable standardized entrance exam.

Students may transfer up to 15 s.h. from a regionally accredited institution with the approval of the director of the MPA program and the dean of the Graduate School. Requests for transfer credit should be made at the time of admission.

Students may earn the MPA degree by completing 45 s.h. as follows: 24 s.h. in core public administration and quantitative analysis courses, 3 s.h. of internship work for pre-service students, 15 s.h. elective credit in an area of emphasis to be approved by the director of the MPA program, and 3 s.h. for the MPA professional paper.

Public administration required core courses: PADM 6100, 6110, 6120, 6140, 6160, 6161, 6230, 6260 24 s.h.

Internship 3 s.h.

Pre-service students seeking the MPA are required to complete a 3 s.h. internship in a local, state, federal, or approved not-for-profit agency. Students with relevant work experience in excess of one year may apply to the director of the MPA program for exemption from this requirement. Those students who are exempted from this requirement will complete 42 s.h. instead of 45 s.h.; however, no academic credit will be awarded for work experience.

MPA professional paper..... 3 s.h.

All students must enroll in PADM 6900 and complete an MPA professional paper in which they identify a public management problem or policy issue and develop a problem-resolution strategy. The completed paper must be defended successfully before a three-member committee of MPA faculty members (one member may be from outside the MPA faculty upon approval of the director of the MPA program).

Electives (MPA)..... 15 s.h.

1. Students may elect to complete PADM 6898 or 6899 for a maximum of 6 s.h. of independent study. The independent courses must be completed under the supervision of a public administration instructor in the Department of Political Science; these courses are open only to students who have completed a minimum of 12 s.h.
2. For a planning emphasis, students must complete electives approved jointly by the graduate coordinator of the urban and regional planning program and the director of the MPA program.
3. For an emphasis in community health administration, students with a subfield in health administration should seek counseling from the graduate director of the community health program regarding requirements for certification beyond the formal MPA and Graduate School requirements. See Section 8, College of Allied Health Sciences, Department of Community Health, for requirements.

Recommended elective courses: BIOS 5010; COHE 6000, 6502; EHST 6010; JUST 6502; POLS 6155, 6345, 6382; PADM 6111, 6123, 6150, 6163, 6170, 6187, 6188, 6198, 6199; PLAN 6000, 6010, 6015, 6020; PSYC 6343, 6421, 6422; REHB 5795, 6793.

Other courses may be substituted if approved by the director of the MPA program.

MS in Security Studies

The master of science in security studies offers four areas of emphasis: environmental health and occupational safety, homeland security policy, international security, and science and technology security. The MS in security studies requires **36 s.h.** of graduate work, composed of a required core of seven courses and a four-course area of emphasis in one of the above-listed areas.

All students applying for the degree are expected to apply through the Graduate School's online process, take the GRE, submit three letters of reference, and submit a statement of purpose.

Students may transfer up to 7 s.h. from a regionally accredited institution with the approval of the director of the program and the dean of the Graduate School. Requests for transfer credit should be made at the time of admission.

The required core courses will be offered in a distance education format to enable security professionals to engage in the program without being on campus. The international security and homeland security policy areas of emphasis can be completed via distance education. If a course in the area of emphasis is offered face-to-face, students may opt to take it on campus. Otherwise, they will have to either select another course or wait for that class to be offered again in a distance education format.

Required core courses: SECS 6000, 6155, 6250, 6300, 6350 15 s.h.

Internship: SECS 6450 3 s.h.

Students with relevant work experience in excess of one year may apply to the director of the program for exemption from the internship requirement. Those students who are exempted will complete 33 s.h. instead of 36 s.h.; no academic credit will be awarded for work experience.

Area of Emphasis 12 s.h.

SECTION 8: CURRICULA

All students must complete 12 s.h. in one of the following areas of emphasis.

Environmental health and occupational safety:

EHST 6010, 6100, 5510, 5520, 5530, 5540; SAFT 6290, 6402, 6410

Homeland security policy:

BIOL 6110; EHST 6010; HIST 6260; JUST 6502; PADM 6163, 6170, 6220; PLAN 6015; POLS 6345, 6382; SECS 6400, 6430; SOCI 5500

International security:

HIST 6210, 6260; INTL 6005, 6105, 6500, 6510; POLS 6080, 6330, 6360, 6382, 6425, 6430, 6440; SECS 6380, 6390, 6420, 6430

Science and technology security:

Students must select one specialization and choose four courses from that specialization. Only students with a technical undergraduate background may apply for this. Students should be aware that the science and technology security and environmental health and occupational safety areas of emphasis do not guarantee that the coursework will be available via a distance education format. Furthermore, the area of emphasis in these programs may exceed the minimum 12 s.h. requirement due to the student's need to have completed prerequisites or the numbers of credit hours associated with specific courses. Students interested in these areas of emphasis are encouraged to contact the relevant department to receive further information about their current offerings.

Areas of specialization are as follows:

- Computer science: CSCI 5800, 6100, 6130, 6300, 7000
- Information technology: ICTN 6823, 6853, 6865, 6878; IDIS 6515; ITEC 6050, 6600

Thesis or non-thesis option 6 s.h.

Students may take either a thesis or non-thesis option. Students selecting the thesis option must complete a minimum of 6 s.h. of SECS 7000 and prepare a thesis acceptable to a three-person committee with relevant expertise. Students pursuing the area of emphasis in science and technology security, computer science specialization must combine SECS 7000 Thesis (3 s.h.) with CSCI 7000 Thesis (3 s.h.) for the total of 6 s.h. of thesis. Students may choose the non-thesis option by taking two additional courses (6 s.h.) in their area of emphasis.

All students must pass a comprehensive exam.

CERTIFICATE IN COMMUNITY HEALTH ADMINISTRATION

Students seeking the master of public administration degree (MPA) in the Department of Political Science may take **15 s.h.** in COHE and approved electives for the completion of an emphasis in community health administration. For information on admission requirements to the certificate in community health administration, students should seek counseling from the director of the MPA program. Required courses are the following: COHE 6000, 6100; PADM 6400 or COHE 6971 or NURS 6971. Electives may be taken from the following: ACCT 6241; BIOS 5010; COHE 6300, 6310; ENGL 5780; FINA 6144; PADM 6410.

CERTIFICATE IN SECURITY STUDIES

Jalil Roshandel, Director, Brewster A-116

Through the Division of Academic Affairs, the university offers the interdisciplinary graduate certificate in Security Studies. This program provides students with an understanding of national and international threats posed by non-state actors such as terrorist networks, and the landscape of response coordination required to meet challenges posed by such threats. The goal of the certificate program is to develop new thinking towards security within a changing environment. Countering and responding to the new threats requires integration of traditional military strategies with criminal justice systems and investigation, intelligence gathering, policy development, emergency planning and response, and interagency cooperation at multiple levels of government and between governments.

Applicants seeking admission must be graduate students or non-degree students holding a baccalaureate degree. All applicants must complete the certificate application and have it approved by the program coordinator.

The certificate requires 15 s.h. of credit as follows: two core courses, SECS 6000 and 6155; and three optional courses chosen in conjunction with the certificate director from the following list: CSCI 6100; EHST 6010; JUST 6502; HIST 6260; ICTN 6823; INTL 6500; POLS 6382, 6425; PADM 6170, 6220; PLAN 6015.

Note: In some cases, courses may require prerequisites which students must satisfy first. Establishment and enforcement of prerequisites is the prerogative of the offering department.

POLS: POLITICAL SCIENCE

5000. American Government and Politics (3) May not count toward POLS major or minor or MPA degree. P: Consent of instructor. Introductory survey of readings in American national government and politics for students interested in graduate work, but who have no undergraduate background in political science or public administration.

6040. Problems in State Government (3) Intensive study of significant problems confronting American state governments.

6080. American Foreign Relations (3) Most important events and characteristics of American foreign policy since World War II.

6310. Comparative Government I (3) Theoretical and comparative study of major parliamentary governments of Western Europe.

6320. Comparative Government II (3) Theoretical and comparative study of former USSR and East European Communist states.

6330. Political Modernization and the Non-Western World (3) Theoretical analysis of developmental processes in politics of Asia, Africa, and Latin America.

6345. Comparative Public Policy (3) Cross-national study of selected major policy issues, their development and implementation through analysis of policy substance, and its linkage to policy process.

6360. Causes of International War (3) Aspects of international war, primarily between nation-states.

6382. Global Terrorism (3) Introduces issues defining and characterizing terrorism. Primary emphasis given to issues in countering terrorism such as intelligence, international treaty issues, and use of military and criminal justice tools to respond to terrorism.

6425. War, Peace and Security in the Middle East (3) Integrated study of international politics and security studies with a special focus on issues directly related to peace and security in the Middle East.

6430. Seminar in International Politics (3) P: Consent of instructor. Concentrated study of major theories of international politics and/or selected case studies.

6440. Seminar in International Organization (3) P: Consent of instructor. Advanced study of selected aspects.

6524. Readings in American Foreign Relations (3) P: POLS 6080. Intensive study in selected area.

PADM: PUBLIC ADMINISTRATION

6100. Politics and Management in Public Agencies (3) P: Consent of instructor. Study, functions, structures, and processes of public administration at all levels of government. General management issues in public agencies. Emphasis on political institutions and their impact on policy process.

6110. Human Resource Management in Public Agencies (3) P: Consent of instructor. Assessment skills for recruitment and maintenance of personnel in public sector. Comparative study of all phases of human resource management in federal, state, and local governments.

6111. Contemporary Problems in Public Personnel Administration (3) Problems faced by public personnel administrators stemming from changes in social, political, and technological environment. Focus on merit system.

SECTION 8: CURRICULA

6112. Productivity in the Public Sector (3) P: PADM 6110. Various approaches that increase efficiency with which resources (especially human resources) may be converted into products or services. Barriers to productivity. Emphasis on motivation of public employees.

6115. Readings in Public Personnel Administration (3) P: PADM 6110, 6111. Intensive study of an area in the field.

6116. Women, Public Policy, and Administration (3) Significant works, discussion of timely problems, and guided individual research on women, public policy, and administration.

6120. Public Budgeting and Finance (3) P: Consent of instructor. Comparative study of US budgetary and revenue systems.

6121. Financial Management in State and Local Governments (3) P: Consent of instructor. Introduction to financial and managerial accounting and reporting, the use of accounting and financial information in managing state and local governments, capital budgeting and the market for tax-exempt debt.

6122. Local Government Budgeting and Financing (3) P: PADM 6120. Intensive study of theory and practice of government budgeting and finance at local level. Topics may include operating and capital budget making, revenue sources and forecasting, intergovernmental transfers, accounting and auditing systems, borrowing, and cash management.

6123. Economic Development (3) Theory, practice, and history of local government economic development policies in US.

6124. State and Local Government Finance (3) P: Consent of instructor. Expenditures and revenues of state and local governments plus fiscal aspects of intergovernmental relations. Determinants of state and urban economic development and local government fiscal behavior.

6125. Readings in Public Budgeting and Finance (3) P: PADM 6120. Intensive study of an area in the field.

6130. Urban Policy and Administration (3) Policy-oriented study of urban government, leadership styles, and problems.

6140. Administrative Law and Ethics (3) P: Consent of instructor. Structure and processes of administrative agency rule making and adjudication in US. Emphasis on administrative ethics and role of values in practice of public administration.

6150. Seminar in Public Administration (3) May be repeated. May count maximum of 6 s.h. toward MPA degree with change of topic. Intensive study of various topics.

6160. Public Policy Formulation and Implementation (3) P: Consent of instructor. Formulation and implementation of public policy at federal, state, and local levels of government. Application of various models and theories of policy formation and implementation to substantive policy areas.

6161. Applied Policy Analysis and Program Evaluation (3) P: Consent of instructor. Public policy at all levels of government. Program charting, budget examination, management analysis, systems analysis, program evaluation, implementation analysis, and cost-benefit analysis.

6162. Environmental Administration (3) RP: Course or other background in public policy. Political and bureaucratic constraints reflecting conflicting objectives of energy independence and pollution-free environment.

6163. Environmental Policy Analysis (3) P: Consent of instructor. Political, economic, and regulatory issues associated with protection and enhancement of quality of physical environment. Formation, implementation, and evaluation of environmental and natural resource policies. Emphasis on development of research skills to facilitate reasonable knowledgeable about formulation and termination of environmental policies.

6164. State and Local Environmental Policy (3) P: PADM 6162 or consent of instructor. Comparative study of state and local government structures and processes related to environmental laws, regulations, organizational structures, and implementation results.

6170. Intergovernmental/Interagency Relations (3) Patterns of relations between officials of various US governmental units and agencies.

6210. Organization Theory in the Public Context (3) Behavior and interaction of individuals and groups in complex organizations in public context. Analysis of processes, conditions, and constraints in formulation and implementation of public policy.

6220. Leadership and Ethics in the Public Sector (3) Study of leadership and ethical issues facing policy makers and public administrators, including leadership and management skills, ethical dilemmas and challenges, conflicts of interest and values, and professionalism.

6230. Quantitative Methods for Public Administration (3) Familiarity with algebra and descriptive statistics presumed. P: Undergraduate course in statistics or consent of instructor. Basic statistical methods and their applications in public administration and policy analysis.

6240. Management of Non-Profit Organizations (3) Analysis of nonprofit organizations in the US with attention to their purposes, organization, management, and roles in public policy development and implementation.

6260. Management of Public Information Technology (3) Fundamental concepts of information management in the public sector. Examination of planning and implementation of information technology and e-government projects.

6325. Transportation Policy (3) Analysis of US public policy toward transportation issues at both the state and federal levels.

6400. Health Policy (3) Same as COHE 697I and NURS 697I Overview of health policy, law and regulation that relate to the delivery of health care in the United States.

6410. Health Policy Analysis (3) Development of policy analysis and assessment skills needed in the health policy field.

6887, 6888, 6889. Internship in Public Administration (1,2,3) Formerly PADM 6187, 6188, 6189 Approximately 100 hours per semester per credit hour. P: Consent of instructor. Experiential learning in public agency setting under academic supervision.

6898, 6899. Independent Research (3,3) Formerly PADM 6189, 6199 P: Completion of 12 s.h. of degree requirements; consent of instructor. Individualized.

6900. MPA Professional Paper (3) P: Admission to MPA degree program; consent of MPA program director. Identification of public management or policy issue and development of problem-resolution strategy. Completed paper defended before MPA faculty.

6901. Professional Paper: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7004. Marine Policy, Governance, and Law (3) Formerly PADM 6300 P: Consent of instructor. Processes, politics, laws, and institutions as they affect marine, coastal, and climate policy in the United States.

7009. Coastal, Maritime, and Environmental Law (3) P: Consent of instructor. Role of law and the judicial system as these affect coastal, marine, climate, and environmental policy.

SECS: SECURITY STUDIES

6000. Security Studies Foundations (3) Theoretical foundations of domestic and international security.

6155. Changing Nature of National Security Policy (3) Overview of process, forces, and influences involved in determining contemporary national security policy in the United States. Explores historical and constitutional basis of common defense, evaluates national security policy making process, and explores forces and issues that define our national security infrastructure.

6250. Policy and Practice of Security (3) Theories and practices of domestic and international security since World War II.

6300. Research Methods for Security Studies (3) Quantitative methods for security studies.

SECTION 8: CURRICULA

- 6350. Weapons of Mass Destruction (WMD) (3)** Characteristics of WMD and challenges posed domestically and internationally from an emergency response perspective.
- 6380. The Art of Statecraft and International Security (3)** Examination and application of violent and non-violent foreign policy tools in achieving global peace and security.
- 6390. Human Security (3)** Intensive study of human security issues such as economic development, gender inequality, human rights, and public health.
- 6400. The Foundation of Homeland Security and Defense (3)** Overview of essential ideas contributing to the concept of homeland security. Emphasis on improving student thinking, analytical skills and communications relevant to homeland security policy and practice.
- 6420. Globalization and Security (3)** Impact of globalization on domestic and international security.
- 6430. Special Topics Seminar (3)** Selected topics and issues in contemporary security studies.
- 6450. Internship (3)** P: Consent of instructor. Experiential learning in a setting relevant to security studies under academic supervision for a minimum of 150 hours per semester.
- 7000. Thesis (1-6)** P: Consent of instructor. May be repeated. May count maximum of 6 s.h.

DEPARTMENT OF PSYCHOLOGY

Kathleen A. Row, Chair and Director of Graduate Studies, 115 Rawl Building

The Department of Psychology offers master's degrees in general-theoretic and clinical psychology, the master's degree and Certificate of Advanced Study in School Psychology, and the PHD degree in health psychology. All graduate programs require the completion of research skills courses and defense of a dissertation or thesis, and written and oral specialty examinations. The student will consult with his or her program director in order to decide which approved elective courses best meet the needs of his or her program. Additional alternative courses may be considered, subject to the approval of the student's doctoral committee or masters program directors and the departmental chairperson. It is important to note that requirements of both the Graduate School and the Department of Psychology must be met before a degree is awarded.

MA, PSYCHOLOGY, GENERAL-THEORETIC

The general psychology program offers students the opportunity to specialize in one of three concentrations. The academic concentration (30 s.h.) is designed to provide the preparation necessary to teach psychology at the community college level. Students can opt for on or off campus instruction. The research concentration (30 s.h.) focuses on courses for those who wish to conduct research or prepare for doctoral training. The industrial/organizational concentration (45 s.h.) is designed for students wishing to apply psychological expertise to situations involving human resources in organizations.

The industrial/organizational concentration requires a summer internship between the first and second year. Program requirements include:

- 1. Research skills requirement: PSYC 64303 s.h.
- 2. Thesis or Teaching Portfolio6 s.h.
- Academic concentration:
 - PSYC 6800, 6810 (Teaching Practicum)
- Research concentration:
 - PSYC 7000 (Thesis)
- Industrial/Organizational concentration:
 - PSYC 7000 (Thesis)
- 3. Electives.....6-15 s.h.
- Academic concentration:
 - 6 s.h. from PSYC
- Research concentration:
 - 6 s.h. are required of which 3 s.h. must be PSYC

Industrial/Organizational concentration:

15 s.h. are required of which 6 s.h. must be PSYC

4. Concentration areas (Choose one.).....15-21 s.h.

Academic concentration:

PSYC 6406, 6421; 6428 or 7427; 6450 or 6475, 6414 or 7412

Research concentration:

PSYC 6421; 6428 or 7427; 6450 or 6475; 6414 or 7412; 7431

Industrial/Organizational concentration:

PSYC 6327, 6343, 6420, 6465, 6521, 6970, 7431

MA IN CLINICAL PSYCHOLOGY

The clinical psychology program of study leads to a master of arts degree in psychology. The degree is earned as part of the clinical health concentration of the PhD in health psychology program. The program requires a minimum of 51 s.h. of instruction and is generally completed in two years. The program provides classroom training in ethics, psychological assessment and diagnosis, and psychotherapy. In addition to classroom learning, the student will also engage in supervised practica experiences during the first-year of training in addition to the second-year practicum. Finally, students will gain research experience through the completion of a master's thesis project during the second year of training.

Admission to the clinical MA program is contingent on admission to the clinical health concentration of the PhD in health psychology program and follows a review of credentials as well as an on-site interview. Continuation in the program is based upon satisfactory course work and effective personal functioning and ethical behavior. At the end of each semester of the student's enrollment, the clinical faculty will conduct a review of student performance. Continuation in the program is contingent upon a favorable review during these evaluations. Students who consistently show borderline course performance, who are not developing good applied skills in the practice of psychology, who fail to complete course work on a timely basis, or who otherwise perform unprofessionally or unsatisfactorily, may be required to complete additional courses or practicum work, or may be removed from the program.

Program requirements include:

1. Core courses31 s.h.
 Clinical-Ethics requirement: PSYC 6465 3 s.h.
 Practicum: PSYC 6460, 6461, 6462, 6463, 7995, 8460 10 s.h.
 Research skills requirement: PSYC 6430 3 s.h.
 Therapy: PSYC 6466 3 s.h.
 Thesis: PSYC 7000 6 s.h.
 Core electives 6 s.h.
 Choose two from: PSYC 6406, 6408, 6414, 6421, 6428, 6475.
2. Concentration area12 s.h.
 PSYC 6450, 6468, 6485
 Assessment elective - 3 s.h.
3. Electives 8 s.h.

MA IN SCHOOL PSYCHOLOGY/CAS IN SCHOOL PSYCHOLOGY

The graduate program in school psychology is a three-year program to train psychologists for practice in school and related settings and requires 63 s.h. credit. The program requires full-time attendance, and students must complete both the MA and CAS degrees. The first two years of the program provide classroom training and field experiences in assessment, consultation, and interventions for children, adolescents, families, and systems. The third year consists of a full-time paid internship in a public school setting.

Program completion meets the current requirements for licensure by the North Carolina Department of Public Instruction as a Level II school psychologist, for certification by the National School Psychology Certification Board, and satisfies the educational requirements for licensure by the North Carolina Psychology Board as a licensed psychological associate. The program is approved by the National Association of School Psychologists, the National Council for the Accreditation of Teacher Education Programs, and the North Carolina Department of Public Instruction.

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Program requirements include:

Assessment: PSYC 6409, 6410, 7411	9 s.h.
Consultation/Intervention: PSYC 6402, 6467, 7442.....	9 s.h.
Internship: PSYC 7992, 7993.....	6 s.h.
Practicum: PSYC 7950, 7951.....	6 s.h.
Professional school psychology: PSYC 6404.....	3 s.h.
Psychological foundations: COAD 6407; PSYC 6405, 6406, 6452, 7413.....	15 s.h.
Research skills requirement: PSYC 6430.....	3 s.h.
Thesis: PSYC 7000 (May repeat once).....	3 s.h.
EDUC electives.....	6 s.h.

PHD IN HEALTH PSYCHOLOGY

The PhD program in health psychology is a post-baccalaureate 5-year program (98-104 s.h.); students must choose a concentration in clinical health (100 s.h.) or pediatric school psychology (104 s.h.) at the time of their application to the program. A one-year pre-doctoral internship is required for the clinical health and pediatric school concentrations.

Completion of the clinical health concentration meets the current requirements for licensure by the North Carolina Psychology Board as a licensed psychologist. Completion of the pediatric school psychology concentration meets the current requirements for licensure by the North Carolina Department of Public Instruction as a Level III school psychologist, for certification by the National School Psychology Certification Board, and satisfies the educational requirements for licensure by the North Carolina Psychology Board as a licensed psychologist.

Program requirements include:

Professional Standards and Ethics: PSYC 6404 or 6465.....	3 s.h.
Foundations in Psychology	18 s.h.
Biological Bases of Behavior: PSYC 6414 or 7413.....	3 s.h.
Social Bases of Behavior: PSYC 6402 or 6421	3 s.h.
Cognitive and Affective Bases: PSYC 6405 or 6428 or 7427	3 s.h.
Individual Differences: PSYC 6407 or 6452 or 6475.....	3 s.h.
Human Development: PSYC 6406.....	3 s.h.
History and Systems: PSYC 6408.....	3 s.h.
Research Methods and Practice.....	24 s.h.
Statistics and Research Design: PSYC 6430, 7431	6 s.h.
Thesis/predissertation research: PSYC 7000.....	6 s.h.
Dissertation: PSYC 9000	12 s.h.
Health Psychology core	17 s.h.
PSYC 8001	2 s.h.
PSYC 8002	3 s.h.
PSYC 7504 or 8404 or 8468.....	3 s.h.
PSYC 7506 or 8416.....	3 s.h.
PSYC 8994 or 8995 or 8996.....	3 s.h.
Approved health elective	3 s.h.
Clinical Health concentration	38 s.h.
Psychopathology: PSYC 6450.....	3 s.h.
Interventions: PSYC 6466, 6468.....	6 s.h.
Assessment: PSYC 6484, 6485.....	6 s.h.
Practicum: PSYC 6460, 6461, 6462, 6463, 7995, 8460.....	16 s.h.
Clinical Supervision Training: PSYC 8500.....	1 s.h.
Internship: PSYC 8990.....	6 s.h.
Pediatric School Psychology concentration.....	42 s.h.
Interventions: PSYC 6467, 7442.....	6 s.h.
Assessment: PSYC 6409, 6410 and 7411	9 s.h.
Practicum: PSYC 7950, 7951 and 8460.....	12 s.h.

Education: SPED 6701, 6702 or approved electives	6 s.h.
Statistics and Research Design: PSYC 7433 or approved elective.....	3 s.h.
Internship: PSYC 8990.....	6 s.h.

PSYC: PSYCHOLOGY

5250. Topics in Psychology (3) (WI*) May be repeated for up to 6 s.h. with change of topic. P: Minimum of 9 s.h. in PSYC. Selected topics at advanced level. Topics vary.

5325. Introduction to Psychological Testing (3) P: PSYC 1000 or 1060 or consent of chair: A statistics course. Principles of testing, including requirements for validity, reliability, norm samples, and examples of psychological tests.

5380. Psychology of the Exceptional Child (3) P: PSYC 1000 or 1060 or consent of chair: Study of children who are markedly different from the average child in physical, mental, emotional, academic, or social characteristics.

5400. Advanced Gerontology (3) P: PSYC 1000 or 1060; GERO 2400 or consent of chair: Seminar on psychological research and its applications to the aged.

5990, 5991, 5992. Field Experience in Psychology (1,1,1) May be taken concurrently. Accepted graduate psychology students spend approximately 10 hours per week per credit hour in lab/field experiences under joint supervision of field supervisor and university instructor. May count maximum of 3 s.h. of field experience toward BA or MA PSYC requirement. Additional hours may count toward electives. P for undergraduate students: PSYC major; 9 s.h. in PSYC; minimum cumulative and PSYC major 2.0 GPA; dept consent. P for graduate students: PSYC major; minimum cumulative and major GPA of 3.0 in PSYC; dept consent. Applies concepts and principles from related courses to applied situations in field.

6312. Laboratory Methods in Behavioral Neuroscience (3) Formerly PSYC 5312, 5313 1 lecture and 4 lab hours per week. P: Consent of chair: Basic techniques of animal surgery, histological examination, drug administration, and behavior testing.

6315. Neuroscience: Literature and Laboratory Experience (3) Formerly PSYC 5315, 5316 May be repeated. May count a maximum of 12 s.h. 1 hour seminar and 8 hours lab per week. P: Consent of chair: Recently published research and participation in ongoing research.

6320. Behavioral Pharmacology Seminar (3) Formerly PSYC 5320 P: Consent of chair: Behavioral and neurophysiological effects of psychoactive drugs in experimental animal and clinical populations.

6327. Methods in Human Measurement (3) P: Statistics course or consent of chair: Rationale and techniques of psychological measurement. Advanced estimates of reliability and validity, questionnaire and test construction, and fair employment procedures.

6333. Applied Behavior Analysis (3) P: PSYC 4333 or consent of chair: Advanced study of principles, applications, and research methodology of behavior analysis.

6343. Psychology of Organizational Behavior (3) P: PSYC 3241 or consent of chair: Systems approach to understanding behavior in work organizations.

6350. Psychology of Sexual Behavior (3) P: Consent of chair: Research relating to psychological aspects of sexual behavior.

6353. Behavioral Assessment and Intervention (3) P: PSYC 4333 or 6333 and consent of chair: Applies behavioral principles to assessment and intervention with children and adults with developmental and/or learning disabilities, behavioral disorders, psychiatric diagnoses, medical illness and health/fitness-related issues.

6380. Interdisciplinary Practice: Services for Children with Serious Emotional Disturbances and Their Families (3) Same as CDFR 6380 and SOCW 6380 P: Consent of chair: System of care model for use across disciplines in mental health services for children with serious emotional disturbances and their families. Prepares professionals to participate in holistic, interdisciplinary team practice in variety of settings.

6402. School Consultation (3) P: Consent of chair: Theory, models, and methods of consultation and systems change in schools.

SECTION 8: CURRICULA

- 6404. Professional School Psychology (3)** P: Consent of chair. History, foundations, models of service delivery, and legal and ethical issues in school psychology.
- 6405. Advanced Educational Psychology (3)** Comprehensive study of psychological principles and techniques as applied to various aspects of human learning. Emphasis on relationships between brain functions and learning processes.
- 6406. Advanced Developmental Psychology (3)** P: Consent of chair. Review of theories and research dealing with developmental change. Emphasis on life span development and application of developmental psychology to social service professions.
- 6407. Cultural Psychology (3)** P: Consent of chair. Current theories, concepts, and issues associated with cultural psychology, including cultural processes, structures, and differences.
- 6408. History of Psychological Thought (3)** P: Consent of chair. Review of major themes of psychological thought from the Renaissance through the 20th century.
- 6409. School Assessment I (3)** P: Consent of program director. Standardized testing procedures, applied psychometrics, and selection, administration, and interpretation of individual measures of intelligence and visual-motor abilities.
- 6410. School Assessment II (3)** P: PSYC 6409 or consent of program director. Selection, administration, and interpretation of measures of children's academic, behavioral, emotional, and social functioning.
- 6414. Biological Basis of Behavior (3)** P: Consent of chair. Biological explanation for behavior and mental processes (physiological, ontogenetic, evolutionary, and functional).
- 6420. Issues in Personnel Selection (3)** P: Consent of chair. Application of psychological research and theory to personnel selection and training.
- 6421. Social Psychology (3)** Current research and theory in selected topics such as attitudes, dehumanization and conformity, aggression, and effective group functioning and change.
- 6422. Group Dynamics (3)** Psychological nature of task-oriented groups and dynamics and principles of group processes.
- 6423. Employee Motivation and Leadership (3)** P: Consent of program director or chair. Current theories, concepts, and issues associated with the application of psychology to employee motivation and leadership.
- 6426. Motivation (3)** Research and theory in motivation.
- 6428. Cognitive Psychology (3)** P: Consent of chair. Research and theory in cognition. Research and theory in cognition. Attention, memory, imagery, language, conceptual behavior, and problem solving.
- 6430. Statistics and Research Design (3)** 2 classroom and 3 lab hours per week. P: Consent of chair. Inferential statistical application and research methodologies.
- 6440. Individual and Group Counseling Theory (2)** May not count toward degree unless PSYC 6441 is completed. Basic theory and application of principles involved in individual and group counseling. Emphasis on application of theoretical and practical approaches of group and individual counseling for school psychologist.
- 6441. Individual and Group Counseling Theory and Practice (1)** 3 hours per week in school setting under academic supervision. P: Consent of chair; PSYC 6440. Application of concepts and principles of group processes by school psychologist.
- 6450. Advanced Psychopathology (3)** P: Consent of chair. Diagnosis, etiology from several theoretical viewpoints, and implications for interventions. Broad biopsychosocial framework.
- 6452. Child and Adolescent Psychopathology (3)** P: Consent of chair. Major childhood emotional disorders. Emphasis on assessment and diagnosis.
- 6460. Clinical Psychology Practicum I (2)** P: PSYC 6466. Develop skills in intake interviewing, mental status examination, diagnostic interviewing, and other specialized assessment interviews.

- 6461. Clinical Psychology Practicum II (2)** P: PSYC 6484 or 6485. Develop skills in intellectual, visual-motor, behavior ratings, and personality evaluation with major psychology assessment instruments.
- 6462. Advanced Clinical Psychology Practicum I (1)** 4 hours of clinical training per week. P: Consent of chair. May be repeated. May count a maximum of 6 s.h. Individual and/or group psychotherapy, and/or assessment with adults and/or children.
- 6463. Advanced Clinical Psychology Practicum II (2)** May be repeated. May count a maximum of 6 s.h. 8 hours of clinical training per week. P: Consent of chair. Individual and/or group psychotherapy, and/or assessment with adults and/or children.
- 6465. Ethics and Professional Practice (3)** P: Consent of chair. Seminar reviews ethical principles and practice issues relevant to professional psychology.
- 6466. Psychotherapy Concepts and Techniques (3)** P: Consent of chair. Basic theory with an emphasis on object relations, self psychology, and interpersonal specialties.
- 6467. Psychotherapeutic Interventions with Children and Families (3)** P: PSYC 6452 or consent of chair. Theoretical models, system of care components, and therapy techniques for working with children with emotional problems and their families. Ecological interpersonal and behavioral approaches.
- 6468. Psychotherapy: Theories, Research, and Practice (3)** P: PSYC 6450 or consent of chair. Psychotherapy research, theories, and techniques. Professional issues and ethical and value considerations.
- 6475. Personality and Individual Differences (3)** Theories and research on personality and individual differences with emphasis on contemporary views and perspectives.
- 6477. Seminar in Group Psychotherapy (3)** P: Psychotherapy or counseling course or consent of chair. Principles of existential and other group psychotherapies. Emphasis on specific populations, research, and cultural issues. Training group experience.
- 6484. Cognitive Assessment (3)** C: PSYC 6461. Introduction to the process of cognitive assessment and the administration, scoring, and interpretation of major intelligence tests.
- 6485. Clinical Assessment (3)** C: PSYC 6461. Selection and use of appropriate psychological assessment procedures leading to integrated report of findings for evaluation of emotional disorder and personality functioning with a wide variety of presenting problems.
- 6486. The Rorschach Technique (3)** P: Consent of chair. Intensive study of Rorschach technique. Emphasis on Exner's administration, scoring, and interpretive system to assess personality functioning of individual.
- 6501, 6502, 6503. Problems in Psychology (1,1,1)** P: PSYC major or minor; consent of chair. Individual study under supervision of staff member.
- 6510. Assessment in Mental Retardation and Developmental Disabilities I (3)** P: Consent of chair; PSYC 5325. Selection, administration, scoring and interpretation of several measures of intellectual, adaptive, and language development functions.
- 6511. Assessment in Mental Retardation and Developmental Disabilities II (3)** P: PSYC 6510. Assessment techniques for individuals who are significantly impaired, by visual, auditory, and motor handicaps; autism; and severe and profound mental retardation.
- 6519, 6520. Directed Research I, II (3,3)** P: Consent of chair. Individual research.
- 6521. Special Topics in Industrial/Organizational Psychology (3)** Basic understanding of current theoretical and applied issues relevant to study and practice of industrial/organizational psychology. Emphasis on newly developed technology and research in areas such as organizational theory, small group theories and processes, teams, and organizational development. Topics vary with new research.

SECTION 8: CURRICULA

6800. Teaching Psychology (3) P: Consent of chair. Develop lesson plans, course delivery systems, effective teaching approaches, and methods of classroom management, testing procedures, tests, teaching of specific areas, and related matters. Information, theory, and training necessary to teach (under supervision) 2000-level or below psychology courses.

6810. Practicum in Teaching Psychology (3) P: PSYC 6800 and consent of chair. Assists assigned faculty member in all aspects of course instruction, including lesson plans, course delivery systems, provision of class lectures, and design and implementation of all student evaluations and tests.

6815. Seminar in Behavioral Neuroscience (1) May be repeated. May count a maximum of 8 s.h. P: Consent of chair. Critique of current literature in behavioral neuroscience.

6960, 6961. Internship in Mental Retardation/Developmental Disabilities I, II (2,2) P: Consent of chair; P for 6961 only: PSYC 6510, 6511. Application of behavioral technology and assessment and behavioral programming techniques in facilities serving individuals with mental retardation/developmental disabilities.

6970. Internship in Industrial/Organizational Psychology (3) P: Consent of chair. Professional experience in organizational application of psychological techniques and principles.

6980, 6981, 6982. Field Experience in Psychology (1,1,1) May be taken concurrently. May count maximum of 3 s.h. field experience toward PSYC MA. Approximately 10 hours per week per credit hour in lab/field experiences under the joint supervision of a field supervisor and a university instructor. P: Consent of chair.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7411. School Assessment III (3) Formerly PSYC 6411 P: PSYC 6410; 6452. Selection, administration, and interpretation of instruments and measures to assess preschool children and children with low-incidence handicaps and health related conditions.

7412. Advanced Behavioral Neuroscience (3) P: Consent of chair. Advanced study of research and theories on neural mediation of behavior and cognitive functions.

7413. Pediatric Clinical Neuropsychology (3) Formerly PSYC 6413 P: Consent of chair. Basic procedures for assessment and intervention of neuropsychological syndromes in children.

7414. Adult Clinical Neuropsychology (3) P: Consent of chair. Research, theory, and basic procedures for assessment of neuropsychological syndromes in adults.

7427. Advanced Principles of Learning (3) P: Consent of chair. Intensive review of principles of learning and advanced study of the field of learning.

7431. Advanced Research Design (3) Formerly 6431 P: Consent of chair and PSYC 6430 or equivalent (inferential) statistics course. Introduces multivariate analysis and research design. to students preparing to engage in research.

7433. Multivariate Statistical Analysis (3) Formerly PSYC 6433 P: PSYC 7431 or consent of chair. Computation and interpretation of multivariate statistical analyses.

7442. Psychological and Educational Interventions (3) Formerly PSYC 6442 P: Consent of chair and PSYC 6409, 6410. Plan, implement, and evaluate psychological and educational interventions for children's academic and behavior problems.

7501. Employee Evaluation and Development (3) P: Consent of chair. Current theories, concepts, and issues associated with the application of psychology to employee performance appraisal and training.

7502. Leadership Assessment (3) P: PSYC 6423 or consent of chair. Current theories, concepts, and issues associated with leader evaluation and assessment methods.

- 7503. Career Development and Executive Coaching (3)** P: Consent of chair: Current theories, concepts, and issues associated with the application of psychology to employee career progression and one-on-one leadership development.
- 7504. Occupational Health Psychology (3)** P: Consent of chair: Current theories, concepts, and issues associated with the application of psychology to occupational health.
- 7505. Structural Equation and Hierarchical Linear Modeling (3)** P: PSYC 7433 or consent of program director or chair: Computation and interpretation of causal and multi-level statistical models.
- 7506. Counterproductive Work Behavior (3)** P: Consent of chair: Current theories, concepts, and issues associated with deviant and counterproductive behavior in the workplace.
- 7800. Advanced Practicum in Teaching Psychology (2)** P: Admission to the PhD program in health psychology; PSYC 6810 or equivalent teaching experience; consent of chair: Full-time independent teaching experience for graduate instructors teaching 2000-level and below psychology courses under the supervision of a faculty mentor providing both individual and group supervision.
- 7950. Practicum in Therapeutic Approaches with Children (3)** P: Consent of chair: Supervised practicum in counseling with individuals and groups.
- 7951. Practicum in Psychoeducational Assessment (3)** P: PSYC 6409, 6410. Practicum experiences in psychoeducational techniques, procedures, and the analysis and interpretation of psychological tests results.
- 7992. School Internship I (3)** P: Completion of MA in school psychology degree requirements; current standing in CAS in school psychology program. Full-time, supervised experience providing school psychological services in public school setting.
- 7993 School Internship II (3)** P: PSYC 7992. Full-time, supervised experience providing school psychological services in public school setting.
- 7995. Advanced Clinical Psychology Practicum III (3)** May be repeated. May count a maximum of 6 s.h. 12 hours of clinical training per week P: Consent of chair: Individual and/or group psychotherapy and/or assessment with adults and/or children.
- 8001. Colloquium in Health Psychology (1)** P: Admission to PhD program in Health Psychology or consent of chair: May be repeated. May count a maximum of 4 s.h. Current research, practice and ethical issues in health psychology.
- 8002. Health Psychology (3)** P: Consent of chair: Comprehensive introduction to the field of health psychology, including the promotion and maintenance of physical health, the prevention and treatment of physical illness and causal and diagnostic correlates of health and illness for children and adults.
- 8003. Clinical Health Psychology in Primary Care (3)** P: Consent of chair: Theory, research and practice of clinical health psychology in primary care settings.
- 8404. Pediatric School Psychology (3)** P: Consent of chair: Etiology, behavioral/academic characteristics and interventions for pediatric medical disorders in both school and health settings.
- 8416. Psychopharmacology (3)** P: Consent of chair: The biological basis, clinical application, and side effects of the major psychotropic medications used in the management and treatment of psychological and behavioral disorders.
- 8460. Health Psychology Practicum (3)** May be repeated. May count a maximum of 12 s.h. P: Consent of instructor: Supervised clinical experience with assessment, consultation and intervention for health related problems in a variety of health care settings.
- 8468. Health Psychology: Psychotherapy Methods and Interventions (3)** P: Consent of chair: Major theories, models, and empirically-supported principles of health behavior change in behavioral medicine.
- 8500. Seminar in Clinical Supervision (1)** P: Consent of chair: Theoretical models of therapy supervision, legal and ethical issues in supervision, the role of individual differences in supervision, and identification and response to common problems in supervision.

SECTION 8: CURRICULA

- 8519. Directed Research (3)** May be repeated. P: Consent of chair. Research in health psychology
- 8990. Predoctoral Internship (3)** May be repeated for a maximum of 6 s.h. P: Consent of chair. Applied assessment, treatment, consultation, and use of professional ethics at an offsite internship location accredited by the American Psychological Association.
- 8994. Seminar in Pediatric School Psychology (3)** P: Consent of chair. Etiology and developmental course of pediatric health conditions emphasizing the adverse impact of a variety of medical conditions of children's functioning across school, family, and community environments.
- 8995. Seminar in Health Psychology (3)** P: Consent of chair. May be repeated with a change of topic. Special topics in health psychology.
- 8996. Seminar in Applied Occupational Health Psychology (3)** P: Consent of chair. Applied topics relating to occupational health psychology.
- 9000. Dissertation (3-12)** May be repeated. May count a maximum of 12 s.h.
- 9001. Dissertation: Summer Research (1)** May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

RELIGIOUS STUDIES

Derek Maher, Director, 235 Austin Building

RELI: RELIGIOUS STUDIES

- 5000. Religious Studies Seminar (3)** May be repeated for credit with change of topic. P: Consent of instructor or director of RELI. Interdisciplinary seminar examines selected topics.

DEPARTMENT OF SOCIOLOGY

Leon Wilson, Chair, A-415 Brewster Building
A.J. Jacobs, Director of Graduate Studies, A-405 Brewster Building

MA IN SOCIOLOGY

In addition to a traditional liberal arts master's program, students may choose to pursue one of three areas of concentration: health services and research, social issues in regional development, and environment and society. Through graduate assistantships, practica, and participation in faculty research, students in these concentrations are expected to become affiliated with a university institute or center related to the student's interest.

Admission Requirements: Two letters of recommendation and meet the admission standards of the Graduate School. Where an admission examination is required, it is the Graduate Record Examinations.

The MA degree requires **30 s.h.** if a student elects to complete a capstone practicum or thesis; otherwise, the degree requires **36 s.h.**

- 1. Research skills: SOCI 6312, 6313 or some substitute approved by the graduate director.
- 2. Required core courses: SOCI 6212, 6213, 6312, 6313, 6459, 6488.....12 s.h.
- 3. Electives: With approval of the director of graduate studies, students select elective courses that are relevant to their concentration or to their career interests.....12 s.h.
- 4. Capstone course: SOCI 6992 or SOCI 7000.....6 s.h.
Students selecting one of the three concentrations will normally do a practicum in affiliation with a university institute described above. Students who choose not to do a practicum or a thesis must complete the degree by taking an additional 12 s.h. of elective courses with the approval of the graduate program director.
- 5. All students must pass a written comprehensive examination following the completion of their required core courses.

SOCI: SOCIOLOGY

5100. Seminar in Social Inequality and Diversity (3) P: Graduate standing in SOCI or consent of instructor. Critical examination of theory and research on stratification. Consequences for industrial and nonindustrial societies. Emphasis on method and design for analysis.

5200. Seminar in the Sociology of Health (3) P: SOCI 2110 or consent of instructor. Individual as health care consumer. Social factors affecting distribution of disease in population, socio-political structure of health care services in US, and health care system from perspective of various health care providers.

5300. Seminar in Juvenile Delinquency (3) P: SOCI 2110 or consent of instructor. Juvenile delinquency as a socio-legal phenomenon. Special attention to theoretical and methodological issues in study of delinquency, consequences of and societal responses to delinquency, and prediction and intervention techniques.

5318. Social Aspects of Death and Dying (3) P: SOCI 2110 or consent of instructor. Sociological perspective. Focus on organizational aspects of death and dying as process and status.

5335. Sociology of Marriage Problems (3) For students planning to work in marriage counseling. P: SOCI 2110; consent of instructor. Advanced study of nature, causes, consequences, and treatment of marriage problems. Supervised individual experience in sociological and counseling techniques.

5400. Seminar in Gender Roles (3) P: SOCI 2110 or graduate standing or consent of instructor. Origins of gender roles and gender stratification. Personal, interpersonal, and social consequences of gender. Alternatives to traditional gender relations.

5500. Seminar in Population (3) P: SOCI 3222 or 3225 or 3235 or consent of instructor. Intensive study of substantive theory, methods of population analysis, and select problems of population dynamics, communities, and regions.

5600. Seminar in Aging (3) P: SOCI 2111 or consent of instructor. Places experience of aging in social context. Begins with examination of aging from demographic and entitlement perspectives and concludes with application of sociological theory to changing self definition accompanying age-related functional decline.

5700. Seminar in Social Interaction (3) P: SOCI 2110 or graduate standing. Empirical research on interaction in small groups and relations between group structure and personality. Emphasis on micro-sociological research methods and results.

5800. Seminar in the Family (3) P: SOCI 2110 or graduate standing or consent of instructor. Sociological theories, methods, and applications involving family and social policies. Emphasis on comparative and social historical perspectives for understanding family in social context and change.

6010. Seminar on Immigration (3) Sociological analysis of ongoing debates regarding the causes and consequences of immigration; implications for social diversity and inequality.

6100. Aging and Health (3) Same as GERO 6100; MPH 6100 P: Consent of instructor or Center on Aging associate director for educational programs. Analysis of behavioral, social, and cultural influences upon health status of older adults and intervention strategies.

6212, 6213. Social Statistics (3,0) Principles underlying application of statistical techniques to sociological research data. Application of packaged computer programs to problems.

6300. Seminar in Environment and Society (3) In-depth treatment of human dimensions of environmental conditions and issues. Emphasis on society as cause of environmental problems and social impacts of these problems at regional, national, and international levels.

6312, 6313. Multivariate Techniques and Analysis (3,0) P: SOCI 6212, 6213. Multivariate techniques currently used in sociology (beginning with multiple regression). Evaluates published research using these techniques. Applies techniques to real data. Integrates sociological theory and statistics.

6400. Social Issues in Regional Development (3) Social, cultural, and development issues facing regions such as eastern NC within context of social changes occurring in American society. Macro and micro sociological theories used to explore relationships between local issues (e.g., gender, race, class, power, poverty, and community) and national and international trends (e.g., demographic, social, and cultural).

SECTION 8: CURRICULA

6430. Society and the Individual (3) Influence of culture and social relations on character structure and development of human personality. Draws from anthropological, sociological, and psychological materials.

6459. Seminar on Modern Sociological Theory (3) Comparison and analysis of concepts, conceptual schemes, and theories of leading contemporary theorists in relation to modern research.

6488. Seminar in Research Methods and Design (3) P: SOCI 6312, 6313. Research methodology, experimental and survey designs, and scaling and sampling techniques. Field projects designed and carried out by class. Critical analysis of techniques and results.

6500. Qualitative Methods (3) Study and practice of participant-observation, in-depth interviews, and related methodologies used by sociologists.

6521. Readings in Sociology (1) P: Consent of instructor and dept chair. Modern sociological research monographs or specialized areas of sociology in which student has taken one or more courses.

6523. Readings in Sociology (3) May be repeated for a maximum of 6 s.h. P: Consent of instructor and dept chair. Extensive readings from modern sociological research monographs or specialized areas of sociology in which student has taken one or more courses.

6600. Society and Coastal Policy (3) Sociological perspectives on relationship among society, marine and coastal science, coastal environmental problems and issues, and public policy formation. Special consideration given to current coastal environmental issues pertinent to NC.

6900. Special Topics Seminar (3) May be repeated. Selected advanced topics in sociology.

6992. Practicum (6) 135 hours of relevant field work. P: Approval of dept graduate faculty and student's practicum committee. Plan, implement, and evaluate individual project of applied sociology.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

SOCI Banked Courses

5311. Contemporary Social Problems (3)

6418. Research in Marriage and the Family (3)

6429. Seminar in Social Organization (3)

6431. Seminar on Deviant Behavior (3)

6445. Seminar on Racial and Cultural Contacts (3)

6490. Small Group Research (3)

WOMEN'S STUDIES

Marieke Van Willigen, Director, B-103 Brewster Building

The graduate women's studies minor consists of 9 s.h. of graduate-level course work designed to complement the student's major field by exploring the experience of women in relationship to issues of gender, race/ethnicity, sexual orientation, class, political structures, and social systems. The minor encourages critical thinking, seeks new knowledge, and explores feminist theory across cultural and disciplinary boundaries.

The minor includes the theoretical foundations course, WOST 5000, and at least two courses from the following: SOCI 5400; CDFR 5300; SOCW 5007; WOST 6100; a maximum of 3 s.h. in WOST 6101, 6102, 6103, or approved courses at the graduate level.

WOST: WOMEN'S STUDIES

5000. Advanced Seminar in Women's Studies (3) P: Consent of instructor; Interdisciplinary. History and development of feminist theories that shape women's studies. Readings reflect international and multi-ethnic perspectives by including materials from variety of countries and cultures.

6100. Special Topics in Women's Studies (3) Selected advanced topics in women's studies. Topics vary depending on student interest and current issues in women's studies.

6101, 6102, 6103. Independent Study (1,2,3) Intensive research in selected area of women's studies.

COLLEGE OF ALLIED HEALTH SCIENCES

Stephen W. Thomas, Dean, 3206H Health Sciences Building

The East Carolina University College of Allied Health Sciences, established in 1967-68, was created in response to the growing need for allied health professional and health care services in eastern North Carolina and the state.

The mission of the College of Allied Health Sciences is to improve the quality of health through leadership, excellence, and innovation in the delivery of progressive baccalaureate, master's, doctoral, and continuing education programs, providing professional and clinical services and conducting basic, clinical and applied research.

The College of Allied Health Sciences (part of the Division of Health Sciences) is comprised of eight departments: Biostatistics (BIOS), Clinical Laboratory Science (CLSC), Communication Sciences and Disorders (CSDI), Health Services and Information Management (HSIM), Occupational Therapy (OCCT), Physical Therapy (PTHE), Physician Assistant Studies (PADP), and Rehabilitation Studies (REHB). The college offers 15 bachelors, masters, and doctoral degrees, seven minors, and eight graduate certificates.

HIMA: HEALTH INFORMATION MANAGEMENT

5060. Health Informatics (3) P: Consent of instructor. Informatics in health care delivery systems with focus on the clinical, public health, and consumer aspects.

HPRO: HEALTH PROFESSIONS

5000. Seminar in Human Sexual Dysfunctions (3) Explores problems in human sexual behavior and functioning. Emphasis on development of assessment and intervention skills in delivery of sexual health care to broad spectrum of clients.

5011, 5012. Gross Anatomy (5,0) P: Enrolled in OCCT or PTHE programs or consent of dept chairs. Structure of human body. Lab dissection.

5030, 5031. Neuroanatomy (3,0) P: Enrolled in OCCT or PTHE programs or consent of dept chairs; HPRO 5011, 5012. Relationship between structure and function of the nervous system and foundations of neurology. Pathophysiology of specific neurologic disorders common to practice of occupational and physical therapy.

DEPARTMENT OF BIOSTATISTICS

Paul Vos, Chair, 2435C Health Sciences Building

Located within the College of Allied Health Sciences, the Department of Biostatistics offers a variety of statistical consulting, teaching, and collaboration services to the College of Allied Health Sciences, the Brody School of Medicine, and the university as a whole. The Department offers courses at both the undergraduate and graduate level.

BIOS: BIOSTATISTICS

5010. Epidemiology for Health Professionals (3) P: BIOS 1500 or consent of instructor. Distribution of disease in human populations and factors that influence this distribution. Emphasis on leading causes of death, evaluating health research, and utilizing epidemiologic methods.

7021. Biostatistics for Health Professionals I (3) Formerly BIOS 6021 P: MATH 1065 or consent of instructor. Applies statistical methods to health sciences. Types, organization, and display of data; elementary probability; parametric and nonparametric techniques when dealing with one or two samples (matched and independent); one way ANOVA; and simple linear regression.

7022. Biostatistics for Health Professionals II (3) Formerly BIOS 6022 P: BIOS 7021 with a grade of B or better or consent of instructor. Continuation of BIOS 7021. Topics include ANOVA for multi-factor designs and analysis of single degree of freedom contrasts; randomized block and repeated measures designs; nonparametric methods for standard designs; multiple linear and logistic regression; and chi-square analysis of contingency tables.

7501. Experimental Design (3) Formerly BIOS 6501 P: BIOS 7021 or equivalent with a grade of B or better or consent of instructor. Experimental designs and their analysis. Topics include completely randomized, randomized block, Latin square, and split-unit designs; factorial treatment structures and repeated measures designs; multiple comparison procedures; tests of normality and homogeneity of variance; measures of effect size; and power considerations.

7550. Applied Multivariate Analysis (3) Formerly BIOS 5450 P: BIOS 7021 or equivalent with a grade of B or better or consent of instructor. Overview of the most commonly used multivariate statistical techniques. Topics include Hotelling's T-square, MANOVA, discriminant analysis, cluster analysis, principal components, factor analysis, canonical correlation, multidimensional scaling, and correspondence analysis.

7560. Nonparametric Statistical Methods (3) Formerly BIOS 5500 P: BIOS 7021 or equivalent with a grade of B or better or consent of instructor. Statistical methods requiring less restrictive assumptions (than parametric methods) about the form of the population distribution. General linear rank statistics, tests and estimation of location, dispersion, regression, and association in the nonparametric setting.

7570. Introduction to Survival Analysis (3) Formerly BIOS 5575 P: BIOS 7021 or equivalent with a grade of B or better or consent of instructor. Statistical methods for time-to-event data, including censoring, hazard rates, estimation of survival curves, and methods to compare survival curves. Applications to clinical trials.

7580. Categorical Data Analysis (3) Formerly BIOS 5600 P: BIOS 7021 or equivalent with a grade of B or better or consent of instructor. Introduction to the analysis of categorized data; rates, ratios, and proportions; relative risk and odds ratio; Cochran-Mantel-Haenszel procedure; life table methods; linear models for categorical data. Applications in demography, epidemiology, and medicine.

DEPARTMENT OF COMMUNICATION SCIENCES AND DISORDERS

Gregg D. Givens, Chair, 3310W Health Sciences Building

Monica Strauss Hough, Director of Graduate Studies, 3310V Health Sciences Building

For all graduate program, students must review the departmental minimal technical standards to ensure they meet the minimum capabilities to perform in the professions. The standards are accessible on the department Web site (www.ecu.edu/csd).

MS IN COMMUNICATION SCIENCES AND DISORDERS

Graduate programs are accredited by the Council for Academic Accreditation of the American Speech-Language-Hearing Association.

Admission

Application for admission to the graduate program in communication sciences and disorders must be initiated through the Graduate School. (See Section 2, Admission and Readmission.) The department requires that the applicant take the Graduate Record Examination (GRE) with minimum combined scores of 900 on the verbal and quantitative sections of the examination (absolute minimum of 400 on each section). A minimum overall cumulative GPA of 3.0 on a 4.0 scale in undergraduate work is required with a minimum of 3.2 in the major area of study. The applicant must submit three letters of reference with at least two from faculty of the college(s) or university(s) previously attended. A face-to-face or telephone interview is required to be considered for admission into the program.

Completed applications should be received no later than January 15 for enrollment in the fall semester. Applications for full-time study beginning in either the spring or summer semesters will be considered only under special circumstances because of the sequential nature of the program of study. Students interested in being considered for a graduate or research assistantship should complete the graduate assistantship form on the departmental Web site (www.ecu.edu/csd).

Major Areas of Study

Candidates for the MS degree in communication sciences and disorders may select from the major emphasis areas of speech-language pathology and communication sciences.

The speech-language pathology emphasis area is a professional program designed to prepare students for immediate placement in public school and other clinical positions. Persons completing this program of study must meet all academic and clinical

SECTION 8: CURRICULA

requirements for certification by the American Speech-Language-Hearing Association, licensure in North Carolina as well as in most other states, and graduate certification by the North Carolina State Department of Public Instruction.

The communication sciences emphasis area is tailored to the special interests of the students. The course of study can include a substantial portion of the courses in the speech-language pathology and audiology emphasis areas. Additionally, students are required to complete a thesis and successfully pass a final oral defense of the thesis.

Degree Requirements

The university confers the degree of master of science in communication sciences and disorders when the candidate has earned at least 54 s.h. of graduate credit. An additional 6 s.h. of graduate credit is available for those interested in receiving the Advanced Certificate of Teaching from the Department of Public Instruction.

A background of undergraduate courses in speech and hearing sciences is essential. For those students who do not have an undergraduate degree in the field, specific undergraduate courses must be taken prior to formally beginning the MS degree sequence. The following undergraduate courses or their equivalent must be taken prior to enrolling in graduate courses: CSDI 3010 (phonetics), 3020 (child language development), 3030 (anatomy, physiology, and acoustics), 3050 (acquisition and development of phonology and articulation), 3105 (hearing science), 4100 (introduction to audiology), 4110 (aural rehabilitation). See requirements for the BS degree in the undergraduate catalog for course descriptions.

Candidates are required to take and pass a final comprehensive examination, which may be taken upon completion of enrollment in all didactic courses required for the degree in the major area of study.

Required Courses

Regardless of the major emphasis area chosen, 9 s.h. of specific core courses are required as follows: CSDI 6100, 6103, 6121. The communication science emphasis requires an additional 6 s.h. (CSDI 6101, 6523). The communication sciences emphasis also requires a thesis. For the speech-language pathology emphasis, only 3 s.h. of thesis credit may count toward the degree. For the communication science emphasis, 6 s.h. of thesis are required for the degree.

In addition to the general core requirements, the emphasis in speech-language pathology requires an additional 33 s.h. of didactic courses. These courses include CSDI 6101, 6104, 6106, 6108, 6109, 6110, 6112, 6113, 6114, 6200, 6320, 6321, 6901. Clinical course requirements include: CSDI 6226, 6227, 6229, 6992, 6993. CSDI 6111 and 6117 are available as electives, but cannot replace any of the required courses.

For the candidate whose major area of study is in speech-language pathology a minimum of 250 clinical clock hours in the diagnosis and treatment of communication disorders is required at the graduate level.

If there are no hours accumulated at the undergraduate level, 375 hours will be required at the graduate level to meet certification and licensure requirements as set forth by the American Speech-Language-Hearing Association and the North Carolina State Board of Examiners.

DOCTORAL PROGRAMS IN COMMUNICATION SCIENCES AND DISORDERS

The doctoral programs are designed for advanced scholars with interest in communication sciences and disorders. The doctoral programs consist of PhD programs in speech-language pathology and audiology, or communication sciences, as well as a joint AUD/PhD degree program in audiology. Students may enroll in either the PhD program in speech-language pathology, audiology, or communication sciences or in the joint AuD/PhD degree program. Students enrolled in the PhD programs are required to take course work in a science core, which includes computer applications to the fields, physiology, acoustics and language science (speech-language pathology concentration), a support core taken across disciplines, a statistics core, and an area of concentration developed with the major professor. Students enrolled in the AuD/PhD degree program are required to take course work in a science core, which includes computer applications to the fields, physiology and acoustic sciences, a statistics core, a clinical audiology core, and a clinical residency. All students are required to complete a dissertation project prior to being awarded the degree.

Admission

The Admissions Committee will make a holistic judgment of applicant qualifications. Admission to study at the doctoral level requires acceptance by the Graduate School and the department. The application for admission to the Graduate School and

official transcripts from each college or university attended must be sent to the dean of the Graduate School. In addition, the following must be received by the Graduate School: Graduate Record Examination scores; three letters of recommendation, with at least two from previous faculty of previous colleges or universities attended; a sample of scholarly writing which may be a thesis, a published or unpublished reprint, or term paper; and a statement that summarizes in as much detail as possible the reasons for pursuing doctoral study and doctoral research objectives.

A bachelor's, master's, or AuD degree is required for entrance into the doctoral programs. Acceptable performance on the Graduate Record Examination and a minimum cumulative GPA of 3.5 on a 4.0 scale in graduate work are required. Post-baccalaureate entry into the joint AuD/PhD is offered.

Applicants seeking admission to doctoral study should have completed a well-integrated program of study that includes course work in biological/physical sciences and mathematics, behavioral and/or social sciences, and human communication sciences and disorders. Applicants for all doctoral degrees are accepted on a rolling basis; admission can occur in either fall, spring, or summer semesters. Priority for financial support through the Department of Communication Sciences and Disorders will be given to individuals whose applications are complete and submitted by February 1st.

Admission Requirements for PhD (emphasis in speech-language pathology, audiology or communication sciences):

1. A bachelor's or master's degree from an accredited institution or its equivalent, in speech-language pathology, audiology, communication sciences or related area, with a minimum overall grade point average of 3.5 (on a scale of A=4.0) in graduate work is required for admission to the PhD program with emphasis in speech-language pathology or communication sciences program. A bachelor's or master's in speech-language pathology, communication sciences or related areas, or AuD degree or its equivalent from an accredited institution is required for admission into the audiology PhD program. For the audiology PhD program, a minimum overall grade point average of 3.0 (on a scale of A = 4.0) for a bachelor's degree is required. A minimum overall grade point average of 3.5 (on a scale of A = 4.0) is required for master's and AuD work for applicants to the audiology PhD program.
2. The Graduate Record Examination must have been taken within the past five years. A minimum score of 1000 (Verbal and Quantitative subtests) will be required for consideration of admission. The Graduate Record Examination is waived as an entrance requirement for Merit Scholars at East Carolina University if other criteria are met. Post-baccalaureate admissions will be considered on a case-by-case basis.
3. Three letters of recommendation, at least two from faculty of the college(s) or university(s) previously attended are required.
4. A sample of scholarly writing which may be a thesis, a published or unpublished reprint, or term paper must be submitted.
5. A statement that summarizes reasons for pursuing doctoral study and doctoral research objectives in as much detail as possible must be included.
6. A face-to-face or telephone interview is required.

Admission Requirements for Joint AuD/PhD:

1. Applicants must have a baccalaureate or master's degree from an accredited institution.
2. The applicant must have an undergraduate grade point average of 3.2 on a 4.0 scale. The applicant with a master's degree or its equivalent must have a minimum overall grade point average of 3.5 (on a scale of A=4.0) in graduate work.
3. The following undergraduate course prerequisites are required: life sciences (6 s.h.), physical sciences (3 s.h.), behavioral sciences (6 s.h.), English (3 s.h.), mathematics (3 s.h.), statistics (3 s.h.), anatomy and physiology (3 s.h.), introduction to audiology (3 s.h.), speech and hearing sciences (3 s.h.), language development (3 s.h.). Other courses in communication sciences and disorders are strongly encouraged.
4. The Graduate Record Examination must have been taken within the past five years. A minimum score of 1000 (Verbal and Quantitative subtests) is required for consideration of admission. Graduate Record Examination is waived as an entrance requirement for Merit Scholars at East Carolina University if other criteria are met. Merit Scholars at East Carolina University will receive automatic admission to 3 of the 6 class places if application is completed before their senior year of their baccalaureate program.
5. Three (3) letters of recommendation, at least two from faculty of the college(s) or university(s) previously attended are required.
6. A face-to-face or telephone interview is required.

Degree Requirements

PhD Program: Communication Sciences, and Speech-Language Pathology and Audiology

The PhD program requires a minimum **53 s.h.** of didactic and research experiences beyond the masters degree or 95 s.h. beyond the bachelors degree, involving the entire doctoral faculty. The student will develop a background in a science core curriculum (12 s.h.), a support core taken across disciplines (9 s.h.), a statistics core (statistics and research design) (minimum 9 s.h.), research ethics (2 s.h.), a research internship (6 s.h.), and dissertation (minimum 3 s.h.). The student and major professor will select and design an area of major concentration, including 12 s.h. of course work or independent studies.

Except for credits accepted by transfer, the Department of Communication Sciences and Disorders requires that all graduate work, including the dissertation, be completed in residence. The course of study ordinarily requires at least three years of full-time study. Students who have not completed a master's thesis are required to complete a research project by the end of the first academic year with the scope of a thesis (thesis equivalence), approved by a majority of the student's program committee.

AuD/PhD Program: Audiology

Baccalaureate admission: The post-baccalaureate AuD/PhD degree program consists of a minimum of **125 graduate credit hours** to include broad-based knowledge in areas of applied clinical audiology, structure and development of hearing and communication disorders, speech and hearing sciences, statistics, computers and instrumentation, and research design.

The AuD/PhD degree program includes the following minimum required credit hours: a science core curriculum (12 s.h.), a support core taken across disciplines (9 s.h.), a statistics core (9 s.h. in statistics and research design), clinical audiology course work (33 s.h.), clinical experience/residency (24 s.h.), and research dissertation (24 s.h.). A minimum of 14 s.h. in elective courses within or outside the department are needed; these can be additional courses in the categories stated above.

Post-Master's admission: Students with a master's degree may seek admission to the AuD/PhD degree program. Admission decisions will be made on an individual basis with review of the educational background as well as the admissions requirements. Individuals seeking post-master's entrance will be required to complete the minimum 125 graduate semester hours. Those hours may include up to 20% of approved transfer graduate credit hours.

Examination: The AuD/PhD includes a "Gateway" examination during the summer session of the first year of study. A second "Gateway" or "comprehensive" examination is administered during the summer session at the end of the third year of study. The student's program will be terminated with the second failure of the "comprehensive" examination.

Clinical Residency: The clinical residency will be the final clinical placement in audiology that may range from half-time to full-time and that allows for the development of comprehensive clinical knowledge, skills and abilities.

Clinical Defense: The Clinical Defense is an examination designed to evaluate the analysis and synthesis of clinical knowledge. This Defense will occur following successful completion of the comprehensive examination and prior to applying for graduation.

Except for credits accepted by transfer, the Department of Communication Sciences and Disorders requires that all graduate work, including the dissertation, be completed in residence. The course of study ordinarily requires five years of full-time study, post-baccalaureate degree.

Transfer Credit

Credit will be accepted for transfer at the discretion of the Department of Communication Sciences and Disorders and the dean of the Graduate School. A maximum of 9 s.h. of doctoral credit (course work taken beyond the master's degree) may be applied toward the support and/or statistics cores. Credit will not be accepted in the science core or area of concentration.

Doctoral Candidacy Requirements

Following completion of most course work and prior to admission to candidacy for the PhD, students must pass a preliminary examination intended to test fundamental knowledge in both the major and support fields. The candidate will undergo written and oral examinations for mastery of the areas of concentration, the support core, statistical applications in the area of basic and applied research, and research design. Critical analysis and synthesis of all related academic, research, and clinical aspects of the field of preparation must be demonstrated. For the clinical PhD, the second gateway examination will constitute this preliminary examination.

The student's program committee is responsible for the administration and evaluation of the preliminary examination. The recommendation of the committee is sent to the chairperson of the department who forwards to the dean of the Graduate School one of the following recommendations:

- The responses to the preliminary examination are satisfactory and the student is recommended to candidacy.
- Some responses to the preliminary examination are unsatisfactory and the student is to be re-examined at a specific time. Areas of deficiency to be rewritten and the dates of re-examination will be determined by the program committee.
- The responses to the examination are unsatisfactory and a full re-examination will be administered during the subsequent semester. Failure of the second examination results in termination of the program.

Doctoral Dissertation

After passing the preliminary examination, the candidate must initiate the development of an appropriate dissertation research project. The dissertation must reflect independent, scholarly research that will contribute significant new knowledge to the candidate's area of concentration.

Prior to initiating the dissertation research, the candidate's program committee (composed of the major professor and at least three members of the graduate faculty) must approve a prospectus of the proposed dissertation containing the following:

- A review of the pertinent literature.
- A statement of the nature of the problem and the objectives of the proposed investigation.
- A complete methodology, based on preliminary pilot investigations, which include a description and number of subjects to be studied, a discussion of the dependent and independent variables that will be manipulated, and a detailed description of the experimental procedures to be employed, including all experimental instrumentation.
- A detailed outline and justification of the statistical analysis of the data that will be obtained.
- A copy of the approved Institutional Review Board Application.

With the guidance and approval of the major professor, the candidate formally presents the prospectus to the faculty of the Department of Communication Sciences and Disorders at an open meeting. The program committee must agree that the research proposal is satisfactory, with only one dissenting vote allowed.

It is the responsibility of the program committee to counsel the candidate in the research program, critique the dissertation, and conduct the final examination. Upon the satisfactory completion of all requirements, the committee and departmental chairperson will recommend to the dean of the Graduate School the award of the doctoral degree.

The basic form of the dissertation manuscript will follow the East Carolina University manual of style. Please see the *Manual of Basic Requirements for Thesis and Dissertations* at <http://www.ecu.edu/cs-acad/gradschool/Thesis-and-Dissertation.cfm>.

Enrichment

In addition to course requirements, each student will be assigned various preceptorships, involving mentored classroom and clinical instruction and administration to assist the student in gaining perspective and experience in university teaching, clinical supervision, and management. Students will be encouraged to participate in university-wide seminars. This enrichment may include being required to take a didactic course on teaching if the student is assigned to teach courses as a part of an assistantship or other contract.

Research Internship

In addition to the didactic portion of the doctoral program, each student enrolled in the research concentration will be required to complete two predissertation directed research projects to gain perspectives and laboratory experiences in the area of concentration and/or areas outside the concentration. These projects will be publishable, data-based manuscripts, one developed by the end of each of the first two academic years. At least one of the two research internships must be completed with a faculty member whose primary appointment is in the Department of Communication Sciences and Disorders. Successful completion of an internship requires a written report approved by the supervising faculty member(s) with credit awarded for two of the following courses: CSDI 8070, 8071, 8080, 8081, 8090, 8091.

Time Limits for Completion of Degree Requirements

A doctoral degree program must be completed before the end of the twelfth semester, excluding summers, following initial enrollment. With endorsement of the student's program committee and the departmental chairperson, a student may request one extension of not more than two semesters, summers included.

CSDI: SPEECH, LANGUAGE, AND HEARING SCIENCES

5010. Procedures in Clinical Management (3) P: Consent of instructor. Procedures used in diagnostic and treatment of communication disorders. Topics include observation styles, task presentation and analysis, reinforcement techniques, group management, and intervention models. Multicultural communication models and supervised observation experiences in various clinical and public school settings.

5510, 5511, 5512. Special Problems in Speech and Hearing (2,2,2) For advanced senior and graduate students. May be repeated for maximum of 6 s.h. May count toward the CSDI major with consent of chair. Independent exploration of specific areas of interest in communication disorders and research.

6100. Language Disorders (3) P: Undergraduate course in language development. Childhood language disorders from infancy to school-age period. Principles of assessment, intervention, and classification of various types of language disorders. Specific language impairment, developmental and acquired language disorders, and autism.

6101. Language and Learning Disabilities (3) P: CSDI 6100. Oral and written language learning disabilities in school-age and adolescent populations. Contemporary theories, assessment practices, and intervention techniques used in management of those with language learning disorders and/or dyslexia.

6103. Research Design in Speech and Hearing (3) P: Undergraduate statistics course. Fundamentals of research and experimental design and basic statistical analysis in communication sciences and disorders.

6104. Seminar in Voice Disorders (3) P: CSDI 6121 or consent of instructor. Anatomy and physiology of vocal mechanism and phonatory process. Consideration of influence of pathology on phonation. In-depth study of special voice problems as well as those more commonly encountered in clinical practice and their treatment.

6106. Stuttering and Other Fluency Disorders (3) P: Consent of instructor. Current and historical concepts of nature and etiology of stuttering and other fluency disorders such as methodologies of assessment and treatment of children and adults, parent counseling, and research design.

6108. Seminar in Articulation/Phonology Disorders (3) P: Undergraduate course in articulation/phonology or consent of instructor. Phonologic/articulatory development and disorders, dynamics of articulatory production, phonetics as clinical tool, and nature and development of normal and defective articulation/phonology. Contemporary scientific methodology, technology, and research in appraisal and treatment of phonological/articulatory disorders.

6109. Motor Speech Disorders (3) P: CSDI 3020, 3030, 6110; or consent of instructor. Neurophysiology of motor speech behavior coupled with detailed clinical analyses and treatment of various forms of dysarthria and apraxia.

6110. Brain, Language, and Aphasia (3) P: CSDI 6100 or consent of instructor. Comprehensive study of correlative nature of brain and language. Emphasis on aphasiology, including neurological, cognitive, and linguistic aspects.

6111. Communication Disorders in Infants and Toddlers (3) Theory and practice in the assessment and intervention of speech and language disorders in the infant/toddler population.

6112. Seminar in Cranio-Facial Anomalies and Alaryngeal Rehabilitation (3) P: Consent of instructor. Anatomy, physiology, assessment, and treatment of persons with cranio-facial anomalies (including cleft lip and palate) and alaryngeal disorders (laryngectomy).

6113. Linguistic/Cognitive Impairments in Brain-Injured Adults (3) P: CSDI 6110 or consent of instructor. Relationships between cognition, communicative abilities, and brain in normal aging dementia, various causes of dementia, head injury, and right hemisphere brain-damage in adults.

6114. Dysphagia and Neuromotor Functions (3) Relationships between brain and neuromotor functions specifically in regard to swallowing function. Identification, characteristics, assessment, and treatment of disordered swallowing.

- 6117. Augmentative and Alternative Communication (3)** Provides an overview of augmentative and alternative communication systems (AAC), including selecting and implementing AAC for children and adults.
- 6121. Speech Science (3)** P: CSDI 3030 or equivalent. Acoustic theory of speech production and anatomical and physiological aspects of speech-motor production.
- 6200. Multicultural Communication Disorders (3)** P: Consent of instructor. Speech and language variations in regional dialects, bilingualism, foreign accent, and multicultural populations. Emphasis on assessing disorders and providing therapy to multicultural and multilingual populations.
- 6225, 6226, 6227. Clinical Practicum in Speech and Language Pathologies (1,2,3)** For CSDI graduate students. Each course may be repeated from 1-3 semesters. P: Completion of 24 s.h. of undergraduate and/or graduate academic course work in CSDI; consent of instructor. Utilization of advanced theoretical knowledge with practical application for speech-language and hearing impaired individuals under direct faculty supervision in University Speech and Hearing Clinic.
- 6229. Distance Education Clinical Internship (1-9)** May be repeated. P: Admission to the CSDI Distance Education Program; Completion of 12 s.h. academic CSDI graduate course work and/or consent of Director of Distance Education program and Director of External Clinical Education. Clinical practice in diagnostic and therapeutic procedures at clinical facilities that have affiliation agreements with ECU/CSDI, supervised by ASHA-certified and state-licensed (where applicable) speech-language pathologists.
- 6320. Clinical Methods in Speech-Language Pathology I (1)** Required one hour clinical methods course addressing basic assessment and intervention issues in Speech-Language Pathology.
- 6321. Clinical Methods in Speech-Language Pathology II (1)** P: 6320. Required one credit clinical methods course which is a continuation of CSDI 6320 addressing advanced assessment and intervention issues in Speech-Language Pathology.
- 6520. Master of Science Paper (2)** P: CSDI 6103. Formulation of lab project, a case study, or library research project. Principles and procedures of recognizing and stating problems of scientific, professional, and clinical importance in CSDI.
- 6521, 6522, 6523. Readings in Speech and Hearing Research (1,2,3)** Each course may be repeated from 1-3 semesters. P: Consent of instructor. Independent exploration of areas of interest in contemporary research in communication disorders and speech and hearing science.
- 6527, 6528, 6529. Research in Speech-Language Pathology (1-3)** For CSDI graduate students. P: CSDI 6103; consent of chair. Independent studies, lab projects, case studies, and research problems in communication sciences and disorders.
- 6800. Communication Processes and Disorders in Aging (3) Formerly CSDI 5800** Study of basic communicative processes and disorders of the aging population including anatomic and physiologic changes in the speech, language, and hearing mechanism. Service delivery issues and residential accommodations for the aging also are addressed.
- 6900. Administration and Supervision in Speech-Language Pathology and Audiology (3)** P: Consent of instructor. Methods involved in organization, management, and supervision in a public school or clinical speech-language and hearing therapy program.
- 6901. Professional Issues in Speech-Language Pathology (1)** For CSDI graduate students. P: Consent of instructor. Supervisory processes, certification, licensure, and ethics/legal issues in Speech-Language Pathology.
- 6990, 6991. Internship in Speech-Language Pathology and Audiology (1,1)** May be taken concurrently. Each course may be repeated for maximum of 3 s.h. each. P: Completion of a minimum of 1 semester of full-time graduate study at ECU and 100 patient contact hours; consent of the director of clinical operations and the dept chair. Directed experience with communicatively handicapped in clinical facility outside university.
- 6992. Internship in Speech-Language Pathology/Audiology (2)** May be repeated. P: CSDI 6990 or 6991. Directed clinical experience in university-affiliated clinical facility for a full semester.

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6993. Full-time Internship in Speech-Language Pathology/Audiology (2-9) Credit hours designated relative to clinical responsibilities of student at their specific clinical site of practice. P: Completion of minimum of 3 semesters of full-time graduate study at East Carolina University and 150 patient contact hours; consent of director of clinical operations and dept chair. Directed full-time clinical experience in university-affiliated clinical facility for full semester.

7000. Thesis (1-6) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7004. Research Ethics for a Complex World* (2) Same as GRAD 7004 P: Current enrollment in master's or doctoral program. Introductory graduate course. Case studies, readings, policy review, assignments, and discussions with guest faculty examine areas of ethical concern for researchers. Areas include scientific misconduct, conflict of interest, abusive mentoring, improper authorship practices, protection of human participants, animal subjects of research, and others.

7500. Professional Issues in Communication Disorders (3) P: Consent of instructor. Contemporary topics in administration of clinical programs in speech-language pathology and audiology, clinical supervision models, theories of leadership, state licensure and national certification standards, and legal and other current issues.

8000. Methods in Clinical Audiology (3) P: Consent of instructor. In-depth understanding of issues and employment of basic and advanced auditory tests. Emphasis on relationship between these topics and clinical competency required with advanced testing and diagnosis.

8001. Anatomy and Physiology of the Vestibular System (2) P: Consent of instructor. Functional anatomy and neurophysiology of vestibular and balance systems, from level of inner ear to central nervous system. Emphasis on describing anatomical and physiological bases for both normal and pathological vestibular and balance functions.

8002. Assessment and Management of the Vestibular System (3) P: CSDI 8001 and consent of instructor. Theory and clinical application of current electrophysiological procedures for assessing peripheral and central nervous system portions of vestibular and balance systems.

8003. Advanced Pediatric Assessment (3) P: CSDI 6001, 6019. Contemporary developments in assessment and habilitation of hearing loss in infants and children. Includes areas of otoacoustic emissions, auditory evoked potentials, acoustic emissions, and behavioral auditory assessment and auditory processing.

8004. Embryology, Genetics, and the Auditory System (3) P: CSDI 6000, 6013; or consent of instructor. Comprehensive study of embryology, genetics, and syndromes as related to auditory system.

8005. Methods in Amplification (3) P: Consent of instructor. Study of the components and functions of amplification systems, hearing aid evaluation and selection, and related regulations and guidelines. Emphasis on current research, software applications, and clinical implications for high performance technology systems.

8006. Auditory Processing (3) P: CSDI 8000 or consent of instructor. Contemporary theories of auditory processing. Methodologies in assessment and management of auditory processing skills and disorders.

8007. Methods in Clinical Audiology Lab (1) P: Consent of instructor; C: CSDI 8000. Hearing evaluation laboratory.

8009. Psychoacoustics (3) P: Consent of instructor. Examines abilities and limitations of human hearing to discover how sounds entering the ear are processed to give listener useful information about the world outside. Specific topics include measurement methods; frequency, intensity and temporal encoding; localization; and speech perception.

8010. Computer and Instrumentation Applications to Speech and Hearing Science* (3) Knowledge and skills in application of basic signal processing technologies in speech and hearing laboratories. Stimulus generation and analysis techniques as well as physiological recording methods. Emphasis on digital instrumentation training. Analog devices included as needed for certain applications.

8011. Advanced Acoustics (3) P: Consent of instructor. An advanced study of sound and acoustic vibration in the context of living organisms and hearing.

- 8012. Physiological Phonetics* (3)** P: CSDI 6121 or equivalent. Physiologic aspects of speech-motor production. Lab experiences include physiological measurements of respiratory, phonatory, articulatory, and resonance mechanisms.
- 8013. Methods in Clinical Audiology II (3)** P: CSDI 8000 or consent of instructor. Analysis and synthesis of results from advanced audiological testing (behavioral, electrophysiological, and neurological) and differential diagnosis of auditory pathologies.
- 8014. Acoustic Phonetics* (3)** P: CSDI 6121 or equivalent. Acoustic theory of speech production and acoustic analysis of speech. Lab experiences include modern analytical techniques in speech analysis.
- 8015. Electronic Instrumentation and Calibration in Speech and Hearing (3)** An advanced study of electronics, circuits, and instruments used in basic and applied research in the hearing and speech sciences.
- 8016. Auditory Physiology* (3)** P: CSDI 6009, 6010; or equivalent. Functional anatomy and physiology of auditory nervous system, from level of inner ear to cerebral cortex. Emphasis on describing anatomical and physiological bases for both normal and pathological hearing functions.
- 8017. Advanced Methods in Amplification II (3)** P: CSDI 8005 or consent of instructor. Study of hearing aid selection, verification and outcome measures, fitting of amplification in special populations; includes in-class lab exercises.
- 8018. Neurolinguistics* (3)** P: CSDI 6101, 6103, 6110; or equivalent. Relationships between brain and language and between brain and other cognitive abilities that influence communication.
- 8019. Electrophysiological Measures in Audition I (3)** P: CSDI 8000 or consent of instructor. Introduces issues underlying employment of theory and application of clinical use of clinical procedures in electrophysiological measurement of auditory function. Topics restricted to measurement techniques at auditory periphery and early evoked potentials.
- 8020. Advanced Seminar in Communication Sciences (1-9)** May register for maximum of 9 s.h. May count toward concentration area. P: Consent of instructor.
- 8021. Aural Rehabilitation (4)** 3 hours of didactic lecture and one weekly lab for development and implementation of a community-based program. P: CSDI 8013, 8100; or consent of instructor. Study of aural rehabilitation principles, methods, and technologies.
- 8022. Advanced Seminar in Audiology (1-9)** May register for a maximum of 9 s.h. May count toward concentration area. P: Consent of instructor.
- 8023. Advanced Seminar in Speech-Language Pathology (1-9)** May register for a maximum of 9 s.h. May count toward concentration area. P: Consent of instructor.
- 8024. Advanced Electrophysiological Measures (3)** P: CSDI 8019 and consent of instructor. Latest developments in auditory neurophysiological measurement techniques. Review of test procedures in clinical use and those under research development. Focus on all levels of auditory system, from inner ear to temporal lobe. Intensive review of basic science and clinical research literature as well as hands-on lab experiences with new procedures.
- 8026. Electrophysiological Measures in Audition II (3)** P: Consent of instructor. Introduces issues underlying theory and application of clinical use of measurement techniques for middle and late evoked potentials.
- 8027. Cochlear Implants (2)** P: Consent of instructor. Applied and theoretical principles involved with cochlear implants, including candidacy, rehabilitation and programming considerations.
- 8028. Auditory Pathologies (2)** P: Consent of instructor. Medical/surgical procedures for treatment of disorders affecting auditory and vestibular systems and discussion of prognosis and treatment options.
- 8030. Doctoral Colloquium (1-9)** May register for a maximum of 9 s.h. P: Consent of instructor. Current topics in field of communication sciences and disorders, varying from grantsmanship to health care leadership.
- 8070, 8071, 8072, 8073. Research Internship: Communication Sciences* (3,3,3,3)** P: Consent of instructor. Directed research with CSDI doctoral faculty member.

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8080, 8081, 8082, 8083. Research Internship: Audiology* (3,3,3,3) P: Consent of instructor. Directed research with CSDI doctoral faculty member.

8090, 8091, 8092, 8093. Research Internship: Speech-Language-Pathology* (3,3,3,3) P: Consent of instructor. Directed research with CSDI doctoral faculty member.

8100. Advanced Audiology Methods Lab (I) P: Consent of instructor. Lab experiences in assessment of auditory systems.

8102. Vestibular Lab (I) P: Consent of instructor. Lab experiences in assessment of vestibular and balance systems.

8103. Electrophysiological Measures in Audition I - Laboratory (I) P: Consent of instructor. Hands-on lab exercises for clinical procedures in electrophysiological measurement of auditory periphery and early evoked potentials.

8104. Electrophysiological Measures in Audition II - Laboratory (I) P: CSDI 8019, 8103; or consent of instructor. Hands-on lab exercises for clinical procedures in electrophysiological measurement of middle and late evoked potentials.

8150. Audiology Licensure, Certification and Related Issues (I) P: Consent of instructor. Current issues related to the laws, regulations, policies, and supervisory processes governing or related to the professions of audiology and speech-language pathologies.

8234. Audiology Clinical Rotation (I-9) May be repeated for credit. P: Consent of instructor. Observations, readings, supervised clinical practicum, and weekly clinic meetings.

8993. Clinical Residency (6-9) P: Consent of instructor. May be repeated for credit. Clinical experience in application of knowledge, abilities, and advanced clinical skills.

8999. Predoctoral Independent Study (1,2,3,4,5,6) May be repeated. Self-study of a range of topics and techniques relevant to preparation for undertaking dissertation research.

9000*. Dissertation (3) May be repeated. May count maximum of 18 s.h. toward the degree.

9001. Dissertation: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

DEPARTMENT OF HEALTH SERVICES AND INFORMATION MANAGEMENT

Xiaoming Zeng, Chair, 4340D Health Sciences Building

Pat Royal, Director, Health Care Administration Certificate, 4340J Health Sciences Building

Robert J. Campbell, Director, Health Informatics Certificate, 4340M Health Sciences Building

CERTIFICATE IN COMMUNITY HEALTH ADMINISTRATION

In cooperation with the Department of Political Science, students seeking the master of public administration degree (MPA) may take **15 s.h.** in COHE and approved electives for the completion of a certificate in community health administration. Required courses are the following: COHE 6000, 6100; PADM 6400 or COHE 6971 or NURS 6971. Electives may be taken from the following: ACCT 6241; BIOS 5010; COHE 6300, 6310; ENGL 5780; FINA 6144; PADM 6410.

Admission requirements are available from the director of the MPA program in the Department of Political Science.

CERTIFICATE IN COMMUNITY HEALTH CENTER ADMINISTRATION

In cooperation with the Department of Public Health, students seeking the MPH and nondegree students may take **15 s.h.** for completion of a certificate in community health center administration. Required courses are: COHE 6100, 6310, 6600; HIMA 5060; MPH 6200.

Admission priority is given to individuals enrolled in the MPH degree or another graduate degree related to community health center administration or who are employed in community health centers. Individuals outside these three groups and without significant work experience in a community health center are required to take COHE 6000, MPH 6000, or equivalent.

Admission and other requirements are available from the director of the certificate program in community health center administration in the Department of Public Health.

MBA WITH HEALTH CARE MANAGEMENT CERTIFICATE

MBA students interested in pursuing the MBA with the health care management certificate must take COHE 6000, 6600, 6610, and 6620 as electives in the MBA program. Other graduate students interested in taking these electives must confer with the program directors of the respective schools.

HEALTH CARE ADMINISTRATION CERTIFICATE

The Health Care Administration Certificate is available to all students holding a baccalaureate degree. The certificate requires successful completion of **15 s.h.** from the following COHE courses: COHE 6000 or HIMA 5060 and COHE 6300, 6310, 6600, and 6620. Students who have not previously passed a graduate health care systems course must first complete COHE 6000 before taking any other course. Students who have already taken the equivalent of COHE 6000, are advised to take HIMA 5060. Certificate students may transfer credits to other graduate programs but acceptance into the certificate program does not guarantee acceptance into other programs and non-degree students can only apply 9 s.h. toward a graduate degree.

HEALTH INFORMATICS CERTIFICATE

The Health Informatics Certificate is available to all students holding a baccalaureate degree. The certificate requires successful completion of **15 s.h.** from the following COHE courses: HIMA 5060, COHE 6410, COHE 6420, COHE 6430, COHE 6440, COHE 6450. Students who have not previously passed a graduate health care systems course must first complete COHE 6000 before taking any other course. HIMA 5060 is a co-requisite and should be taken before or with COHE 6410, 6420, 6430, 6440, or 6450. Certificate students may transfer credits to other graduate programs but acceptance into the certificate program does not guarantee acceptance into other programs and non-degree students can only apply 9 s.h. toward a graduate degree.

COHE: COMMUNITY HEALTH

6000. Health Care Systems and Problems (3) P: Consent of instructor. Advanced study of contemporary health care problems. Evolution, philosophy, and present and future trends of our health care system. Emphasis on health policy and practices of community health service institutions and agencies.

6100. Community Health Administration (3) P: COHE 6000 or MPH 6000, MPH 6200 or consent of instructor. Role and application of basic administrative theory and practice in health service institutions and agencies. Emphasis on public aspects of health service.

6300. Health Law (3) P: Consent of instructor. Process and substance of law related to organization and delivery of health services in the US. Recognition of legal issues arising in the practice of health administration, understanding of how legal system thinks, and effective communicate with lawyers practicing in health care field.

6310. Health Care Accounting and Financial Administration (3) Application of the theories, principles and concepts of financial management and accounting to decision-making and accountability in health care organizations.

6410. Electronic Health Records (3) P/C: HIMA 5060 or consent of instructor. Principles and approaches to EHR technology.

6420. Evaluation Methods in Health Informatics (3) P/C: HIMA 5060 or consent of instructor. Design, data collection, analysis and reporting of health informatics applications.

6430. Database Systems in Health Care (3) P/C: HIMA 5060 or consent of instructor. Relational database theory and applications in health care.

6440. E-Health Care Information System (3) P/C: HIMA 5060 or consent of instructor. Systematic analysis of electronic technologies in health care.

6450. Decision Support in Health Care (3) P/C: HIMA 5060 or consent of instructor. Theories and applications of decision science in health care.

SECTION 8: CURRICULA

6500, 6502. Independent Study (2,3) P: Approval of outline of study by student's committee or advisor. Tutorial study or supervised research in contemporary health problems, programs, and educational methods.

6600. Management of Health Care Operations (3) P: COHE 6000 or consent of instructor. Focus on day-to-day operational aspects of managing health care organizations. Operational needs of various health care providers. Emphasis on legal, marketing, service, quality, and personnel issues.

6610. Financial Management of Health Care Organizations (3) P: COHE 6000; FINA 6144. Focus on acquisition, allocation, and management of financial resources within health care organizations. Emphasis on application of financial tools to unique problems of these organizations.

6620. Health Care Strategic Planning and Management (3) P: COHE 6600, 6610. Focus on methods for strategic planning and management health services organizations. Emphasis on techniques for determining strategies for unique services. Integrates strategy, structure, and administrative systems.

6971. Health Policy (3) Same as NURS 6971 and PADM 6400 Overview of health policy and legal issues related to delivery of health care. Emphasis on action, theory, and roles; strategies of power politics; legal foundations; and trends in policy formation with implications for health care administrators.

6990. Internship in Community Health (3) P: COHE 6000 or consent by the student's advisor and the Department of Community Health. Professional learning experience in work study program in community health setting. Supervised by experienced health professional approved by Department of Community Health and student's faculty advisor.

DEPARTMENT OF OCCUPATIONAL THERAPY

Leonard Trujillo, Chair, 3305E Health Sciences Building

MASTER OF SCIENCE IN OCCUPATIONAL THERAPY

There are two degree paths in occupational therapy. The professional (entry-level) master's degree offers preparation for certification for individuals with baccalaureate degrees in fields other than occupational therapy. The second degree path is a post-professional master's degree, which offers course work for individuals who have an undergraduate degree in occupational therapy and who are certified occupational therapists (OTR). Students who complete a professional (entry-level) master's degree at ECU cannot apply for the post-professional master's degree in occupational therapy.

Admission

Application for admission to the graduate program in occupational therapy must be initiated through the Graduate School. (See Section 2, Admission and Readmission.) The department requires that the applicant meet the following minimum admission requirements: a minimum cumulative GPA of 3.0 on a 4.0 scale, satisfactory Graduate Record Examinations, and acceptable TOEFL or TSL score for non-English foreign students. At the time of application, the applicant must submit two letters of reference, a resume, and a completed statement as specified in the Graduate School application.

For the professional (entry-level) master's degree path, the applicant must present evidence that the required prerequisite course work will be completed and an undergraduate degree (other than occupational therapy) conferred before the start of the program in the fall. Required undergraduate prerequisite courses include anatomy, physiology, statistics, developmental psychology or other course with emphasis on human development across the lifespan, abnormal psychology, introduction to anthropology or sociology, an introduction to occupational therapy course, and a reasoning course such as logic, ethics, or research inquiry in social sciences. Students must demonstrate a proficiency in medical terminology or take a course in medical terminology.

For the post-professional master's degree path, applicants must present evidence of an undergraduate degree from an accredited baccalaureate occupational therapy program.

Degree Requirements

Minimum degree requirement is 73 s.h. for the professional (entry-level) path and 30-33 s.h. for the post-professional path as follows:

Core courses.....	10 s.h.
OCCT 6080, 6455, 6500, 6550, 6600	
Research options (Choose one.).....	5-9 s.h.
Master's project:.....	5 s.h.
OCCT 6650, 6660	
Thesis:	6-9 s.h.
BIOS 7022 or Qualitative analysis.....	3 s.h.
OCCT 7000	3-6 s.h.
Choose one path:	
Professional (entry-level) path.....	57 s.h.
OCCT 6000, 6001, 6002, 6003, 6004, 6005, 6006, 6007, 6008, 6009, 6100, 6150, 6200, 6250, 6300, 6350, 6400 6450, 6500, 6701	
Post-professional path	12 s.h.
OCCT 6020	3 s.h.
Concentration Area	3 s.h.
OCCT 6060 or 6070	
Electives	6 s.h.

Successful completion of OCCT 6455 with a grade of B or better serves as a comprehensive examination.

Standard grading policies will follow Graduate School guidelines. Verification by the department chair of the completion of the professional (entry-level) master's degree requirements is necessary to meet occupational therapy practice licensure statutes of the North Carolina Board of Occupational Therapy. Verification by the registrar for completion of the professional (entry-level) master's program is required to take the national certification examination.

ACCREDITATION

The occupational therapy program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. ACOTE's telephone number c/o AOTA is 301-652-2682. Graduates of this program will be eligible to sit for the national certification examination for the occupational therapist administered by the National Board for Certification in Occupational Therapy (NBCOT) located at 800 S. Frederick Ave., Suite 2000, Gaithersburg, MD 20877, 301-990-7979. After successful completion of this exam, the individual will be an occupational therapist, registered (OTR). In addition, most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT certification examination. However, a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

ACCELERATED PROGRAM IN THE PROFESSIONAL MASTER'S DEGREE PATH IN OCCUPATIONAL THERAPY

The accelerated program provides a means by which highly qualified undergraduate students at East Carolina University enroll in the undergraduate program of Health Services Management with the intention of preparing for a professional master's (entry-level) degree path in Occupational Therapy. The student in this program does not obtain an undergraduate degree, but completes a master's degree in five years by completing a total of 162 credit hours including all foundations curriculum courses and core requirements of the undergraduate degree and graduate degree programs.

Admission

Students must maintain an accumulated grade point average (GPA) of 3.2/4.0 at East Carolina University in the undergraduate program. Students should apply to the graduate school in their junior year or after completing at least seventy-five (75) credit hours, including credits earned from advanced placement. Completion of the course requirements does not guarantee an admission to the Graduate School. Students who do not complete the occupational therapy program, must complete all required courses to obtain an undergraduate degree in Health Services Management.

Degree Requirements

Required courses include: foundations curriculum courses, BIOL 2140, 2141, 2150, 2151; BIOS 1500; CHEM 1120; ECON 2113; HIMA 3000, 3120, 4030; HSMA 3020, 3025, 3030, 3035, 4010, 4050, 4055; OCCT 3000, 6000, 6001, 6002, 6003,

P=Prerequisite(s); C=Corequisite(s); P/C=Prerequisite(s) or Corequisite(s); R=Recommended P, C, or P/C

SECTION 8: CURRICULA

6004, 6005, 6006, 6007, 6008, 6009, 6080, 6100, 6150, 6200, 6250, 6500, 6600, 6300, 6350, 6400, 6450, 6455, 6550, 6650; 6701; 6660 or BIOS 7022; OCCT 7000; PHIL 1110, 1175, 1180, 1500, or 2275; PSYC 1000, 3206, 4375; SOCI 2110.

INTEGRATED UNDERGRADUATE/GRADUATE DEGREE PROGRAM IN PSYCHOLOGY AND OCCUPATIONAL THERAPY

The integrated Undergraduate/Graduate Degree Program in Psychology and Occupational Therapy provides a means by which highly qualified undergraduate students at East Carolina University may pursue an undergraduate degree in psychology with the intention of completing the professional masters degree in occupational therapy in five years. Fifteen semester credits of graduate courses count towards both the undergraduate and graduate degree. Total for both undergraduate and graduate programs are 181 credits.

Admission

Students must apply to the graduate school as an integrated undergraduate/graduate after 75 credits of undergraduate work is completed. Incoming students must meet requirements for the honors program and must maintain a cumulative grade point average (GPA) of 3.5/4.0 at East Carolina University. Students who complete the program will receive an undergraduate degree in psychology upon completing all required courses, typically at the end of the first year of the graduate occupational therapy program. Permission to pursue the integrated program does not guarantee an admission to the Graduate School.

Degree Requirements

Required courses include: foundations curriculum courses; foreign language (12 credits); ANTH 1000 or 2200; BIOL 1050, 1051, 2140, 2141, 2150, 2151; CHEM 1120; HIMA 3000; PHIL 1110, 1175, 1180, 1500, or 2275; PSYC 1000, 2210, 3206, 3226, 3311, 4000, 4375; SOCI 2110; electives (12 credits): OCCT 3000, 6000, 6001, 6002, 6003, 6004, 6005, 6006, 6007, 6008, 6009, 6080, 6100, 6150, 6200, 6250, 6500, 6600, 6300, 6350, 6400, 6450, 6455, 6550, 6701, and 6660 or BIOS 7022; OCCT 7000.

CERTIFICATE IN ASSISTIVE TECHNOLOGY

The certificate in assistive technology will equip students with specific skills and knowledge in assistive technology. The overall objective of the program is to prepare educational and/or health care professionals in the knowledge and skills needed to utilize assistive technology for the enhancement of a student and/or client's functional performance. Specifically, candidates who successfully complete the certification will have a broad-based knowledge of assistive technology, the ability to assess assistive technology needs with clients/students and plan implementation based upon that assessment, the ability to work with a collaborative team to implement assistive technology, and the knowledge and skills to effectively manage resources for procurement of assistive technology.

Applicants seeking admission must be graduate students or education or health care professionals working in their respective fields. Professionals can enroll as non-degree seeking students. Admission is based on completion of the certificate application and approval by the program coordinator.

The certificate program requires 12 s.h. of graduate-level course work in assistive technology, emphasizing practical application and collaborative team work. Required courses include SPED/OCCT 6701, 6702, 6703, and an elective.

OCCT: OCCUPATIONAL THERAPY

6000. Foundations of Occupational Therapy (4) P: OCCT 3000 or introductory OCCT course approved by dept chair. Foundations and models of practice of OT. Dimensions and characteristics of human occupation and their relationship to models of practice. Analysis of occupation, including real and symbolic aspects meaningful for individuals and populations.

6001, 6002. Occupation and Movement (3,1) 2 classroom and 3 lab hours per week. P: ANAT and PHLY courses approved by dept chair. P/C: OCCT 6000. Musculoskeletal system as related to human occupation. Mobility, stability, posture, biomechanics, development of movement, relationship between kinesiological components, and gradation of activities.

6003, 6004. Dyadic and Group Skills in Occupational Therapy (3,1) 3 classroom and 3 lab hours per week. P: OCCT 3000, P/C: OCCT 6000. Applies systems theory, communication, and techniques to dyadic and group processes relevant to OT. Relationships and roles of OT practice with individuals across life span.

6005, 6006. Health Impairments and Occupational Therapy I (3,1) 3 classroom and 3 lab hours per week. P: OCCT 3000. P/C: OCCT 6000, 6001, 6002. Etiology of impairments and models of ablement/disablement. Identification of consequences of diseases, injuries or disorders and impact of these on human occupation. Applies appropriate OT frames of reference and remedial techniques.

6007, 6008. Health Impairments and Occupational Therapy II (3,1) 3 classroom and 3 lab hours per week. P: OCCT 6001, 6002, 6005, 6006. Continuation of OCCT 6005, 6006.

6009. Neurological Foundations of Occupational Therapy (3) P: OCCT 6000; ANAT and PHLY courses approved by dept chair. Occupational performance as affected by human nervous system. Structures and functions of human nervous system and relationship of occupation to brain function.

6020. Theoretical Models of Practice in Occupational Therapy (3) P: Enrollment in OCCT or consent of chair. Advanced examination and conceptualization of OT theories within models of practice, including consultation. Analysis and comparison of theories applied to areas of specialty in service delivery systems.

6060. Directed Independent Study (3) Requires approval by occupational therapy advisor and/or graduate committee. May be repeated more than once with change of topic. Individualized, advanced, or in-depth study of topic not offered in OT curriculum.

6070. Special Topics (3) May be repeated more than once with change of topic. Topics of current importance not covered thoroughly in other courses.

6080. Environmental Contexts and Systems of Occupational Therapy (3) P: OCCT 6000, 6003, 6004; or consent of dept chair. Systems analysis of societal, cultural, physical, and temporal environments. Evaluates use of environment and technology to enhance occupational function.

6100, 6150. Therapeutic Use of Human Occupation I (4,1) 4 classroom and 3 lab hours per week. P: OCCT 6000, 6001, 6002, 6003, 6004, 6009; P/C: OCCT 6005, 6006, 6007, 6080. First in three course sequence. Reflects a variety of system-practice contexts such as medical, educational, and natural environments. Occupational therapy roles, responsibilities, and interventions in the different settings will be examined.

6200, 6250. Therapeutic Use of Human Occupation II (4,1) 4 classroom and 4 lab hours per week. P: OCCT 6100, 6150; P/C 6008. Extension of OCCT 6100, 6150. P/C: 6008. Case studies reflect complex health care systems, reimbursement issues, and professional support environments.

6300, 6350. Therapeutic Use of Human Occupation III (4,1) 3 classroom and 3 lab hours per week. P: OCCT 6200, 6250; C: OCCT 6400. Extension of OCCT 6200, 6250. Case studies reflect community-based practice, require coordination of systems, and development of innovative OT services.

6400. Fieldwork I (I) 2-week clinical experience. P: OCCT 6200, 6250; C: OCCT 6300, 6350. Role of occupational therapist in variety of nontraditional or emerging practice settings and service delivery systems. Continued development of OT theory, evaluation, and treatment planning skills. Exploration and development of creative applications of therapeutic occupation.

6450. Fieldwork II (6) May be repeated. May count for a maximum of 12 credits. 12-week, full-time clinical practice. P: OCCT 6080, 6300, 6350, 6400, 6500. Practice and master skills necessary to function as competent, entry-level occupational therapist.

6455. Application of Theory to Practice (3) P: 6300, 6350; P/C: OCCT 6450. Integrates fieldwork and classroom experiences. Cases used to explore issues about management and supervision, OT intervention, research, and education. Analyzes current use of theory in OT practice sites.

6500, 6550. Managing Occupational Therapy Services (3,1) P: OCCT 6080. Leadership theory and roles in OT. Focus on supervision issues, planning, and management of service delivery programs. Emphasis on theories of change and student developments as change agents. Systems theory used as basis for understanding organizational structures and development.

SECTION 8: CURRICULA

6600. Concepts and Practice of Research in Occupational Therapy (3) P: A statistics course approved by dept chair. Principles and processes involved in scientific research. Qualitative and quantitative approaches. Application of knowledge culminates in development of research proposal.

6650. Conducting Research in Occupational Therapy (3) P: OCCT 6600, 6200, 6250. P/C: 6300, 6350. Design and implementation of research project that contributes to knowledge base of OT. Approved research proposal and collection of research data.

6660. Master's Project (3) P: OCCT 6650. Completion of research project which contributes to knowledge base of OT and manuscript appropriate for submission to refereed journal.

6701. Assistive Technology Devices and Services (3) Same as SPED 6701 Admission to certification program or consent of instructor. Broad overview of assistive technology, including legal, educational, and discipline specific information. Provides basic information that prepares students for other certificate courses.

6702. Assessment, Planning, and Implementation of Assistive Technology (3) Same as SPED 6702 P: SPED 6701 or OCCT 6701. Explores assistive technology assessments and planning and implementation of assistive technology within student/client's environment. Students attain skills in variety of technology using cross-disciplinary team approach.

6703. Collaborative Resource Management of Assistive Technology (3) Same as SPED 6703 P: OCCT 6701 or SPED 6701. Human, product, electronic, and funding resources to meet technology needs for individuals with disabilities examined within state and national networks. Practical collaborative skills practiced in cross-disciplinary team assignments.

7000. Thesis (I-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7100. Qualitative Research: Analysis and Interpretation (3) Same as HLTH 7100, NURS 7100 P: Consent of instructor. Application and evaluation of qualitative research design and methods including data collection, management, and analysis approaches, and the art and science of interpretation.

DEPARTMENT OF PHYSICAL THERAPY

Walter L. Jenkins, Chair, 2410B Health Sciences Building

Blaise Williams, Director of Graduate Studies, 1425A Health Sciences Building

DOCTOR OF PHYSICAL THERAPY

Degree Requirements

The doctor of physical therapy (DPT) provides the scope, depth, breadth, and rigor of scholarly activity to prepare an entry-level physical therapy practitioner for current and future practice trends. The program comprises **106 s.h.**, including 80 s.h. of didactic course work, 10 s.h. of clinical specialty and research experience, and 32 weeks of clinical education (16 s.h.). Students begin the program in the first term of the summer and continue for nine continuous semesters. At the end of the final semester, the student will take a written comprehensive examination and provide both an oral defense and written documentation related to clinical specialty and research concentration. The departmental chairperson's verification of the completion of all degree requirements is necessary to meet physical therapy practice licensure statutes of the North Carolina Board of Physical Therapy Examiners. Admission guidelines to the Department of Physical Therapy are available at www.ecu.edu/pt/.

Required courses: PTHE 8007, 8008, 8100, 8101, 8102, 8103, 8104, 8105, 8200, 8201, 8203, 8300, 8301, 8302, 8401, 8402, 8403, 8500, 8501, 8502, 8603, 8700, 8701, 8702, 8703, 8801, 8803, 8906, 8907; REHB 6200.

4 s.h. from PTHE 8900, 8901, 8902, 8904, 8905, 8908, 8909, 8911.

Only 1 course of PTHE 8203, PTHE 8403, PTHE 8603 or PTHE 8803 may be repeated once.

Integrated Physical Therapy/Exercise Physiology (DPT/BS) Degree

The integrated program provides a means by which undergraduate students at East Carolina University enroll in the program of exercise physiology with the intention of preparing for a professional doctoral degree path in physical therapy (DPT). The

student in this program will count 15 s.h. of graduate physical therapy course work towards the BS in exercise physiology. The student will complete the DPT in six years for a total of 217 s.h. Course work includes all foundations curriculum courses, core requirements for the undergraduate degree, and prerequisites and core requirements for the DPT. A student may be granted provisional acceptance to the DPT program after their second year of study at ECU based on competitive academic qualifications.

PTHE: PHYSICAL THERAPY

8007. Functional Anatomy (3) P: Consent of instructor. Principles of kinesiology, joint anatomy, and tissue function. Emphasis on human movement at joint and system level.

8008. Gross Anatomy (5,0) P: Enrolled in PTHE program. Structure of human body. Lab dissection.

8100. Musculoskeletal Physical Therapy I (4) P: PTHE 8008. Acquisition of knowledge and skills related to care of patients with musculoskeletal problems. Focus on examination.

8101. Neuroscience (5) P: Consent of instructor. Neuroanatomy, neurophysiology, and neurology of nervous system. Introduces normal and dysfunctional motor control mechanisms.

8102. Physical Therapy Modalities and Instrumentation (2) P: PTHE 8007. Physiological basis, indications, contraindications, and utilization of instrumentation for thermal treatment procedures and physics of sound. Emphasis on evidence-based practice regarding selection of modalities for specific medical conditions.

8103. Introduction to Patient Care I (1) P: PTHE 8007. Roles and responsibilities of the physical therapist including medical, legal, ethical and cultural dimensions, therapist-patient interaction, medical terminology, diagnostic interviewing strategies and professional issues.

8104. Pharmacological Agents and Pathological Processes (3) P: PTHE 8007. Overview of general pathology and pharmacology. Emphasis on etiology, symptoms, and pharmacological management of selected disease processes and implications.

8105. Introduction to Patient Care II (2) P: PTHE 8103. Roles and responsibilities of the physical therapist and basic patient care skills.

8200. Clinical Biomechanics (3) P: PTHE 8100 or consent of instructor. Evidence-based integration of mechanical principles into physical therapy practice utilizing quantitative and qualitative approaches.

8201. Electrotherapeutic Diagnosis and Treatment (3) P: PTHE 8007. Physics of electricity and physiological basis, indications, contraindications, and utilization of instrumentation for electrophysiological treatment procedures.

8203. Clinical Education I (3) Formerly PTHE 7203 May be repeated. 40 hours per week for 6 weeks. P: PTHE 8100, 8101, 8102, 8103, 8104. Introduces clinical practice through observation and supervised activity in acute care, orthopedic clinics or similar settings.

8300. Musculoskeletal Physical Therapy II (3) P: PTHE 8100. Acquires knowledge and skills related to care of patients with musculoskeletal problems. Focus on treatment.

8301. Motor Control and Movement Disorders (3) P: PTHE 8101 or consent of instructor. Neuroscience principles and mechanisms of normal and impaired movement, learning, emphasizing research and practice.

8302. Adult Therapeutic Intervention I (4) P: PTHE 8101. Applies examination, therapeutic intervention and neuromuscular integration methods effective in identifying and treating motor control dysfunctions in adults with neurological and spinal cord injuries.

8401. Pediatric Therapeutic Intervention (3) P: PTHE 8302. Evaluation and treatment of children, emphasizing development of functional movement, clinical decision making, management of impairments, and practice in various settings.

SECTION 8: CURRICULA

8402. Adult Therapeutic Intervention II (4) PTHE 8302. Applies advanced examination and therapeutic intervention methods effective in identifying and treating motor control dysfunctions in the neurological client, including CNS disorders, neuromuscular diseases, and vestibular disorders.

8403. Clinical Education II (4) May be repeated. 40 hours per week for 8 weeks. P: PTHE 8203. Supervised clinical training and experience in medical training facility. Emphasis on special program functions in inpatient or outpatient facility.

8500. Musculoskeletal Physical Therapy III (4) P: PTHE 8300. Care of patients with musculoskeletal problems of the extremities and spine. Focus on advanced examination and intervention for complicated patients.

8501. Prosthetics (2) P: PTHE 8200. Patient assessment, prescription criteria, rehabilitation goals, and treatment techniques. Functional assessment of patients' prosthetic devices.

8502. Muscle Physiology (3) P: PTHE 8104 or consent of instructor. Physiology of muscle in health, disease, and aging.

8603. Clinical Education III (4) May be repeated. 40 hours per week for 8 weeks. P: PTHE 8403. Supervised clinical experiences concentrating on specialized areas of physical therapy practice.

8700. Cardiovascular and Pulmonary Rehabilitation (3) P: PTHE 8502. Assessment and treatment used for cardiac, peripheral vascular, and pulmonary impairments. Analysis of physiological responses to physical rehabilitation treatment, benefits of preventative management, and value of interdisciplinary team management.

8701. Administration of Physical Therapy Services (3) P: PTHE 8503. Impact of health care industry trends and issues on development and operations of PT services. Application of planning, organizing, marketing, managing and financing principles for clinical practice establishment and maintenance. Medico-legal, ethical, and quality control aspects of services.

8702. Research Design (3) P: PTHE 8603 or consent of instructor. Scientific method, research design, basic statistics, and procedures for communicating results to physical therapy professionals and integrating into evidence-based practice.

8703. Geriatric Physical Therapy (3) P: PTHE 8503. Advanced knowledge of the aging process and the treatment and management of the elderly client.

8704. Health Promotion for Physical Therapists (2) P: PTHE 8104 or consent of instructor. Impact of exercise and nutrition on promoting health and wellness as it relates to the practice of physical therapy.

8801. Seminar in Physical Therapy (1) May count a maximum of 2 s.h. towards DPT. P: PTHE 8403. Integrates basic science and clinical experiences in professional practice.

8803. Clinical Education IV (5) May be repeated. 40 hours per week for 10 weeks. P: PTHE 8503. Supervised clinical experiences in long-term care facilities and specialized clinics.

8900. Advanced Concepts in Sports Physical Therapy (2) P: PTHE 8300. Advanced knowledge and skill in outpatient sports settings. Emphasis on evidence-based research.

8901. Advances in Muscle Research (2) P: PTHE 8104 or consent of instructor. Foundation in pathophysiology and/or rehabilitation of muscle. Emphasis on evidence-based research.

8902. Advances in Lower Extremity Evaluation (2) P: PTHE 8300. Advanced techniques for evaluation of patients with lower extremity pathology, including biomechanics and instrumented gait analysis.

8904. Advances in Prosthetics and Orthotics (2) P: PTHE 8200. Current amputee, prosthetic, and orthotic therapeutic interventions. Emphasis on evidence-based research.

8905. Advanced Seminar in Evidenced Based Practice (2) May be repeated. May count maximum of 4 s.h. P: Consent of instructor. Critical analysis of advances in research in specialized areas of physical therapy practice.

8906. Clinical Specialty Concentration (2) May be repeated. May count maximum of 6 s.h. P: PTHE 8203, PTHE 8403, PTHE 8603. Supervised experience in specialty clinical practice.

8907. Research Concentration (2) May be repeated. May count maximum of 10 s.h. P: Consent of instructor. Directed research with graduate-level faculty.

8908. Advanced Topics in Pediatric Physical Therapy (2) P: PTHE 8401. Advanced techniques for examination, evaluation and intervention for infants, children, and adolescents with/at risk for movement dysfunction in the pediatric population. Use of scientific evidence to aid in clinical decision-making.

8909. Geriatric Balance and Gait Disorders (2) P: PTHE 8402. Advanced knowledge and skill in the evaluation and treatment of geriatric patients with balance and gait disorders. Emphasis on selected populations at high risk for falls.

8910. Muscle Plasticity (2) P: Consent of instructor. Changes in muscle composition and mass with a focus on disease processes and therapeutic interventions.

8911. Advanced Concepts in Spine and Manual Therapy (2) P: PTHE 8300. Theories and techniques of spinal and extremity mobilizations, high velocity thrusts, and functional exercise interventions. Evidenced-based emphasis on spinal impairments and temporomandibular dysfunction.

PTHE Banked Courses

6414. Clinical Problem Solving II (2)

8202. Evaluation and Treatment of the Spine (3)

DEPARTMENT OF PHYSICIAN ASSISTANT STUDIES

Carolyn Pugh, Interim Chair, 4310K Health Sciences Building

MS IN PHYSICIAN ASSISTANT

Physician assistant majors must pass all physician assistant core courses with a minimum numerical grade of 70 percent and an overall GPA of 3.0 for the semester. A student earning less than a grade of 70 percent or an overall GPA of 3.0 for the semester must petition the Department of Physician Assistant Studies for probationary continuation. A student must have completed a baccalaureate degree from a regionally accredited college or university, must have completed the prerequisite requirements as listed below and must have a minimum prerequisite GPA of 3.0 to be eligible to apply for admission into the professional phase of the physician assistant curriculum. Any exceptions must be approved by the department chair. All requirements for continuation in the graduate school must be met. The minimum requirement for the degree is 99 s.h. as follows:

Prerequisite Requirements: Courses to be completed prior to entering the program with at least a 3.0 GPA.

Chemistry: One full academic year

Genetics: One semester

Human Anatomy and Physiology: One full academic year

Medical Terminology: One semester

Microbiology: One semester

Psychology: One semester

Statistics: One semester

Core Courses: PADP 6000, 6010, 6020, 6030, 6040, 6050, 6150, 6200, 6210, 6220, 6250, 6500, 6650, 6680, 6800, 6810, 6850, 6980. To continue to the clinical portion of the curriculum, the student must successfully pass all didactic courses listed above with an overall 3.0 GPA and no more than 6 s.h. of Cs.

Clinical Courses: PADP 6310, 6320, 6330, 6340, 6350, 6360, 6370, 6380.

PADP: PHYSICIAN ASSISTANT STUDIES

6000. The Role of the Physician Assistant and the History, Philosophy, and Ethics of Medical Practice (1) History of medicine. Introduces medical ethics, nonclinical aspects of dependent practice, and roles of other health care providers involved in medical team approach to medical care and disease prevention. Explores different cultures and their perception of medicine, legal issues, quality assurance, and risk management. Facilitates development of realistic role identity for the physician assistant.

6010. Diagnostic Methods I (3) Laboratory procedures used to identify pathophysiological processes and the rationale for ordering them. Interpretation of laboratory results and treatment options.

SECTION 8: CURRICULA

6020. Diagnostic Methods II (3) Continuation of PADP 6010. Emphasis on ordering and interpreting lab tests in organ system based pathological case studies. Interpretation and ordering of electrocardiography, radiography and MRI, CT and PET scans.

6030. Clinical Gross Anatomy (5,0) Structure of human body with virtual anatomy lab and clinical case studies.

6040. Human Physiology (5) P: Enrolled in the PA program or by permission of the chair. Physiological principles fundamental to living tissue. All body systems studied as they relate to normal and pathological conditions in humans.

6050. Introduction to Clinical Medicine (3) Emphasis on medical problem-solving using patient management format and case studies.

6150. Clinical Medicine I (5) Clinically-oriented didactic and lab skills as preparation for clinical rotations and future clinical practice. Etiology, pathophysiology, clinical manifestations, and appropriate management of selected disease entities. Clinical training in lab sciences, standardized patients, and obtaining and writing history and physical exams. Enhances acquisition of skills necessary to formulate a diagnosis and treatment plan. Presents musculoskeletal, infectious disease, dermatology, and cardiology systems.

6200. History and Physical Exam I (2) Emphasis on patient interviewing, communication skills, and counseling skills. Proper use of instruments and techniques used in performing a thorough physical examination.

6210. History and Physical Examination II (3) Continuation of PADP 6200. Emphasis on adult physical examination.

6220. History and Physical Examination III (3) Continuation of PADP 6200 and 6210. Emphasis on examination of the pediatric patient and the geriatric patient.

6250. Clinical Medicine II (4) Continuation of PADP 6150. Presents pulmonary, nephrology, neurology, endocrine, and hematology/oncology systems. Includes geriatrics and pediatrics.

6310. Behavioral Medicine Clinical Practicum (5) Advanced rotation focuses on community settings in area of student's medical vocational interest. Facilitates acquisition of communication and behavioral modification skills useful in primary care setting.

6320. Internal Medicine Clinical Practicum (5) Applies medical knowledge to basic and complicated problems and situations encountered in internal medicine practice. Collect database, formulate complete problem list, and participate in daily rounds and management of patient problems. Develops awareness of complexity of disease processes and differential diagnosis.

6330. Family Medicine Clinical Practicum (5) In-depth emphasis on outpatient evaluation, treatment of conditions common at family medicine/primary care level, and appropriate health maintenance measures for all age groups.

6340. General Surgery Clinical Practicum (5) Routine health care of variety of surgical inpatients and outpatients. Assignment to surgical team with emphasis on pre-operative evaluation and preparatory procedures, assisting at operating table, and management of patients through post-operative period to discharge.

6350. Emergency Medicine Clinical Practicum (5) Evaluation and management of emergency and surgical problems seen in emergency department. Initial evaluation of potential surgical conditions and performance of problem-specific exams, emergency procedures, and minor surgical skills.

6360. Pediatrics Clinical Practicum (5) Assignment to institutional setting or community-based pediatric site. Emphasis on communication skills and relating sensitively to children and parents. Familiarization with normal growth and development, pediatric preventive medicine, and evaluation and management of common childhood illnesses.

6370. Women's Health and Prenatal Care (5) P: Enrolled in PADP program or consent of chair. Clinical experiences in prenatal care and women's health.

6380. Geriatrics Clinical Practicum (5) Clinical experience with the aging population focusing on unique medical, psychosocial, environmental and cultural aspects of aging.

6500. Pharmacology and Pharmacotherapeutics (4) Pharmacological knowledge basic to assessment and management skills for advanced clinical practice. Pharmacological management of patients throughout life span with common acute and chronic health problems. Overviews of selected drug classes. Emphasis on data collection and diagnostic reasoning in relation to major drug classifications, monitoring, and evaluation of pharmacological interventions. Application of cost-benefit, risk-benefit, efficacy, side-effects, and adverse responses through case studies to develop knowledge and skills that adhere to legal standards of practice.

6650. Surgery and Emergency Medicine Skills (4) Clinically-oriented didactic and lab skills related to knowledge and skills needed in emergency department and surgical arena. In-depth focus on acute and surgical conditions encountered in primary care and surgical settings. Pre-operative and post-operative care as well as surgical preparation to be properly demonstrated.

6680. Introduction to Clerkship (4) Emphasis on preparing the student for clinical rotation experiences and medical procedures.

6800. Behavioral Medicine and Psychosocial Issues in Health Care (2) General survey of fundamental principles underlying human behavior. Includes physiological development, learning, memory, motivation, and social and abnormal behavior. Emphasis on improving communication skills and integrating knowledge of psychosocial principles and diagnoses with clinical situations. Development of counseling skills, ability to handle patients with stress, and death and dying issues. Covers additional content in psychiatric case studies, problem-solving methodologies, and evidence-based medicine.

6810. Medical Ethics and Jurisprudence (2,0) Develop critical skills necessary to identify, analyze, and resolve ethical, legal, and professional issues.

6850. Health Promotion/Disease Prevention (2) Basic concepts include distribution, prevalence, causation, mode of transmission and dissemination, control, and prevention strategies used to counter significant infectious disease and occupational injuries. Investigates reportable diseases and conditions; role of state health departments in the process; and role of CDC&P in collecting and evaluating data reported by state, identifying emerging pathogens, and informing treatment community in a timely manner through such venues as the MMWR.

6980. Research Project (4) Admission to candidacy, successful completion of didactic and clinical phases of the program, and successful performance on comprehensive exam as designated by dept.

DEPARTMENT OF REHABILITATION STUDIES

Lloyd R. Goodwin, Jr., Interim Chair, 4425B Health Sciences Building

The department offers three master of science (MS) degree programs and a doctor of philosophy (PhD). Students in rehabilitation counseling complete a minimum of 54 s.h. of credit. Students in the vocational evaluation master's degree program complete a minimum of 48 s.h. of credit. Students in the substance abuse and clinical counseling degree program must complete 62 s.h. of credit. The application deadline for MS degree applications is March 1st for fall semester and October 1st for spring semester.

MS IN REHABILITATION COUNSELING

Required courses: REHB 6000, 6010, 6050, 6100, 6250, 6300, 6310, 6320, 6330, 6350, 6351, 6360, 6361, 6370, 6401, 6550, 6703, 6793, 6991, 6992, 6993, 6994, and 4 s.h. of electives.

MS IN SUBSTANCE ABUSE AND CLINICAL COUNSELING

Required courses: REHB 6010, 6050, 6100, 6250, 6300, 6310, 6320, 6330, 6350, 6351, 6360, 6361, 6370, 6401, 6550, 6703, 6793, 6991, 6992, 6993, 6994; 3 s.h. of electives.

MS IN VOCATIONAL EVALUATION

Required courses: REHB 6000, 6010, 6050, 6100, 6250, 6310, 6400, 6401, 6405, 6550, 6991, 6992, 6993, 6994, 7403, 7404.

Personal Experiential Counseling Requirements

Students in the substance abuse and clinical counseling and rehabilitation counseling programs are required to participate in

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personal counseling and experiential activities. These include participation in a small personal growth group, a group counseling course, counseling pre-practicum and practicum courses, and an option of individual personal counseling by the student counseling center or from another mental health professional to meet part of an optional requirement in the counseling practicum course. All of these personal counseling experiences are oriented toward increasing personal and interpersonal growth of the student in order to become a competent professional clinical counselor.

Certificate in Employee Assistance Program Counseling

The Employee Assistance Program (EAP) Counseling certificate will provide counselors with the specific background information and skills needed in this specialized area of counseling. This certificate is open to students enrolled in graduate counseling programs and counselors who wish to work in this area. The program is designed to equip counselors with knowledge of mental health, substance abuse and family issues related to the work environment. Program design and counseling techniques/approaches specific to this specialized area of the profession are presented.

The certificate requires the completion of 12 s.h. of graduate level courses. Required courses include REHB 7610 and 9 s.h. from REHB 6320, REHB 6793, PSYC 6343 or an approved elective. The coordinator of the EAP certificate program will have a list of approved electives.

Certificate in Rehabilitation Counseling

The Certificate in Rehabilitation Counseling provides basic knowledge and information needed to work as a professional in this specialized area. The certificate program includes specialized training in Rehabilitation Counseling and may prepare counselors to partially meet the basic academic requirements to be eligible to take the Certified Rehabilitation Counselor (CRC) Exam. Participants are required to be currently enrolled in a graduate counseling program or may enroll non degree if they possess a graduate degree in counseling.

The certificate program requires a minimum of 12 s.h. in the following courses: REHB 6000, 6010, 6100, and 3 s.h. of electives. Selected electives should be chosen in consultation with the certificate coordinator. The list of appropriate electives is available from the certificate coordinator and may be selected after consultation with the requirements of the Commission on Rehabilitation Counselor Certification.

Certificate in Substance Abuse Counseling

The Certificate in Substance Abuse Counseling provides students with the practical skills and basic techniques needed to provide services to individuals with addictions. This specialized area of counseling requires specific knowledge of theory and applied techniques in addition to general counseling knowledge and skills. The certificate is open to students enrolled in graduate programs as well as applicants holding a masters or baccalaureate degree. These courses meet the academic requirement for the North Carolina Licensed Clinical Addictions Specialist (LCAS) credential and 180 of the 270 hours required for the certification as a substance abuse counselor (CSAC) credential.

The program requires the completion of 12 s.h. of coursework as follows: REHB 6703, 6793, 6795, 6796. Any substitutions must be approved by the certificate coordinator.

Certificate in Vocational Evaluation

The Certificate in Vocational Evaluation will provide students with the basic knowledge and professional skills needed to work as an evaluator in applied settings. The certificate is open to graduate students as well as nondegree students with a baccalaureate degree. The courses included in the certificate program may allow students with a related degree to function as a professional vocational evaluator.

The program requires completion of 12 s.h. of coursework as follows: REHB 6400, 6401 or equivalent, 6405, plus 3 s.h. of electives chosen in consultation with the certificate coordinator. A list of appropriate electives is available from the certificate coordinator. The certificate in vocational evaluation should not be confused with any state or national certifications or licenses.

PHD IN REHABILITATION COUNSELING AND ADMINISTRATION

The PhD in Rehabilitation Counseling and Administration is designed to prepare higher education faculty in rehabilitation counseling and related fields, and/or administrators in rehabilitation, substance abuse, mental health and related health

care programs. The program prepares advanced clinical professionals for rehabilitation, mental health and substance abuse counseling in clinical settings as well. Students select a concentration in rehabilitation and clinical counseling or rehabilitation administration. All students are required to fulfill a one year residency requirement and complete a dissertation under supervision of a faculty advisor.

Admission

Admission to study at the doctoral level requires acceptance by the Graduate School and the department. Department faculty will make a comprehensive review of the each applicant's qualifications. The following criteria will be considered collectively for admission to the program:

- Earned master's degree (48 s.h. minimum) in rehabilitation counseling or a related field from an accredited university or college
 - o Those applying to the concentration in rehabilitation and clinical counseling must have a master's from a CACREP accredited program or; demonstrate their master's curricular experiences were equivalent to CACREP entry level standards sections II and III. The applicant must contact the director of doctoral studies to facilitate this process. Specifically, these curricular experiences will cover the content of the following courses: REHB 6000, 6010, 6050, 6100, 6250, 6300, 6310, 6320, 6350, 6351, 6360, 6370, 6401, 6550, 6991, 6992, 6993, 6994.
 - o Those applying to the concentration in rehabilitation administration must have a master's in rehabilitation or related field. The master's degree must include curricular experiences covering the content of REHB 6000, 6010, 6050, 6100, 6200, 6300, 6401. Students who have deficits in these content areas will be required to take additional s.h. which will not count toward the degree.
- Earned GPA of 3.5 in all graduate work
- Minimum scores, as determined by the ECU Graduate School, on the quantitative and verbal tests of the Graduate Record Examination (GRE). The Department also prefers scores at the 50th percentile or higher on the analytical writing section of the GRE. GRE scores must be within the past 5 years
- Two (2) years of post-masters related professional experience is preferred
- Personal statement that summarizes in as much detail as possible the reasons for pursuing doctoral study and doctoral research objectives
- Professional and personal accomplishments
- Two (2) professional references
- Personal interview with the faculty

Curriculum

The concentration in rehabilitation and clinical counseling requires a minimum of 61 s.h. Required courses include BIOS 7021, 7022, 3 s.h. of an advanced statistics course approved by the program director; REHB 7340, 7601, 8050, 8210, 8360, 8380, 8420, 8550, 8810 (4 s.h.), 8991, 8992, 8993, 8994, and 9000** (12 s.h. minimum). Students may also elect a specialty area from the list below.

- A. Substance Abuse and Clinical Counseling includes 12 s.h. from REHB 6330, 6703, 8710, and an elective approved by the program director.
- B. Vocational Evaluation includes 12 s.h. from REHB 6405/6406, 7403, 7404, 8410.
- C. Rehabilitation Research includes 12 s.h. from BIOS 5010, 7501, 7560; and other electives in advanced statistics or research approved by the program director.
- D. Specialty area to include 12 s.h. chosen by the candidate and approved by the program director.

The concentration in rehabilitation administration requires a minimum of 58 s.h. Required courses include BIOS 7021, 7022, and 6 s.h. of advanced statistics or research approved by the program director; REHB 7601, 8050, 8210, 8420, 8550, 8630, 8810 (4 s.h.), and 9000** (12 s.h. minimum). This concentration also requires the completion of a 12 s.h. area of focus selected by the candidate and approved by the program director.

**All students must complete doctoral comprehensive exams specific to their concentration, as outlined in the student handbook, prior to enrolling in REHB 9000.

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REHB: REHABILITATION STUDIES

6000, 6001. Medical and Psychosocial Aspects of Disability (3,0) Functional capacities of individuals with disabilities; impact of disability on individual, and personal and social adjustment to life.

6010. Introduction to Counseling and Rehabilitation (3) History and philosophy of the counseling profession, including credentialing, ethical standards and counselor role and function in clinical, substance abuse, and rehabilitation settings.

6050. Ethical and Legal Aspects in Substance Abuse and Rehabilitation Counseling (3) P: Admission to graduate REHB program or consent of instructor. Ethical and legal issues in the fields of counseling, substance abuse and rehabilitation will be explored, compared and contrasted with a focus on counselor education, supervision, administration and research.

6100. Occupational Analysis and Career Counseling (3) Formerly REHB 5100 P: Consent of instructor. Current occupational, vocational, career counseling, and career development theories and practices related to persons with and without disabilities across the life-span.

6200. Psychosocial Aspects of Disability (3) Social and psychological issues related to physical and mental disability. Identification of adjustment problems and design of appropriate rehabilitation responses.

6250. Psychiatric Rehabilitation (3) Basic diagnostic and treatment practices for counseling and rehabilitation of individuals with mental disorders.

6300. Rehabilitation Counseling and Human Development Theories (3) Theories and perspectives of counseling, human growth and development.

6310. Prepracticum in Rehabilitation, Substance Abuse and Clinical Counseling (3) Counseling skills and techniques, assessment practices, treatment/rehabilitation plans, discharge summaries/termination reports, case management, professional issues, standards, and ethics.

6320. Family Treatment in Substance Abuse Rehabilitation (3) Same as CDFR 6320 P: REHB 6703 or consent of instructor. Rehabilitation and treatment strategies. Family intervention strategies, family counseling, and treatment of adult children of addicted parents. Emphasis on relationships of family, substance abuse, and major physical and mental disabilities.

6330. Substance Abuse Counseling (3) P: REHB 6703 or consent of instructor. Theory and practice for counseling substance abusers. Specialized counseling issues related to family issues, multiple diagnosis, special populations, stress management, criminal justice system, and relapse prevention.

6350. Group Counseling for Addictive Behavior (3) P: REHB 6300, 6310, 6703; or consent of instructor. Group counseling processes with chemically-addicted persons. Didactic information on group counseling theory for addicts coupled with experiential group counseling process.

6351. Small Group (1) P: Admission to REHB graduate program. Direct student experience in small group activity.

6360, 6361. Rehabilitation, Substance Abuse and Clinical Counseling Practicum (3,1) P: REHB 6300, 6310; or consent of instructor. Counseling of clients with problems of personal/social adjustment, substance abuse, adjustment to disability, educational and/or career planning in an applied setting.

6370. Multicultural Counseling in Rehabilitation (3) Culturally-based studies, experiences and activities for students to acquire the awareness, knowledge, and skills to work with persons from culturally diverse backgrounds.

6375. Military and Trauma Counseling (3) P: Admission to graduate REHB program or consent of instructor. Focuses on providing assessment, counseling, rehabilitation, and transitional services to individuals and families in the military, veterans, and trauma survivors.

6400. Introduction to Vocational Evaluation and Career Assessment (3) Formerly REHB 5400 History, theories and philosophies of vocational evaluation to include credentialing, program accreditation, ethics, and the role and function of the vocational evaluator in various social service settings.

6401. Rehabilitation Evaluation (3) Tests and measurement theory. Principles and hands-on exposure to standardized psychological, vocational, and educational tests and inventories. Ethical, legal, and practical considerations in testing adolescents and adults that are disabled or disadvantaged. Interpreting tests and using test results in report writing, rehabilitation counseling, planning, and self-determination.

6405, 6406. Vocational Evaluation Practicum and Lab (3,0) Classroom instruction and field experience. P: REHB 6400 or consent of instructor or dept chair. Administering, modifying, scoring, and interpreting various vocational evaluation instruments. Behavioral observation and recording techniques. Community-based assessment strategies. Group discussion of case studies and problems.

6501. Problems and Research in Rehabilitation (1) May be repeated for 1-6 s.h. Advanced independent study and research for MS research project. Close supervision of faculty member.

6521, 6522, 6523. Directed Readings in Rehabilitation (1,1,1) No class meetings; hours for instructor conferences arranged. Intensive reading on particular rehabilitation problem based on student's special interests and needs.

6550. Rehabilitation Research (3) Research design and techniques. Develop proposal for MS research project or thesis.

6561. Master of Science Research Project (3) P: REHB 6550 or consent of instructor. Formulation of lab project, case study, experimental study, or library research project that demonstrates principles and procedures of recognizing and formulating problems of scientific, professional, and clinical importance in rehabilitation.

6703. Introduction to Substance Abuse (3) Addresses psychoactive drugs of abuse; the impact of drug abuse on society; psychopharmacology; substance abuse prevention; substance abuse treatment; and drug regulation.

6793. Treatment of Drug and Behavioral Addictions (3) Formerly REHB 5793 P: REHB 6703; admission to graduate REHB program or substance abuse counseling certificate or consent of instructor. In-depth study of evidence-based strategies and models for treating individuals addicted to substances and behaviors, such as pathological gambling, compulsive sex, and binge eating.

6795. Prevention of Drug and Behavioral Addictions (3) Formerly REHB 5795 P: REHB 6703; admission to graduate REHB program or substance abuse counseling certificate or consent of instructor. Current evidence-based models will be applied to the prevention of substance and behavioral addictions.

6796. Contemporary Issues for Addictions (3) Formerly REHB 5796 P: REHB 6703; REHB majors or substance abuse counseling certificate or consent of instructor. In-depth exploration of current topics in the field of substance and behavioral addictions.

6799. Independent Study in Alcohol/Drug Abuse Addiction (3) P: REHB 5793, 5795; or consent of instructor. Etiology, epidemiology, treatment, rehabilitation, intervention, or prevention.

6895. Internship in Vocational Evaluation (3-12) May be taken for a maximum of 12 s.h. P: Consent of graduate director. Field placement specific to vocational evaluation which can be substituted for 6991, 6992, 6993, and/or 6994.

6991, 6992, 6993, 6994. Internship in Substance Abuse and Rehabilitation Counseling (3 each) Consent of graduate director. Normally taken in last semester of student's program. Placement in program involved in substance abuse and/or rehabilitation counseling.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7340. Advanced Clinical Counseling Theories and Techniques (3) P: REHB 6300, 6310 or equivalent; or consent of instructor. Counseling theories utilized with people with disabilities, such as cognitive-behavioral counseling, transactional analysis, and gestalt therapy. Counseling techniques and strategies such as stress management skill training, anger management, self-esteem building, conflict management, dream work, and alternative and complementary therapies.

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7403. Advanced Vocational Evaluation Methods (3) P: REHB 6400 or consent of instructor or dept chair: Current vocational evaluation research. Various assessment samples and systems. Work sample development, standardization, and modification. Synthesis and interpretation of vocational evaluation results and report writing.

7404. Seminar in Vocational Evaluation Administration (3) P: REHB 6400 or consent of instructor or dept chair. Developing and administering public and private vocational evaluation units. Development of service grants and contracts. Professional, ethical, and legal issues and concerns in vocational evaluation. Consultation, certification, accreditation, and program evaluation methods.

7601. Rehabilitation Administration and Leadership (3) Provides overview of management and leadership theory for rehabilitation service delivery organizations.

7610. Employee Assistance Programs (3) P: Consent of instructor. Theory and practice of employee assistance programs. Organization, structure, and professional helping role.

8050. Ethical and Legal Issues in Counselor Education and Supervision (3) P: REHB 6050 or consent of instructor. Issues of professionalism and ethical practice related to counselor education, supervision, administration, consultation, and practice.

8210. Advanced Pedagogy in Rehabilitation Counseling (3) Prepares professionals to teach in higher education settings.

8350. Advanced Group Counseling in Rehabilitation (3) P: REHB 6350 or equivalent or consent of instructor. Advanced group counseling techniques and skills with people in rehabilitation settings. Includes experiential component.

8360. Advanced Practicum (3) P: REHB 6360; or consent of instructor. Experience in clinical counseling, counselor education, or administration with individual and/or triadic supervision.

8370. Advanced Multicultural Ethics and Leadership in Counseling (3) P: REHB 6370; or consent of instructor. Multicultural theories, experiences, and activities to develop advanced cultural awareness, ethics, knowledge, and skills to work as professionals and leaders with individuals, groups, and organizations from diverse backgrounds.

8380. Rehabilitation Counseling Supervision (3) Current knowledge in theoretical foundations and applied models of counselor/clinical supervision within a rehabilitation counseling context. Doctoral students develop skills in roles of supervisor-teacher, supervisor-counselor, and supervisor-consultant. Simulated counselor-supervision experiences and engagement in experiential training by supervising several master's-level practicum and/or internship supervisees.

8410. Seminar in Vocational Evaluation Systems Design (3) P: REHB 6400 or equivalent. Examines vocational assessment and vocational systems, including construction, standardization, and administration. Reviews service delivery systems that utilize vocational evaluation/assessment instruments. Analysis of effective service and system matches.

8420. Advanced Assessment and Evaluation (3) P: REHB 6401, 6550 or consent of instructor. Advanced study of evaluation procedures and methods necessary to analyze and assess individuals and/or programs.

8531, 8532, 8533. Independent Study (1,1,1) Intensive reading on a particular area of rehabilitation or administration. Hours for instructor conferences arranged individually with student.

8550. Advanced Research in Rehabilitation (3) Prepares professionals to study and evaluate professional practice.

8630. Theory and Design of Rehabilitation Programs (3) P: REHB 7601 or equivalent or consent of instructor. Theory, philosophy, and administrative processes behind design and operation of different rehabilitation service delivery programs. Approaches to evaluating and improving program effectiveness.

8710. Substance Abuse Seminar (3) P: REHB 6796, 6793, 6330; or consent of instructor. Covers contemporary and controversial issues in substance abuse field. Explores opposing viewpoints from leading health care professionals, social scientists, and social commentators. Develops critical thinking skills, including debates, literature review, and class discussion. Examines several major issues facing the substance abuse field.

8810. Doctoral Seminar in Rehabilitation Counseling (1-4) Forum to review, discuss, write, and develop research on a variety of current topics in rehabilitation counseling and/or administration.

8991, 8992, 8993, 8994. Advanced Internship (3 each) P: Consent of graduate director; Includes a minimum of 600 hours of supervised experiences in clinical practice, supervision, research, and/or teaching.

9000. Dissertation (3-12) May be repeated. May count maximum of 18 s.h. toward degree.

9001. Dissertation Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for the course during summer.

REHB Banked Courses

6502, 6503, 6504, 6505, 6506. Problems and Research in Rehabilitation (1 s.h. each)

COLLEGE OF BUSINESS

Stanley G. Eakins, Interim Dean, 3119 Bate Building

Paul H. Schwager, Acting Associate Dean, 3119 Bate Building

Margaret T. O'hara, Assistant Dean for Online Programs, 3208 Bate Building

Tina Williams, Director of Graduate Programs, 3203 Bate Building

MISSION

The mission of the East Carolina University College of Business is to be a highly respected regional business school. The mission is achieved by preparing undergraduate and graduate students for careers in business, expanding knowledge of business disciplines through theoretical and applied research, and serving practitioners with training and applied research.

The college, which consists of five departments, offers the bachelor of science in business administration (BSBA) degree with ten concentrations, the master of business administration (MBA) degree, the joint doctor of medicine and master of business administration (MD/MBA) degree, and the master of science in accounting (MSA) degree. The college also offers six graduate business certificates open to students concurrently enrolled in MBA or MSA degree programs from AACSB accredited institutions or possessing an MBA and MSA degree from an AACSB accredited institution.

The college supports the business practitioner through the Division of Professional Programs, Bureau of Business Research, Small Business Institute, and applied research projects in both graduate and undergraduate classes. The college supports primary and secondary education in the state through its Center for Economic Education.

ACCREDITATION

The College of Business undergraduate and graduate business programs are accredited by the Association to Advance Collegiate School of Business (AACSB) International.

MASTER'S PROGRAMS IN BUSINESS

The MBA and MSA degree programs are open to students with baccalaureate degrees from institutions accredited by the Council for Higher Education Accreditation (CHEA) agency who present evidence of their ability to pursue graduate study. Both the MBA and MSA degree programs are structured for students with baccalaureate degrees in nonbusiness as well as business fields.

The decision is based on a combination of factors including but not limited to successful completion of the Graduate Management Admissions Test (GMAT) and a total of at least 950 points for the MBA or 1000 points for the MSA based on the formula: 200 times the cumulative GPA (4.0 system) plus the GMAT score; or at least 1000 points for the MBA or 1050 for the MSA based on the formula: 200 times upper division GPA (4.0 system) plus the GMAT score. Point totals for international students are 50 points greater.

Students possessing a degree or diploma from an institution which does not use English as the language of instruction are required to take the Test of English as a Foreign Language (TOEFL). A minimum score of 20 on each section and a minimum total score of 80 for the Internet based exam, or a minimum score of 550 on the paper based exam, or a minimum score of 213 on the computer based exam is required.

A maximum of 9 semester hours (s.h.) of MBA or MSA requirements may be transferred from another AACSB accredited graduate business program or an equivalent international graduate business program with the approval of the assistant dean for graduate programs and the dean of the Graduate School.

MBA

The MBA degree program offers professional training to qualified applicants who aspire to careers as efficient and responsible managers. The program emphasizes the development of analytical skills in problem solving and decision making.

The MBA degree program requires between a minimum of 30 s.h. and a maximum of 60 s.h. and consists of two major components; the business core, and the business breadth. Courses required to fulfill the business core requirement are ACCT 6241; ENGL 5780; FINA 6144, 6204, 6214; MGMT 6102; MIS 6143; MKTG 6162; OMGT 6123, 6213. Some or all of the business core courses may be waived if equivalent recent work of sufficient depth has been completed at a high performance level. Courses required to fulfill the business breadth requirement are: ACCT 6521; FINA 6604; MGMT 6722, 6802; MKTG 6822; OMGT 6613, 6683; and sufficient electives as approved by the assistant dean for graduate programs. Electives are divided

into analytical and behavioral subgroups and each student is usually required to take at least one elective from each subgroup, although a student judged weak in one of the subgroups may be required to take all three electives from that subgroup. At least 30 s.h. must be in business courses numbered 6300 or above. Upon approval by the assistant dean for graduate programs certain 5000-level courses may be substituted for business electives, reducing the total required business courses numbered 6300 or above to 21. Students may choose to use their electives to complete one of the graduate certificate programs as approved by the assistant dean for graduate programs.

MD/MBA

The Brody School of Medicine and the College of Business cooperatively offer a joint MD/MBA dual degree program. Students in the Brody School of Medicine may use the school's cooperative educational experience option to enroll in the MBA program in the College of Business, usually between the second and third years of medical school. The MD/MBA dual degree program is also open to medical students who are accepted for, or enrolled in, other accredited medical schools, physicians who are currently in medical residence training programs, and practicing physicians. The GMAT requirement is waived for applicants with MD degrees or students from accredited medical schools.

The MD/MBA degree program is structured for medical students, residents, and practicing physicians. Medical students and residents may complete all MBA course work in one calendar year by entering in the second session of summer school and finishing in the first session of summer school twelve months later. Practicing physicians and residents who attend part time may enter in any term.

Courses required to fulfill the MBA requirement are ACCT 6241, 6521; FINA 6144, 6204, 6604; MGMT 6102, 6722, 6802; MIS 6143; MKTG 6162, 6822; OMGT 6123 or 6683; 6213, 6613.

MSA

The MSA degree program includes advanced study in business administration and provides for greater depth and breadth in professional courses in accounting than is possible in current undergraduate degree programs or master's in business administration programs. The MSA degree meets the requirements to sit for the CPA exam in North Carolina and most other states.

The MSA degree program requires between a minimum of 30 s.h. and a maximum of 45 s.h. and consists of three major components; the business core, the accounting evaluation, and the accounting breadth. Courses required to fulfill the business core requirement are ACCT 6221, 6231. One or both of the business core courses may be waived if equivalent recent work of sufficient depth has been completed at a high performance level. Courses required to fulfill the accounting evaluation requirement are ACCT 6621, 6631, 6641. Some or all of the accounting evaluation courses may be waived if equivalent recent work of sufficient depth has been completed at a high performance level.

Undergraduate accounting majors must complete the following courses to fulfill the accounting breadth requirement: ACCT 6611, 6701, 6891, 6901, 6951, 6981; FINA 6604, and 9 s.h. of accounting electives numbered 6300 or greater. Undergraduate non-accounting majors must complete the following courses to fulfill the accounting breadth requirement: ACCT 6611, 6701, 6891, 6901, 6951, 6981; and 9 s.h. of accounting electives numbered 6300 or greater. At least 30 s.h. must be in accounting courses numbered 6300 or above.

CERTIFICATE PROGRAMS

College of Business graduate certificate programs are open to students enrolled in the MBA and MSA programs, concurrently enrolled in MBA or MSA degree programs from AACSB accredited institutions, possessing an MBA or MSA degree from an AACSB accredited institution, and applicants with graduate business degrees from schools of business without AACSB accreditation with the approval of the assistant dean for graduate programs. MBA students may choose to use their electives to complete one of the graduate business certificate programs. Courses required to fulfill the various graduate business certificates requirements are as follows:

Development and Environmental Planning (12 s.h.): PLAN 6301, 6305; choose two from: PLAN 6000, 6009, 6010, 6019, 6020, 6029.

Electronic Commerce (12 s.h.): MIS 6863, 6883; MKTG 6662, 6762.

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Finance (12 s.h.): Choose four from the following: FINA 6624, 6654, 6814, 6824, 6854, 6874, 6876.

Health Care Management (12 s.h.): COHE 6000, 6600, 6610, 6620.

Hospitality Management (12 s.h.): HMGH 6310, 6400, 6410, 6420.

International Management (12 s.h.): INTL 6005, 6105, 6500; choose one from: FINA 6876; MGMT 6322; MKTG 6992; complete the foreign language requirement for the master of arts in international studies; and have a minimum of a semester-long international field experience in the area in which the selected foreign language is used, as approved by the assistant dean for graduate programs.

Management information Systems (12 s.h.): MIS 6843, 6863, 6873, 6883.

Professional investment Management and Operations (12 s.h.): FINA 6624, 6824, 6904, 6914.

School Business Management (12 s.h.): LEED 6804, 6807, 7408, 7470.

Supply Chain Management (12 s.h.): OMGT 6383, 6743, 6763; choose one from: MKTG 6762, OMGT 6333, 6493.

Tax (9 s.h.): ACCT 6911, 6921, 6931.

MBA students may choose to use their electives to complete one of the following graduate certificate programs as approved by the assistant dean for graduate programs. Additional application and program coordinator approval may be required. Courses required to fulfill the various certificate requirements are as follows:

Sport Management (12 s.h.): EXSS 6106, 6132; choose two from: EXSS 6001, 6102, 6131, 6133, RCLS 6005. See College of Health and Human Performance, Department of Exercise and Sport Science, for certificate requirements.

Security Studies (15 s.h.): Through the Division of Academic Affairs, the university offers the interdisciplinary graduate certificate in security studies. See Thomas Harriot College of Arts and Sciences, Department of Political Science, for certificate requirements.

BUSI: BUSINESS

6001, 6002, 6003. Internship in Business (1,2,3) P: Consent of assistant dean for graduate programs. Part-time experience under the supervision of a business owner, manager, or business professional.

DEPARTMENT OF ACCOUNTING

Dan L. Schisler, Chair, 3208 Bate Building

ACCT: ACCOUNTING

6221. Principles of Accounting and Finance (3) Generation and flow of financial information through the accounting system as well as financial control, capital budgeting, time value of money, ratio analysis, and valuation.

6231. Principles of Business (3) The functions of business from organizational structure and human resource management to marketing behavior.

6241. Financial and Managerial Accounting (3) May not count toward the MSA. Generation and flow of financial information through accounting system and its uses by management in decision-making process.

6301. Fraud Examination (3) May not count toward the MSA. P:ACCT 6241. Basic understanding of fraud prevention, detection concepts, and examination techniques.

6521. Accounting for Decision Making (3) May not count toward the MSA. P: ACCT 6241. Managerial accounting, cost theories, and applications and their effect on decision making.

6611. Auditing (3) P: ACCT 6631. Auditing standards and procedures and their relation to principles and systems of internal control of business operations.

662I. Intermediate Financial Accounting Theory (6) P: ACCT 622I. Principles and concepts underlying the compilation of financial statements along with financial reporting problems and contemporary financial accounting issues.

663I. Advanced Cost and Systems (3) P/C: ACCT 622I. Types of cost accounting for planning, control, and product cost combined with the study of the accounting system.

664I. Advanced & Governmental Accounting (3) P: ACCT 662I. Business combinations, other advanced accounting topics and the principles underlying the compilation/presentation of governmental and nonprofit financial statements.

670I. Regulation (3) P: ACCT 689I, 691I; P/C: ACCT 690I. Regulatory issues confronting accountants and AICPA standards for professional responsibility.

680I. Accounting Theory (3) P: ACCT 622I. Accounting principles, practices, and procedures of complex business enterprises.

681I. Cost Accounting Theory (3) P: ACCT 622I. Basic concepts underlying cost accounting and use of knowledge in studying contemporary business environment.

689I. Federal Income Taxation (3) P/C: ACCT 622I. General income tax theory and applications to problems encountered by individuals and businesses. Compliance, planning, and research.

690I. Advanced Federal Taxation (3) P: ACCT 689I. Income tax issues encountered by corporations, partnerships, and families. Includes gift and estate taxation, research and compliance procedures, and planning for maximization of after-tax benefits for multiple entities.

691I. Research in Taxation (3) P: ACCT 689I. Federal taxation at research level. Research for individuals and corporations. Introduction to estates and trusts.

692I. Advanced Taxation of Partnerships (3) P: ACCT 689I. Federal taxation of partnerships, S-corporations, and limited liability companies.

693I. Advanced Taxation of Estates (3) P: ACCT 689I. Federal taxation of estates, trusts, and gifts.

695I. Auditing Seminar (3) P: ACCT 661I, 689I; P/C: ACCT 690I. Conceptual framework of independent auditing. Emphasis on development of theory, methodology, standards, and practice.

696I. Information Technology Auditing (3) P: ACCT 661I. The fundamental concepts of the information technology (IT) security audit and control process in government, financial, and healthcare industries.

697I. Corporate Governance and Accounting Ethics (3) P: ACCT 622I. Fundamental concepts of corporate governance and accounting ethics.

698I. The Professional Accounting Environment (3) P: ACCT 661I, 689I; P/C: ACCT 690I. Advanced accounting topics, the audit, and contemporary issues and problems. Emphasis on cost accounting, international accounting, business combinations, taxation, and practical application.

699I. Advanced Topics in Accounting (3) P: ACCT 690I. Investigation of specific problems in accounting.

ACCT Banked Courses

683I. Taxation and Business Decisions (3)

DEPARTMENT OF FINANCE

Scott D. Below, Chair, 3420 Bate Building

FINA: FINANCE

6144. Financial Management I (3) P: ACCT 624I; OMGT 6123. Financial manager's role in financial planning, acquisition of funds, and social, ethical, and governmental aspects of national and international financial decision making.

SECTION 8: CURRICULA

6204. Analysis of the Business Economic Environment (3) P: OMGT 6123. Concepts, theories, and analytical tools of micro and macroeconomic theory and their application in understanding the economic, social, and legal environment in which businesses operate.

6214. Government Regulation of Business (3) Legal process and government's role played in public regulation of business enterprise. Covers judicial system, contract and sales law, business associations, antitrust, securities regulation, employment law, and trade regulation.

6604. Financial Management II (3) P: ACCT 6221 or FINA 6144. Financial management decision techniques as applicable to complex domestic and international business.

6624. Investment Management (3) P: FINA 6144. Conceptual and analytical framework for formulating investment policies, analyzing investment alternatives, and constructing portfolio strategies for individuals and institutions.

6654. Commercial Bank Financial Management (3) P: FINA 6144. Conceptual and analytical framework for management of commercial banks.

6814. Management of Financial Risk (3) P: FINA 6144. Analysis of risk environment of corporations through advanced analytical tools and models.

6824. Portfolio Theory, Construction and Management (3) For students considering careers in portfolio management. P: FINA 6144. Portfolio optimization, asset allocation, performance evaluation, and market efficiency issues from perspective of professional portfolio manager. Extensive use of spreadsheet software.

6854. Real Estate Investments and Analysis (3) P: FINA 6144. Relationships among real estate, financial, and investor communities. Includes markets, location, financial and investments analysis, and taxation.

6874. Topics in Finance (3) P: FINA 6144. Selected topics.

6876. International Financial Management (3) P: FINA 6144. Financing of international trade and investments. Topics include international monetary system and banking, exchange rates and money markets, and international long-term investment and financial management.

6904. Mutual Fund Management and Operations (3) P: FINA 6624 or FINA 6824. Structure and regulatory environment of investment companies and investment company securities (i.e. mutual funds).

6914. Portfolio Management and Operations Practicum (3) P: FINA 6824; P/C FINA 6904. Hands-on professional investment management. Students will be responsible for the day-to-day management and operations of actual and hypothetical investment portfolios.

DEPARTMENT OF MANAGEMENT

Joseph M. Tomkiewicz, Chair, 3106 Bate Building

MGMT: MANAGEMENT

6102. Comparative Management (3) Management concepts and manager's responsibilities to stakeholders. Emphasis on impact of international competition.

6322. International Management (3) P: MGMT 6102. Intensive examination of management of organizations in global economy.

6500, 6510, 6520. Independent Study (3,3,3) P: MGMT 6102. Intensive study of selected subject in greater depth than achieved in other courses offered by school.

6722. Strategic Management (3) P: ACCT 6521, FINA 6604, MGMT 6802, MKTG 6822, OMGT 6613, OMGT 6883. Concept of policy making and viewpoint of management. Integration of business organization in decision making and formulation of plans to achieve objectives.

6682. Collaboration, Conflict and Negotiation (3) P: MGMT 6102. Theories and processes of negotiation and conflict resolution as practiced in a variety of organizational settings.

155 P=Prerequisite(s); C=Corequisite(s); P/C=Prerequisite(s) or Corequisite(s); R=Recommended P, C, or P/C

6802. Organizational Behavior (3) P: MGMT 6102. Managing and understanding individuals and groups in organizational environment. Motivation, communication, leadership, group process, and diversity in work place.

6812. Entrepreneurship (3) P: FINA 6144; MGMT 6102; MKTG 6162. Conceptualization, initiation, and management of new enterprises with consideration of opportunities and associated risks.

6822. Business and Society (3) P: MGMT 6102. Implications of management decisions in broader scope of antitrust legislation, regulation by government, value systems, and ethics.

6832. Human Resources (3) P: MGMT 6102. Skills and techniques used in building and maintaining an effective work force.

DEPARTMENT OF MANAGEMENT INFORMATION SYSTEMS

Richard Hauser, Chair, 3410 Bate Building

MIS: MANAGEMENT INFORMATION SYSTEMS

6143. Management Information Systems I (3) Emphasis on computer application.

6843. Systems Analysis and Design (3) P: MIS 6143. Information systems analysis and design from information system/requirements analysis and application system design perspectives.

6853. Seminar in Information Systems (3) P: MIS 6143. Current and emerging concepts, tools, and methodologies in information systems.

6863. Enterprise Infrastructure (3) P: MIS 6143. Data and telecommunications fundamentals for design, implementation, and management of digital networks.

6873. Data Management (3) P: MIS 6143. Fundamental concepts and issues in database design, management, and application of data management technologies to support managerial decision making.

6883. Web Technologies for Business (3) Formerly DSCI 6883 P: MIS 6143. Exploration of issues, strategies, and evolving techniques that enable modern web applications for organizations.

6923. Topics in Management Information Systems (3) Formerly DSCI 6923 P: MIS 6143.

DEPARTMENT OF MARKETING AND SUPPLY CHAIN MANAGEMENT

Kenneth Anselmi, Chair, 3414 Bate Building

MKTG: MARKETING

6162. Marketing Management (3) Definitions, concepts, practices, and analytical tools used to market goods and services. Environmental variables, e.g., legal, social, ethical, cultural, ecological, and technological issues and marketing's role within profit and nonprofit organizations.

6642. Marketing Research (3) P: MKTG 6162; OMGT 6123. Methods, techniques, and procedures of marketing research. Emphasis on various methods of acquiring information for marketing management decision making. Major group project or case is required.

6652. Seminar in Marketing (3) P: MKTG 6162. Selected topics.

6662. Electronic Markets (3) P: MKTG 6162; MIS 6143. Examines processes necessary to integrate a website into an organization's strategic plan and the basics of the Internet. Focuses on strategic application of website to enhance corporate profit, serve customers, and market organization. Considers how various types of hardware, software, and telecommunications enable and support integrated, e-business processes in an organization. Covers improvement, enhancement, and promotion of the site, including registering with search engines and directories.

6752. Advertising and Promotion Strategy (3) P: MKTG 6162. Effective integrated marketing communication strategies for organizations.

SECTION 8: CURRICULA

6762. Business-to-Business Marketing (3) P: MKTG 6162. Marketing mix design for business customers, emphasizing purchasing decisions, inter-firm relationships, the roles of supply chain and value-added activities in profitability, and value communication.

6822. Marketing Strategy (3) P: ACCT 6521; MKTG 6162. Market analysis and strategy formulation. Emphasis on application of marketing concepts to variety of organizations.

6842. Consumer Behavior (3) P: MKTG 6162. Current theory and research in consumer behavior used to develop marketing strategy for profit and nonprofit businesses. Applications of consumer behavior to social marketing.

6992. Global Marketing (3) P: MKTG 6162. Marketing decision-making, strategy development, and operational performance of firms involved in international business.

OMGT: OPERATIONS MANAGEMENT

6123. Quantitative Methods (3) Formerly DSCI 6123 Basic quantitative concepts and their applications to decision models.

6213. Operations and Supply Chain Management (3) Formerly DSCI 6213 P: OMGT 6123, MIS 6143. Design, operations and improvement of systems that produce a firm's products and services; management of supply chains; application of conceptual and quantitative techniques.

6333. Project Management (3) P: OMGT 6123. Concepts and technology of project management as applicable to wide range of business and technical situations. Focus on behavioral and organizational aspects as well as quantitative methods and computer systems in project management.

6383. Supply Chain Systems (3) P: OMGT 6213. Application of technology to three key aspects of a supply chain's competitive advantage: product design, product demand estimation, and supply chain systems analysis.

6493. Quality Management (3) P: OMGT 6213. Quality management principles and application in business enterprises and global supply chains.

6613. Management Science (3) Formerly DSCI 6613 P: OMGT 6213. Methods and models used in application of management science to managerial and organizational decision-making. Emphasis on deterministic models. Topics include decision theory, mathematical programming, network models, and deterministic simulation.

6683. Statistical Methods (3) Formerly DSCI 6683 P: OMGT 6123. Multiple correlation and regression, forecasting, analysis of variance, and selected nonparametric statistical techniques. Application project.

6743. Logistics and Materials Management (3) P: OMGT 6213. Management and movement of goods and services to support supply chain management.

6763. Strategic Supply Chain Management (3) P: OMGT 6213. Concepts in supply chain management and its role in global markets. Analyzes supply chains, creating supplier networks, and evaluating the performance of a supply chain.

6943. Topics in Operations Management (3) P: Consent of assistant dean for graduate program and dept chair.

OMGT Banked Courses

6803. Stabilization Policy (3) Formerly DSCI 6803

6823. Applied Management Science (3) Formerly DSCI 6823

6833. Advanced Production Management (3) Formerly DSCI 6683

COLLEGE OF EDUCATION

Linda Patriarca, Dean, 154 Speight Building

The mission of the College of Education is the preparation of professional educators and allied practitioners, including professionals in adult/continuing education, business information systems, counseling, instructional technology, and librarianship. Significant to this mission is a strong commitment to three important, related areas: the encouragement and nurturing of professional growth for educators and allied practitioners at all levels and in all areas of the educational endeavor; a continuing emphasis on and support for scholarship and research/creative activity, and service in all areas of professional education.

The College of Education offers graduate degree programs through the Departments of Business and Information Technologies Education; Counselor and Adult Education; Curriculum and Instruction; Educational Leadership; Library Science; and Mathematics, Science, and Industrial Technology Education.

ACCREDITATION

Graduate teacher education programs are accredited by the National Council for the Accreditation of Teacher Education (NCATE) and the Public Schools of North Carolina, Department of Public Instruction.

DISTANCE EDUCATION

Selected College of Education programs have been approved for distance education delivery. All programs may be available on campus. For a complete listing of programs available partially or entirely through distance education, please refer to Section 7, Degrees and Teacher Licensure, or contact individual department offices.

MASTER'S TEACHING DEGREES

The master of arts in education (MAEd) is offered with teaching areas in business education; elementary education; English education; health education; history education (with concentrations in American history and European history); instructional technology; marketing education; mathematics; middle grades education (with licensure areas in English, mathematics, science, and social studies); physical education (with concentrations in adapted physical education and physical education pedagogy); reading education; science education; special education (with concentrations in behavioral/emotional disabilities, learning disabilities, low incidence disabilities, and intellectual disabilities). MAEd programs in art, birth-kindergarten, family and consumer sciences education, and music (master of music) are administratively located in the respective departments. These programs may choose to satisfy MAEd competency requirements through the use of the MAEd core or they may utilize their own courses to meet the competencies. The College of Education also offers the master of arts in teaching (MAT) with teaching field concentrations. Please refer to the Department of Curriculum and Instruction for requirements of the MAT.

NOTE: The College of Education also offers the MAEd in adult education, which does not require or result in state licensure.

MASTER OF ARTS IN EDUCATION (MAEd)

Master of arts in education (MAEd) degree programs range from a minimum of 36-39 semester hours, depending on the teaching field. All MAEd degree programs require completion of course work in the following competency areas: research, trends, and issues in education; the diverse learner; and, effective communication and leadership. The program is designed so that students and advisors have options in completing these competencies. Additional courses may be added to the following list of core courses as they are approved.

All MAEd teaching degree programs require completion of a final product. Depending on the teaching area selected, the final product may be in the form of a comprehensive examination (written or oral), a thesis, a research project, or a portfolio. See the description of teaching area specific courses (below) for information about how the final product requirement is satisfied in each teaching area.

A student may seek acceptance into the College of Education and one of several teaching areas offered in the MAEd. Minimum requirements for admission to the College of Education's MAEd program include the following:

1. All MAEd applicants (except those applying to the adult education MAEd program) must currently hold or be eligible for an initial teaching license. Entrance into an MAEd teaching area other than that of the initial licensure area may require prerequisite courses and a passing score on the area specialty PRAXIS exam for licensure.
2. Overall GPA of 2.7 on a 4.0 scale on all undergraduate work from an institution accredited by a regional association.

SECTION 8: CURRICULA

3. Satisfactory entrance examination scores on either the Graduate Record Examination or the Miller Analogies Test. This must be completed prior to admission or completion of 9 s.h. of graduate credit.
4. A completed Graduate School application packet, including the written statement of purpose, a copy of the initial teaching license, and three letters of recommendation from persons who can attest to the applicant's academic competence or ability to do graduate work.

Upon acceptance into a teaching area, the student is assigned an advisor:

Required core courses..... 12 s.h.
Research, Trends, and Issues Competency Area: EDUC 6480, 6482 or SCIE 6500 3 s.h.
Diverse Learner Competency Area: EDUC 6001; SPED 6002..... 6 s.h.
Effective Communication and Leadership Competency Area: LEED 6000 or ADED 6550 or ELEM 6550 3 s.h.

Teaching area specific courses (Choose from one of the following areas.) 24-27 s.h.

Business education..... 27 s.h.

Required core courses 15 s.h.

BITE 6410, 6426, 6450, 6492, 6750

Choose from the following..... 12 s.h.

BITE 5200 or 5503; choose from 6100, 6103, 6420, 6424, 6428, 6430, 6435, 6700, 7000. Students selecting the thesis option must register for BITE 7000 and may count 6 s.h. of BITE 7000 toward the degree.

Elementary education 24 s.h.

ELEM 6000, 6001, 6200, 6400, 6500

Choose 9 s.h. in an elementary content strand as follows:

Academically Gifted: SPED 6104, 6401, 6402 (SPED 6403 is a requirement for add-on licensure in gifted education)

Content Pedagogy: ELEM 6406; 6412 or 6488; MATE 6320; SCIE 6019; READ 5316 or 6421

Teacher Leadership in the Elementary School: ELEM 6408; LEED 6805, 6830

Early Childhood: ELEM 6412, 6408, and 6410

Thesis: ELEM 7000 (May be repeated. May count 6 s.h. toward the degree. Can be substituted for 3 s.h. in one of the content strands.)

Final product requirement: A research project with an oral presentation (ELEM 6000 and 6001) or a thesis with an oral thesis defense (ELEM 7000).

English 27 s.h.

ENED 6510, 6511 (IRB research approval procedures are required for all students in this research series)

18 s.h. of English or English Education courses, 6 s.h. of which must be at the 6000 or 7000-level.

Choose 3 s.h. from COAD 6358; READ 5317; SPED 6000

Final product requirement: A research project initiated in ENED 6510 and completed with an oral presentation in ENED 6511.

Health education 24 s.h.

HLTH 5310, 6100, 6200, 6300, 6355, 6400

Internship: HLTH 6990, 6991

Final product requirement: A professional portfolio (HLTH 6990 and 6991) is required for completion of the final product requirement.

History education..... 27 s.h.

HIED 6510; HIST 6900, 6993

Concentration: Choose American History or European History

Choose 21 s.h. in the area, including 9 s.h. from the historiography course, the seminar in issues and topics, and a directed research project.

6 s.h. in a related field outside the concentration.

At least 3 s.h. of coursework must be in the area of culturally diverse or multicultural populations.

Final product requirement: A research project with an oral defense and comprehensive oral examination.

Instructional Technology 24-27 s.h.

EDTC 6010, 6020, 6025; 6035 or 6037; 6139; 6149, 6992, two electives

Final product requirement: Either the development of a professional portfolio and an internship (EDTC 6992) or a thesis with an oral defense (EDTC 6995) and an internship (EDTC 6992).

Marketing education	27 s.h.
BITE 5200, 5201	
BITE 6400 or 6700; 6426, 6450, 6750	
MKTG 6162, 6822, 6842	
Choose a technology elective from BITE or EDTC	
Final product requirement: The development of a professional portfolio with an oral defense or a thesis with an oral defense (BITE 7000).	
Middle grades education	24 s.h.
MIDG 6000, 6100, 6200, 6300, 6401	
Concentration Area: Choose 12 s.h. from one concentration area or a minimum of 9 s.h. from one area and 3 s.h. from another.	
English: ENED 6510; ENED 6630 or ENGL 6625; ENGL 6340 or 6360 or 6460; ELEM 6488, 6515; 3 s.h. ENGL or ENED elective	
Mathematics: MATE 5263, 5264, 6321; MATH 6264; 3 s.h. MATE or MATH elective	
Science: SCIE 6003, 6004, 6020, 6200, 6310, 6506	
Social studies: ELEM 5306 or 6406; GEOG 5283, 6393; HIED 6510; HIST 5122, 5130, 5135, 5340, 5765	
Thesis: MIDG 7000	
Final product requirement: A research project with a presentation and written documentation (MIDG 6001 and 6401) or a thesis with an oral thesis defense (MIDG 7000).	
Physical education	24 s.h.
Choose one concentration area:	
Adapted Physical Education: EXSS 5303, 5305, 5903, 6201, 6300, 6301, 6990, 6991, 6994; 3 s.h. elective	
Physical Education Pedagogy: EXSS 6101, 6104, 6108, 6109, 6110, 6202, 6300, 6301, 6990, 6991	
Final product requirement: In addition to successfully passing a written comprehensive exam, a research project (EXSS 6994) or a professional portfolio (EXSS 6990, 6991) is required.	
Reading education	27 s.h.
COAD 6358; READ 6406, 6407, 6418, 6430; 6421, 6422 or 6431, 6432	
Choose 6 s.h. from one option as follows:	
Option I. Courses for Related Study: Approved electives from reading and classroom teaching, reading specialist, adult literacy, English as a second language, or a combination of related study courses	
Option II. Non-Thesis: Choose from approved list of electives	
Option III. Thesis (2 required courses): READ 7000 (May count 6 s.h. toward degree.)	
Final product requirement: A professional electronic portfolio (READ 6406, 6407, 6418, 6421, 6422, 6430) and presentation.	
Science education	24 s.h.
SCIE 6020; 6200 or 5010; 6310, 6600, and 9 s.h. coursework from fields of biological, physical, and earth science (BIOL, CHEM, GEOL, PHYS, and SCIE)	
Final product requirement: Choose 3 s.h. of thesis (SCIE 7000) or research problem option, which requires completion of SCIE 6505 or 6506 or 6507.	
Special education	30 s.h.
SPED 6010, 6011, 6012, 6014, 6015	
Choose 15 s.h. from one licensure area as follows:	
Behavioral/Emotional disabilities: SPED 6023, 6027, 6994, 7000 or 7002; approved electives	
Learning disabilities: SPED 6022, 6025, 6994, 7000 or 7002; approved electives	
Low Incidence disabilities: SPED 6030, 6031, 6994, 7000 or 7002; approved electives	
Electronic portfolio requirement: Demonstration of field-based master teaching, research, collaboration, and leadership skills developed throughout the SPED MAEd program.	
Final product requirement: Completion of a thesis (SPED 7000) or a field-based project (SPED 7002); both require a presentation to faculty and students.	
Special education, intellectual disabilities	30 s.h.
SPED 6010, 6011, 6012, 6014, 6015, 6020, 6021, 6994, 7000 or 7002; approved elective.	
Electronic portfolio requirement: Demonstration of field-based master teaching, research, collaboration, and leadership skills developed through the SPED MAEd program.	

SECTION 8: CURRICULA

Final product requirement: Completion of a thesis (SPED 7000) or a field-based project (SPED 7002); both require a presentation to faculty and students.

ADMISSION TO CANDIDACY

Admission to candidacy for the MAEd will be met when the following have been completed.

1. Unconditionally admitted to graduate standing.
2. Acquired initial NC teaching licensure in appropriate area.
3. Accepted to a program area and assigned an advisor.
4. Completion of 12 s.h. of graduate credit over and above any entrance deficiencies or conditions.

TRANSFER CREDIT

Transfer of credit regulations which have been established by the Graduate School apply to this degree program. Transfer of credit is only accepted when it is fulfilling a deficiency or content area of knowledge.

RESIDENCE REQUIREMENTS

The residence requirement for a nondoctoral degree program is met when a student has earned at least eighty percent of the required graduate degree credit for his or her program through enrollment in courses offered by East Carolina University.

CONTINUOUS ENROLLMENT (OR REGISTRATION)

Graduate students who have previously registered for all credits in a graduate degree program but who have not completed all requirements (e.g., thesis, professional paper, internship, etc.) must continue to register each semester (except summer terms) until all degree requirements are completed and filed with the registrar. Under special circumstance, exception to continuous registration may be approved by the dean of the Graduate School. Students must be registered for the semester of graduation (except summer if registered for preceding spring semester).

OTHER REQUIREMENTS FOR THE MAEd

General requirements for the completion of the master's degrees are as follows:

1. 36-39 s.h. of course work, depending upon the teaching area.
2. A cumulative grade point average of 3.0 in all graduate coursework.
3. Meeting specific teaching area requirements.
4. Completion of a culminating project.

Students who do not have at least a 3.0 GPA upon completion of the MAEd program may be allowed to submit up to 6 s.h. additional graduate credit hours in residence on the East Carolina University campus or at an approved graduate center in order to accumulate a 3.0 average. These credits will be in the area(s) evaluated as being weak.

Graduate courses with a final grade of C may be credited toward completion of any part of a nondoctoral degree program, but any student who receives a final grade of C on courses totaling in excess of 6 s.h. will have his or her program terminated. A "B" average is required for graduation based on semester hours of A-graded work equal to or exceeding semester hours of C-graded work. A student who receives two Fs or two Cs and an additional C or F as final grade is subject to termination.

DEPARTMENT OF BUSINESS AND INFORMATION TECHNOLOGIES EDUCATION

Ivan G. Wallace, Chair, 2318-A Bate Building

MAEd AND MAT IN BUSINESS EDUCATION AND MARKETING EDUCATION

For requirements of the master of arts in education (MAEd), please see above. For requirements of the master of arts in teaching (MAT), please see Department of Curriculum and Instruction, below. Both degree programs lead to advanced licensure. See College of Human Ecology for requirements of the MAEd in family and consumer sciences.

MS IN VOCATIONAL EDUCATION

Study toward the MS in vocational education presupposes the completion of an undergraduate degree with a strong information technologies/computer technology background. This program does not offer teacher licensure. Thirty s.h. of course work are required for the degree as well as a thesis or portfolio. The degree has two components: a 12 s.h. BITE core and 18 s.h. of information technologies courses.

BITE core (12 s.h.): BITE 6410, 6426, 6450, and 6750.

Information technologies (18 s.h.): BITE 5200 or 5503; choose from BITE 6100, 6103, 6420, 6424, 6430, 6435, 6700, or 7000. Students selecting the thesis option must register for BITE 7000 and may count 6 s.h. of BITE 7000 toward the degree.

BITE: BUSINESS AND INFORMATION TECHNOLOGIES EDUCATION

5200. Microcomputer Business Graphics Applications (3) P: BITE 4200 or consent of instructor. Advanced course in specialized graphics-oriented microcomputer applications software used to produce business documents, reports, brochures, newsletters, pamphlets, and other screen or page-composition publications.

5205. Teaching Special Populations in Business and Information Technologies Education (3) P: SPED 2000 or equivalent. Emphasis on modification and development of materials, curricula, and programs for special populations in career and technical education.

5388, 5389, 5390. Seminar in Business and Information Technologies Education (3,3,3) May be repeated for credit with change of topic. Problem areas of major concern in information technologies, business education, or marketing education.

5500. Independent Study in Business and Information Technologies Education (3) P: Senior or graduate standing. May be repeated for credit with change of topic. Independent study, research, and investigation in business and information technologies education.

5503. Integrating Information Processing Technology into Business and Information Technologies Education (3) Integrates information processing technology into business and information technologies education curricula.

6100. Designing Virtual Environments in Business and Information Technology Education (3) Use of specialized software and microcomputer applications for designing virtual environments.

6103. Facilities Planning and Management in Business and Information Technologies Education (3) Planning building facilities for business and information technologies education.

6400. Foundations and Management of Retailing for Marketing Education (3) Emphasis on retailing and wholesaling institutions, their development, roles in distribution structure, strategies, and practical technical problems. Basic functions of buying, selling, physical distribution, and risk.

6410. Social, Legal, and Ethical Environments in Business and Information Technologies Education (3) Major ideas and institutions that comprise important part of environment within which business and educational transactions occur.

6420. Problems in Business and Information Technologies Education (3) Selected issues in information technologies and development of technology-based solutions.

6422, 6423, 6424. Problems in Business and Information Technologies Education (1,2,3) May be repeated for credit with change of topic. Special topics in selected areas of business and information technologies education.

6426. Supervision in Business and Information Technologies Education (3) Theory, principles, and procedures in supervision as they relate to improvement of instruction and pupil and teacher growth.

6428. Instructional Strategies for Business and Information Technologies Education (3) Planning and implementation of effective instructional procedures for information technology, business, or career and technical education.

SECTION 8: CURRICULA

6430. Computer Concepts and Applications for Business, Information, and Technologies Education

(3) Business-related computer concepts and applications. Hands-on experience using various hardware and software.

6435. Instructional Strategies for Technical Training (3) Development of training strategies, concepts, and materials for enhancing instruction through computer technology.

6450. Evaluation in Business and Information Technologies Education (3) Methods and techniques of evaluating business and information technologies education students, teachers, programs, and facilities.

6492. Business and Information Technologies Education Curriculum Design (3) Program development with special emphasis on job analysis as a base for program planning and curriculum construction.

6700. Website Design and Maintenance (3) Use of specialized software and microcomputer applications for the production and maintenance of websites in Business and Information Technology Education.

6750. Contemporary Business and Information Technologies Education Research (3) Contemporary research and evaluation techniques for business and information technologies education.

7000. Thesis (I -6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

BITE Banked Courses

5301. Middle Grades Career Exploration in Marketing and Business Education (3)

DEPARTMENT OF HIGHER, ADULT AND COUNSELOR EDUCATION

Vivian W. Mott, Chair, 213 Ragsdale Building

MAEd IN ADULT EDUCATION

The College of Education offers a master's degree program in adult education, which is designed to assist teachers, instructional designers, administrators, trainers, and other persons working with adult learners to develop those skills necessary to initiate, design, administer, and implement effective educational programs. The mission of the degree program is to prepare adult educators who are knowledgeable and reflective in their practice and critical in their thinking. Admission to this program does not require an initial teaching license. The program requires a minimum of **36 s.h.** with 24 s.h. in adult education and 3 s.h. in educational research and a culminating reflective portfolio. A maximum of 9 s.h. may be taken as electives in related areas. An interview and writing sample may be required for admission.

Required courses: ADED 6445, 6453, 6481, 6484, 6487; educational research course approved by dept.

MS IN COUNSELOR EDUCATION

Students majoring in counselor education must complete a minimum of **48 s.h.**, including 30 s.h. of core courses, 3 s.h. in the research area, and 15 s.h. of education, psychology, sociology, human environmental sciences, or health according to the student's needs as approved by the advisor. Individualized programs of course work will be designed to promote the competencies required of counselors. Students seeking licensure as school counselors must be eligible for Class A license or must complete an extended school internship. A departmental interview will be required for admission.

Required courses: COAD 5370, 6401, 6402, 6404, 6405, 6407, 6409, 6482, 6991; choose one from: COAD 6406, 6411, 6415; educational research course approved by dept.

EdD CONCENTRATION IN HIGHER EDUCATION LEADERSHIP

The doctor of education in educational leadership (EdD) degree with an emphasis in higher education leadership is designed to develop skills and abilities for individuals to resolve educational issues and problems in institutions of higher education. Coursework includes leadership theory, human resource development, organizational theory, policy analysis, planning studies, curriculum and instructional leadership, political systems analysis, and research. This concentration prepares senior level administrators for leadership positions in higher education. A minimum of 60 semester hours beyond a master's degree is

required. Requirements also include a research-based dissertation completed under the direction of an appropriate faculty member.

Candidates seeking the EdD with a concentration in higher education administration are not required to hold a previous license and are not eligible for North Carolina license in administration or supervision upon completion of the program.

CERTIFICATE IN COMMUNITY COLLEGE INSTRUCTION

The certificate in community college instruction requires **15 s.h.** of graduate level course work (including core courses ADED 6240, 6450, and 6453, and electives chosen to meet the career goals and instructional focus of students in the certificate program) and a culminating professional instructional portfolio. See the Adult Education webpage [<http://www.ecu.edu/cs-educ/coad/index.cfm>] for more information and course schedules.

ADED: ADULT EDUCATION

6001, 6002, 6003. Special Topics Seminar (1,2,3) May be repeated for maximum of 6 s.h. P: Consent of instructor. Focused study in selected topics in adult education.

6240. Effective College Teaching (3) Basic principles and practice of effective teaching at college level. Conceptual understanding and experiential skills in planning, implementing, and evaluating college instruction.

6307. Proposal Writing for Grants and Contracts (3) Sources of support of sponsored programs. Design of proposals for research, training/education, public service, development, and other types of grants and contracts. Emphasis on practical application of knowledge and techniques for proposal preparation.

6379. Issues and Strategies in Adult Literacy (3) Educational, psychological, social, cultural, and political problems that may be present for adults with low levels of literacy. Strategies and practical applications developed for understanding, motivating, and teaching under-educated adult.

6445. Introduction to Adult and Community Education (3) P: Baccalaureate degree. Overview of adult education to aid student in conceptualizing social, historical, and philosophical nature of the field.

6446. Community Education and Community Development (3) P: ADED 6445. Relationship between community education and community development and agencies and institutions in community. Techniques for assessing, coordinating, and delivering services through persons trained as community education specialists.

6450. Community, Junior, and Technical Colleges (3) Philosophy, roles, organization, and historical foundations of community, junior, and technical colleges as specific institutions designed to meet educational needs of a rapidly changing society.

6453. The Adult Learner (3) Uniqueness of adult as learner. Development and changes in adulthood that affect learning process.

6454. Educational Gerontology (3) Developmental process of aging through sociological, physiological, and psychological aspects. Emphasis on overall educational implications, particularly resources and program planning related to all areas of older adult population.

6461. Introduction to Training and Development (3) Current writings and research, models of training and development, and relationship between training and development and other human resource specialty areas.

6462. Seminar in Training and Development (3) P: ADED 6461. Advanced understanding of current problems, issues, and trends in training and development in business, industry, health care, and governmental agencies.

6481. Development of Adult Education Programs (3) Concepts, theories, processes, and practices essential to developing programs for adult learners.

6484. Organization and Administration of Adult Education (3) Organizational practices, principles, and theories as applicable to adult education organizations. Emphasis on specific administrative policies and functions.

SECTION 8: CURRICULA

6487. Instructional Strategies in Adult Education (3) Methods and techniques for effective instruction of adults in a variety of settings. Emphasis on concepts, theories, and principles relevant to the selection, use, and evaluation of instructional strategies.

6490. Issues and Trends in Adult Education (3) May be repeated for a maximum of 6 s.h. P: Consent of instructor. Current issues, trends, and controversies that affect adult and continuing education practice, including emerging technological, sociocultural, economic, demographic, and ethical issues.

6491. Research Problems in Adult Education (3) Advanced study on use, understanding, and critique of existing educational research, including methodologies, ethics of research, thesis, and manuscript preparation.

6492, 6493. Directed Readings in Adult and Community Education (1,2) P: 12 s.h. ADED. Advanced exploration of literature in adult and community education under direction of adult education faculty.

6495. Educational Program Evaluation (3) Components and processes of effective educational program evaluation.

6550. Leadership and Communication Skills in Education (3) Same as ELEM 6550 Teacher leadership, communication, and reflective practice in schools. Skill development enhances communication and collaboration with families, students, and educational professionals. Addresses organizational challenges and facilitates positive change.

6590. Multicultural Issues in Education (3) Role of culture in varying learning venues and contexts, the socio-cultural and political nature of education, and the relationship of power in the teaching/learning transaction.

6600. Introduction to International Higher Education Administration (3) Administrative aspects of international education on university campuses in the United States and abroad.

6690. Current Topics in International Higher Education Administration (3) P: ADED 6600. Applied case study to addressing contemporary issues in international education.

6989, 6990. Internship in Adult Education (3,3) Full-time or part-time experience under the supervision of an expert adult education practitioner.

7000. Thesis (1-6) May be repeated for a maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7580. Introduction to Medical Education (3) Review of the historical roots and continuum of medical education, instructional methods, accreditation requirements, and research of medical education.

COAD: COUNSELOR EDUCATION

5370. Introduction to Counseling and Human Services (3) Issues and processes of counseling services and programs. Attention given to history, philosophy, functions, and professional issues.

6001, 6002, 6003. Special Topics (1,2,3) May be repeated for maximum of 6 s.h. Focused study in selected significant and/or contemporary topics in adult education and/or counseling. Title varies with topic.

6004. Interpersonal Communication Skills (3) For noncounselor education majors. Overview of communication skills useful in professional settings when assisting people with decisions about relationships and life choices.

6358. Classroom Assessment and Measurement (3) Application of measurement techniques to classroom instruction. Preparation of classroom assessment instruments, application of statistical techniques, and use of standardized tests and assessment data to improve instruction and lead curriculum development.

6370. Counseling Children and Adolescents (3) Developmental counseling approaches and techniques used with children and adolescents, including individual, group, and family procedures for prevention, development, and treatment as well as consultation processes.

6401. Analysis of the Individual (3) P: COAD 5370 or consent of chair: Techniques of test and nontest nature for studying individuals. Use of anecdotal records, rating scales, autobiographies, personal data blanks, sociometric devices, and case study. Taking, scoring, and interpreting of mental ability, aptitude, interest, and personality tests useful in counseling work.

6402. Career Development and Counseling (3) P: COAD 5370 or consent of chair: World of work, types of occupational and educational information, sources of information, methods of disseminating the information, and career development theory.

6404. Counseling Theory and Techniques (3) P: COAD 5370. Approaches to counseling, interviewing methods, psychological factors underlying various methods, tools of counseling, and evaluation of counseling.

6405. Group Procedures (3) P: COAD 6404. Application of group methods in counseling. Group dynamics, group therapy, group techniques, and applications of these factors to counseling programs.

6406. Counseling in Schools (3) P: COAD 6401, 6402, 6404; or consent of chair: Development and coordination of comprehensive school counseling program. Planning and management skills, roles of other school personnel, consultation skills, and ethical and professional issues in school counseling.

6407. Social and Cultural Issues in Counseling (3) P: COAD 6401, 6402, 6404. Seminar. Contemporary issues and trends in counseling related to cultural aspects of clients and society. Presents ideas about counseling relationships to encourage an expanded view of professional helping.

6408. Counseling the Exceptional Student (3) P: COAD 6401, 6404; SPED 5101; or consent of instructor. Counseling theories and techniques relevant with exceptional students and their parents. Reviews characteristics and legislation regarding exceptional students. Emphasis on counseling process in dealing with problems of exceptional students.

6409. The Helping Relationship (3) P: COAD 6401, 6404. Fundamental skills development for subsequent professional studies of counseling. Emphasis on development of specific skills in counseling, testing, human relations, design of counseling strategies, and treatment plans.

6411. Student Development and Counseling in Higher Education (3) P: COAD 6401, 6402, 6404; or consent of instructor. Sociological, psychological, and historical basis of student services in higher education. Identifies how professional counselors can meet the needs of students in higher education. Procedures for developing, implementing, and managing student services programs.

6412. Developmental Counseling and Learning: A Life-Span Approach (3) P: COAD 6409; PSYC 6406 or equivalent. Application of human development theories to selection of appropriate counseling strategies and interventions with clients throughout the life span.

6415. Agency and Community Counseling (3) P: COAD 6401, 6402, 6404. Issues, functions, and organization of human service agencies. Focus on helping strategies that promote mental health wellness, personal growth, and development through preventive models of intervention.

6416. Concepts of Self (3) P: COAD 6404 or equivalent. Personal frame of reference for students to examine how self-concept relates to human growth, achievement, and developmental change in counseling.

6482. Supervised Practice Counseling (3) Students apply for placement in settings compatible with their career interests. Weekly seminar complements the field experience. P: All other courses in counselor education sequence. Individual counseling, interviewing, and group work with clients about issues of vocational choice, educational planning, and social-personal adjustment.

6483. Counseling Concerns and Counseling Strategies (2) P: COAD 6409 or consent of instructor. Seminar. Timely concerns of clients and effective strategies for intervention. Examines strategies used to help clients with topical issues.

6991, 6992. Counseling Internship (3,3) For advanced counseling student or one who needs the experience in lieu of initial licensure. Each internship may be repeated once. Practical experience in counseling in professional setting under direct supervision. Counselor education faculty evaluate progress.

SECTION 8: CURRICULA

7000. Thesis (I-6) May be repeated for a maximum of 6 s.h.

7001. Thesis: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7402. Seminar–Career Development (Theory and Program) (3) P: COAD 6402 or equivalent or consent of instructor. Explores aspects of effective career development, successful career preparation, and life-long career planning. Practical application of career theory concepts to rapidly changing world of work and futuristic trends.

7404. Advanced Counseling and Consulting Strategies (3) P: COAD 6404 or equivalent or consent of instructor. In-depth examination of various counseling strategies and approaches for practicing counselors. Study of selected consulting models and approaches.

7405. Practicum in Group Counseling (3) P: COAD 6405 or equivalent or consent of instructor. Supervised practicum in group counseling. Emphasis on development of counseling skills through analyzing and leading small groups. Didactic content related to experiences in group work.

7408. Professional, Legal, and Ethical Issues in Counseling (3) P: COAD 6409 or equivalent or consent of instructor. For advanced students in counseling.

7411. Administration and Management of Student Affairs in Higher Education (3) P: COAD 6411 or consent of instructor. Managing and understanding student affairs agencies, workers in those agencies, and student needs that create those agencies. Considers planning, funding, budgeting, and direction of such agencies.

7480. Research Methods and Design in Counseling (3) P: EDUC 6480 or master's in counseling or equivalent or consent of instructor. Review of methodological problems in counseling research. Development and critique of research designs. Emphasis on application of research to work of counselor.

7482. Counseling Supervision (3) P: COAD 7404, 7405; or consent of instructor. Practicum experience in supervision of counselor trainees. Establishment of supervisory relationship, critiquing of tapes, and application of supervision principles.

7580. Introduction to Medical Education (3) Review of the historical roots and continuum of medical education, instructional methods, accreditation requirements, and research of medical education.

DEPARTMENT OF CURRICULUM AND INSTRUCTION

Carolyn Cox Ledford, Interim Chair, 122 Speight Building

MASTER OF ARTS IN TEACHING (MAT)

The master of arts in teaching (MAT) includes teaching field concentrations as follows: art education, business education, elementary education, English education, family and consumer sciences education, health education, Hispanic studies, history education, marketing education, middle grades education, music education, physical education, and science education. The Schools of Art and Design and Music, the Colleges of Health and Human Performance and Human Ecology, and the departments in the Thomas Harriot College of Arts and Sciences offer subject matter courses and content specific methods courses as well as supervise interns in specific teaching areas. The full-time program is designed to be completed in twelve months, beginning in the summer and finishing the following summer. Successful completion of the MAT leads to advanced teaching licensure.

Minimum requirements for admission to the College of Education's MAT program include the following:

- I. MAT applicants must hold a bachelor's degree in an appropriate discipline as designated for the MAT teaching areas as follows:
 - Art education: BFA or BA in studio art.
 - Business and marketing education: business administration, management, accounting, decision sciences, marketing, or information processing or an MBA.
 - Elementary education: baccalaureate degree from a regionally accredited institution.
 - English education: English

Family and consumer sciences education: family and consumer sciences, family and community services, nutrition, hospitality management, human development, child development, interior design, housing, textiles, apparel design, or consumer economics.

Health education: public education, community health, exercise science, exercise physiology, physical education, nursing, biology, home economics, nutrition, psychology, sociology, or anthropology.

Hispanic Studies: undergraduate major in Spanish, Hispanic Studies, or Romance Languages with concentration in Spanish and proficiency level in Spanish: Advanced on the ACTFL scale in reading, listening, and speaking, Advanced-Plus in writing.

History education: history, political science, geography, sociology, or law

Middle grades education: English, mathematics, history, economics, geography, biology, geology, physics, chemistry, environmental science, life science, or earth science.

Music education: music performance, music business, church music, music theory/composition, or music therapy.

Physical education: exercise and sport science, kinesiology, physical education, or recreation.

Science education: biology, chemistry, physics, geology, life science, natural science, physical science, or earth science.

Special education: baccalaureate degree from a regionally accredited institution.

2. Overall GPA of 2.7 on a 4.0 scale on all undergraduate work from an institution accredited by a regional association.
3. Satisfactory entrance examination scores on either the Graduate Record Examination or the Miller Analogies Test.
4. A completed Graduate School application packet, including the written statement of purpose and three letters of recommendation from persons who can attest to the applicant's academic competence or ability to do graduate work.
5. MAT applicants are required to successfully complete an interview with the MAT coordinator; program area faculty, and teachers.

Upon acceptance into a teaching area, the student is assigned an advisor.

The master of arts degree in teaching requires **39 s.h.** of credit as follows:

Required core courses: TCHR 6010, 6011, 6020, 6024, 6030; SPED 6000.....24 s.h.

Teaching area specific courses: (Choose from one of the following areas.).....15 s.h.

Art education: ART 5323, 5670, 5851, 5860; additional 6 s.h. in teaching area

Business or marketing education: BITE 6410 or 6492 or 6750; BITE 5200, 6424, 6428; BITE 6430; 6492

Elementary education: ELEM 6010, 6406; MATE 6320 or 6321; READ 5316; SCIE 6019

English education: ENGL 6520 or 6529; ENED 6600, 6630, 6967; 3 s.h. literature

Family and consumer sciences education: FACS 6423 and 12 s.h. from the following: CHE 5007; FACS 6003, 6004, 6180; CDFR 6401, 6402, 6407, 7400 or BITE 6750

Health education: HLTH 5310, 6000, 6100, 6355, 6500

Hispanic studies: SPAN 6600; 12 s.h. from the following (9 s.h. must be at the 6000 level): SPAN 5340, 5440, 5445, 5550, 5700, 5940, 6000, 6001, 6100, 6101, 6200, 6202, 6400, 6521, 6522, 6523

History education: HIED 6510, 6500, 6600; 3 s.h. from the following: HIST 5130 or 5220 or 6030 or 6050 or 6260; and 3 s.h. from the following: HIST 5350 or 6355 or 6375

Middle grades education: MIDG 6100, 6200; teaching area MIDG methods; 6 s.h. in specialty area

Music education: MUSC 5257 or 2 s.h. MUSC electives; MUSC 5977, 6048; 6217 or 6237; 6287 or 6405; 6323, 6333

Physical education: EXSS 6101, 6104, 6108, 6110, 6323

Science education: SCIE 5000, 6020, 6310, 6500, 6506

ADMISSION TO CANDIDACY

Admission to candidacy for the MAT will be met when the following have been completed.

1. Unconditionally admitted to graduate standing.
2. Accepted to a program area and assigned an advisor.
3. Completion of 12 s.h. of graduate credit over and above any entrance deficiencies or conditions.

TRANSFER CREDIT

Transfer of credit regulations which have been established by the Graduate School apply to this degree program. Transfer of credit is only accepted when it is fulfilling a deficiency or content area of knowledge.

SECTION 8: CURRICULA

RESIDENCE REQUIREMENTS

The residence requirement for a nondoctoral degree program is met when a student has earned at least one-half of the graduate degree credit for his or her program while in residence, which is defined as taking courses on the campus of East Carolina University or at designated off-campus residence centers.

CONTINUOUS ENROLLMENT (OR REGISTRATION)

Graduate students who have previously registered for all credits in a graduate degree program but who have not completed all requirements (e.g., thesis, professional paper, internship, etc.) must continue to register each semester (except summer terms) until all degree requirements are completed and filed with the registrar. Under special circumstance, exception to continuous registration may be approved by the dean of the Graduate School. Students must be registered for the semester of graduation (except summer if registered for preceding spring semester).

OTHER REQUIREMENTS FOR THE MAT

General requirements for the completion of the master's degree are as follows:

1. 39 s.h. of course work.
2. A cumulative grade point average of 3.0.
3. Meeting specific teaching area requirements.
4. Completion of a culminating project.

In order to remain in good academic standing, graduate students must maintain a minimum cumulative GPA of 3.0 once they have a total of 9 credit hours attempted and any additional or higher academic standards established by their program of study. Students who fail to meet their program's criteria may be placed on probation or dismissed from the program.

Students who fail to remain in good academic standing in accordance with the paragraph above, will be automatically placed on academic probation by the Graduate School, during which time they will have an opportunity to correct their academic deficiencies. The probationary period will last for the term(s) in which the next nine credit hours are attempted. Enrollment in the Graduate School will be automatically terminated for students who fail to correct their academic deficiencies by the end of the probationary period. Graduate students will not be allowed to take classes once it becomes mathematically impossible to achieve an overall cumulative GPA of 3.00 by the end of the remaining probationary period.

Students may appeal dismissal decisions by following the process outlined in the Graduate School Appeals Procedure.

CERTIFICATE IN ASSISTIVE TECHNOLOGY

The certificate in assistive technology will equip students with specific skills and knowledge in assistive technology. The overall objective of the program is to prepare educational and/or health care professionals in the knowledge and skills needed to utilize assistive technology for the enhancement of a student and/or client's functional performance. Specifically, candidates who successfully complete the certification will have a broad-based knowledge of assistive technology, the ability to assess assistive technology needs with clients/students and plan implementation based upon that assessment, the ability to work with a collaborative team to implement assistive technology, and the knowledge and skills to effectively manage resources for procurement of assistive technology.

Applicants seeking admission must be graduate students or education or health care professionals working in their respective fields. Professionals can enroll as non-degree seeking students. Admission is based on completion of the certificate application and approval by the program coordinator.

The certificate program requires **12 s.h.** of graduate-level course work in assistive technology, emphasizing practical application and collaborative team work. Required courses include SPED/OCCT 6701, 6702, 6703, and an elective.

CERTIFICATE IN AUTISM

The certificate in autism will provide teachers and other school personnel with knowledge and skills necessary to work with students with autism and autism spectrum disorder. The overall objective of the program is to prepare classroom general and special educators and/or other school personnel to provide best practice, research based instructional and related services to this growing school population. Specifically, candidates who successfully complete the certificate will have a broad-based

knowledge of the characteristics of students with autism and autism spectrum disorder, strategies for classroom instruction, skills in developing and implementing communication systems, and strategies for collaborating with and supporting families.

Applicants seeking admission must be graduate students or education professionals working in their respective fields. Professionals can enroll as non-degree seeking students. Admission is based on completion of the ECU certificate application and approval by the program coordinator.

The certificate program requires **12 s.h.** of graduate-level course work with completion of the following courses: SPED 6800, 6801, 6802, and 6803.

CERTIFICATE IN DEAF-BLINDNESS

The certificate in deaf-blindness will provide teachers and other school personnel with knowledge and skills necessary to work with students with deaf-blindness and additional impairments. The overall objective of the program is to prepare classroom special educators and/or other school personnel to provide best practice, research based instructional and related services. Specifically, candidates who successfully complete the certificate will have a broad-based knowledge of the characteristics of students with deaf-blindness, strategies for classroom instruction, skills in developing and implementing communication systems, and strategies for collaborating with and supporting families.

Applicants seeking admission must be graduate students or education professionals working in their respective fields. Professionals can enroll as non-degree seeking students. Admission is based on completion of the ECU certificate application and approval by the program coordinator.

The certificate program requires **15 s.h.** of graduate-level course work with completion of the following courses: SPED 6810, 6811, 6812, 6813, and 6814.

ACADEMICALLY GIFTED LICENSURE

Licensure in academically gifted is available as an add-on to an existing licensure. The program requires **12 s.h.** of graduate study in the academically gifted subject area.

Required courses: SPED 6104, 6401, 6402, 6403. This add-on licensure can be a portion of requirements for one MAEd elementary education strand.

EDUC: EDUCATION

5001. Education in a Global Perspective (3) Comparative study of selected national educational systems, curricula, teacher preparatory programs, evaluation systems, and current issues within context of global realities, demands, and needs.

5002. Foundations of Multicultural Education (3) Aspects of teaching that view cultural differences as educational assets.

6001. Introduction to Differences in Human Learning in Schools (3) Examines race, ethnicity, socioeconomic class, gender, sexual preference, and exceptionality relative to historical, philosophical, social, cultural, political, and legal issues in schools.

6415. Techniques of Teaching in the High School (3) Effective teaching techniques used to direct learning in American secondary school.

6423. History and Philosophy of Education (3) Institutional development of public education in US with interpretation of political, philosophical, and social forces influencing this development.

6424. Action Research and Curriculum Development (3) Introduces curriculum design, theory, and action research to assist with knowledge, skills, and dispositions in support of reflective practitioners. Foundations, history, and research methods of action research applied to educational settings, including action inquiry as curriculum development tool. Overview of models of curriculum theory and concrete applications of curriculum development and action inquiry.

6430. Statistics in Education (3) Frequency distribution, central tendency, measurements of variability, sampling and reliability, correlation, regression, prediction, and methods of applying statistics in measurement and evaluation of instructional programs.

SECTION 8: CURRICULA

- 6454. Foundations of American Education (3)** For students entering education graduate work. Educational history, philosophy, sociology, government, and economics. Introduction of pertinent materials.
- 6480. Introduction to Research (3)** Development and use of research, research methods, applied research, basic research, methods of reasoning, fallacies in reasoning, statistical methods, thesis writing, survey research, and evaluation of research.
- 6482. Trends and Issues in Educational Research for Practitioners (3)** Recent developments in educational research and implications for educational practitioners as research consumers. Emphasis on identification, analysis, application, and evaluation of developments in literature through field-based research.
- 6551, 6552, 6553. Problems and Issues in Education (1,2,3)** May be taken for 1, 2, or 3 s.h., depending upon depth of topics. Class meetings may or may not be required. Hours for courses and requirements for completion arranged with instructor. Courses may be repeated for maximum of 9 s.h. P: Consent of chair. Individualized or specialized study of problems or issues in pertinent areas of education. Variable titles and content.
- 6950. Global Considerations in Educational Theory and Policy: Economics and Democracy (3)** May not substitute for required EDUC foundations course. Global economic forces responsible for recent educational reforms. Evaluation of impact of those forces on domestic and foreign populations. Considers future of public school role in advancing democratic citizenship and social justice.
- 7001. Advanced Research and Evaluation (3)** P: EDUC 6480 or equivalent or consent of instructor. Scientific approach to problems in education. Utilizes advanced methodological and statistical techniques leading to design and evaluation of actual projects.
- 7410, 7411, 7412. Special Topics (1, 2, 3)** May be repeated for credit. Focus on special topics in education.
- 7420. Advanced Educational Statistics (3)** P: EDUC 7001 or consent of instructor. Major types of quantitative models and their practical application to data analysis in educational research. Emphasis on appropriateness of types of models for different research problems, use of models as a basis for data interpretation, and management of data analysis projects.
- 7430. Qualitative Research in Education (3)** Field project required. Major types of research methods and techniques and their applicability to clarification and understanding of educational problems. Field project develops basic and advanced skills for conducting qualitative research in educational settings.
- 7440. Applied Educational Research (3)** P: EDUC 6480 or consent of instructor. Instructional systems-based strategies and methodology for identifying and using research findings in school practice. Emphasis on critical evaluation of current educational trends. Use of research information considered an advanced form of behavioral technology.

ELEM: ELEMENTARY EDUCATION

- 5306. Social Studies in the Elementary School (3)** Social studies objectives implemented by study of programs, strategies, and materials.
- 6000. Action Research Planning in Elementary Education (3)** P: Admission to MAEd in ELEM; or consent of instructor. Development of an action research project linking teaching and professional growth to trends and issues in elementary education.
- 6001. Action Research Implementation in Elementary Education (3)** P: ELEM 6000. Implementation and analysis of action research project.
- 6010. Teaching the Integrated Language Arts in the Elementary School (3)** P: TCHR 6010, 6011; or consent of instructor. Nature and role of language arts and the integration throughout the elementary curriculum.
- 6200. Leading Curriculum Revision and Implementation (3)** P: Admission to MAEd in ELEM; or consent of instructor. Examines the structure of elementary school curricula and the role of teachers as leaders in curricular decisions.

6400. Advanced Assessment and Teaching in the Elementary Grades (3) P: Admission to MAEd in ELEM; or consent of instructor: Applies societal, cultural, and educational factors to problems of assessment and teaching. Design, application, and evaluation of teaching models and assessment.

6406. The Teaching of Social Studies in the Elementary Grades (3) P: Admission to MAEd in ELEM; or consent of instructor: Examines current research, standards, curricula and strategies relevant to elementary social studies instruction.

6408. Collaborating, Teaming, and Leading in the Elementary School (3) Leadership, team functioning, development, and teaming practices, and collaboration in elementary schools. Role of teacher as member and leader of planning and evaluation teams to improve learning in schools.

6410. Concepts and Principles of Early Childhood Education (3) Concepts, principles, trends, and current programs in early childhood content.

6412. Emerging Literacy (3) P: Admission to MAEd in ELEM; or consent of instructor: Examination of literacy as an emerging process, with emphasis on critically reviewing sociocultural factors influencing literacy and designing appropriate strategies to enhance young children's literacy education.

6416. Problems in the Lower Elementary Grades (3) Analysis and discussion of significant problems found in lower elementary grades by participants in relationship to their position, interest, and experience.

6417. Problems in the Upper Elementary Grades (3) Analysis and discussion of significant problems of upper elementary grades by participants in relationship to their position, interest, and experience.

6488. Advanced Language Arts in the Elementary School (3) P: Admission to MAEd in ELEM; or consent of instructor: Provides advanced analysis of language arts instruction and assessment, as well as professional development and critical reflection for elementary educators.

6500. Management and Problem-Solving in the Elementary School (3) P: Admission to MAEd in ELEM; or consent of instructor: Recognizing and forming plans to address management problems in the elementary school.

6550. Leadership and Communication Skills in Education (3) Same as ADED 6550 Teacher leadership, communication, and reflective practice in schools. Skill development enhances communication and collaboration with families, students, and educational professionals. Addresses organizational challenges and facilitates positive change.

7000. Thesis (I -6) May be repeated. May count maximum of 6 s.h.

ENED: ENGLISH EDUCATION

6165. Special Topics Seminar in Secondary Literature Study (3) May be repeated for credit. Focus on topics in literature study in the high school.

6400. Teaching Multilingual Students in Secondary English and Middle Grades Language Arts Classrooms (3) Design and implementation of effective instructional strategies, units, and program components for teaching English literacy skills to second language learners.

6500. Literature Study in the Middle Grades (3) Formerly ENGL 6500 Examines role and scope of literature study in middle grades.

6510. Recent Trends in English Education (3) Formerly ENGL 6510 For in-service teachers. Current developments, issues, and research in teaching English in the secondary schools.

6511. Directed Research Project (3) Formerly ENGL 6511 May be repeated. May count a maximum of 3 s.h. P: Approval of program director: Directed readings and research program for MAEd candidates in English education.

6600. Teaching English Studies in the High School (3) Formerly ENGL 6600 Examines role and scope of English studies in secondary classroom.

6630. Studies in the Process of Composition (3) Formerly ENGL 6630 P: Teaching certification or consent of instructor. Theories and methods for teaching composition in grades 6-12.

SECTION 8: CURRICULA

6967. Literature Study in the Secondary School (3) Formerly ENGL 6967 Role and scope of literature study in the secondary school.

HIED: HISTORY EDUCATION

6500. Teaching Civics and Economics in the Secondary Classroom (3) (F) Content and pedagogical knowledge related to teaching civics and economics at the 9-12 level.

6510. Issues and Topics in Social Studies Education (3) (F) Content-specific pedagogical issues relevant to teaching social studies in the secondary classroom. Designed for in-service teachers and/or master of arts (MAT) candidates. Includes research.

6600. Teaching History in the High Schools (3) (F) Historic and contemporary theories, methods, and materials in social studies education in preparation for application in a clinical setting.

MIDG: MIDDLE GRADES EDUCATION

5991, 5992, 5993. Readings in Middle Grades Education (1,2,3) (WI*) Each may be repeated once for a maximum of 6 s.h. P: Upper-level undergraduate or graduate status; consent of advisor. Directed readings on selected topics.

6000. Professional Development, Issues, and Trends in Middle Grades Education (2) Current issues and trends. Self-evaluation of professional development within teaching field. Structuring of individual professional development plan for MAEd program.

6100. Young Adolescents, Schools, and Community (3) P: MAEd core courses; MIDG 6000. Adolescence as historical and cultural concept. Analysis of research on middle school practices and students' perspectives of schooling. Investigation of adolescents' experiences in school and community.

6200. Middle Grades Curriculum Development in Public Schools (3) P: MAEd core courses; MIDG 6000. Theories and practice in middle school curriculum planning. Emphasis on leadership skills in developing, analyzing, and evaluating effective curriculum.

6240. Advanced Curriculum and Instruction in the Middle Grades (3) Historical perspective of middle grades education. Organizational structures and patterns. Components of middle grades curriculum development process and their application to instructional programs.

6245. Education in the Middle and Junior High School: Problems and Issues (3) For MAEd candidates with experience in middle and junior high school education and for in-service teachers and administrators in middle school programs. P: Experience at middle school or junior high level or consent of instructor. In-depth study of problems and issues in middle school education.

6300. Advanced Strategies and Assessment for Middle Grades Learners (3) P: MAEd core courses; MIDG 6000. Strategies and assessment practices to promote success for all students. Emphasis on diverse learners.

6401. Middle Grades Product Documentation (1) P: All MAEd course work. Individual documentation of goals established in MIDG 6000 and accomplished during MAEd program.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

READ: READING

5312. Improvement of Reading Instruction (3) May not be taken by students who have had READ 3204. Beginning reading process. Understanding of essential skills. Early detection and remediation of possible reading problems.

5313. Reading Remediation and Practicum (3) May not be taken by students who have completed READ 3205. P: READ 3204 or 5312. Guidance in designing reading programs on basis of individual and group presentations. Practicum experience in guiding individual and group student activities in reading instructional program.

5316. Applied Phonics (3) Skill in phonics as one kind of help in identifying written words. Essentials of phonics and linguistically sound approach in methodology.

5317. Reading in the Junior and Senior High School (3) Lecture and lab. May receive credit for only one of READ 3990, 5317. Knowledge and skills enable prospective junior high and secondary teachers to assess reading levels of students and use methods and materials in keeping with individual interests and needs. Reading capability enhanced through teaching-learning process in each content area.

6403. Selected Topics in Reading Education (3) May be repeated. May count maximum of 6 s.h. P: Consent of instructor. In-depth study of issues and topics.

6405. Investigations in the Teaching of Reading (3) Analytical study of research related to reading processes. Emphasis on critical evaluation of research studies. Special reference to psychological principles and educational implications.

6406. Preliminary Investigations in Literacy Education (3) P: EDUC 6480 or 6482 or other approved research course. Identification of current issues and trends in literacy education and development of an action research proposal.

6407. Investigations in Literacy Education (3) P: EDUC 6480 or 6482 or other approved research course; READ 6406. Continuation of investigations in literacy research including action research in instructional settings.

6415, 6416, 6417. Problems in Reading Methodology (1,2,3) No class meeting; conference hours with instructor arranged. May be taken concurrently or in any combination for maximum of 3 s.h. P: Consent of instructor and dept chair. Independent study on problem of special interest and value to student.

6418. Reading: The Learning Bases (3) P: Admission to graduate school; BS in early childhood education, elementary education, or related areas; consent of chair; competencies in foundations of reading. Current body of educational and psychological data concerning nature of reading-learning process as applied to teaching of reading. Problems that arise in learning to read.

6419. Foundations of Reading (3) P: Admission to graduate school; BS in early childhood education, elementary education, or related areas; consent of chair. Basic information about reading process - what it is, how the child learns to read, instructional strategies and materials available for teaching reading, and diagnosis and prescription for individual children.

6421. Clinical Procedures in the Identification and Evaluation of Reading Disabilities (3) Includes lab. P: Admission to graduate school; BS in early childhood education, elementary education, or related areas; consent of chair; EDUC 6480 or 6482; COAD 5358; or consent of instructor. Nature and causes of reading disability and development of clinical skills related to diagnosis and evaluation of reading difficulties.

6422. Remediation of Reading Disabilities (3) P: READ 6421. Correction and remediation of reading disabilities. Practicum involves clinical procedures for diagnosis and remediation of reading disabilities.

6430. Organization and Management of Reading Programs (3) P: COAD 5358; EDUC 6480 or 6482; READ 6422. Educational leadership necessary to implement developmental reading program K-12. Involves total school district.

6431. The Teaching of Basic Reading Skills to Adults (3) P: READ 5312 or 6419. Adult-learner characteristics and basic reading skills instruction for adults unskilled in reading. Methods, resources, programs, and diagnostic and evaluative procedures for teaching reading skills to adults.

6432. Internship in the Teaching of Reading to Adults (3) Supervised experience in teaching of reading to adults in adult education settings. P: READ 6431. Knowledge and understanding of teaching of reading to adults beyond teaching of basic reading skills.

6462. Diagnostic and Remedial Techniques in Reading (3) Information and workable procedures for classroom teachers to survey, evaluate, group, and remediate needs of children who are poor readers or nonreaders.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

SECTION 8: CURRICULA

7423. Reading Materials: Selection, Development, and Use (3) P: READ 6419 or other foundations course or consent of instructor. Commercially prepared and teacher-made materials designed to teach reading. Critical evaluation of material construction, design, and appropriate implementation.

7445. Reading Comprehension, Theory, and Practice (3) P: Graduate standing in reading education or consent of instructor. Reading comprehension relating theory and research to practices and procedures employed in teaching of reading comprehension.

SPED: SPECIAL EDUCATION

5101. Introduction to Individuals with Disabilities (3) Incidence, nature, causes, rehabilitation, and education of individuals with disabilities.

5501, 5502. Minor Problems in Special Education (3,3) (WI) Each may be repeated for maximum of 6 s.h. P: Consent of instructor. Conference, library, or lab work in area of special education.

6000. Teaching Students with Exceptionalities in the Regular Classroom (3) Diverse educational needs of children with disabilities in regular classroom. Identification and placement procedures, academic and behavioral strategies, and curriculum and evaluation modifications.

6002. Addressing Differences in Human Learning in Schools (3) Strategies for assessment, curriculum, and instruction of diverse student populations. Extends and applies information from EDUC 6001.

6003. Assessment in Special Education (3) P: Admission to master of arts in teaching (special education); TCHR 6010, 6011. Formal and informal assessment of students with mild or moderate impairments.

6004. Legal and Cultural Issues in Special Education (3) P: Admission to master of arts in teaching (special education); TCHR 6010, 6011. Regulations and other factors influencing provision of special education services for students with mild or moderate impairments.

6005. Curriculum and Instructional Design in Special Education (3) P: Admission to master of arts in teaching (special education); TCHR 6010, 6011. Models of educational planning, design, and accommodations for students with mild or moderate impairments.

6006. Analysis and Application of Instructional Methods in Special Education (3) P: Admission to master of arts in teaching (special education); TCHR 6010, 6011. Instructional strategies and supports for students with mild or moderate impairments.

6007. Individual Behavior Strategies and Supports in Special Education (3) P: Admission to master of arts in teaching (special education); TCHR 6010, 6011. Theories and approaches for increasing positive behavior and social skills for students with mild or moderate impairments.

6008. Linking Research and Practice in Special Education (3) P: Admission to master of arts in teaching (special education); TCHR 6010, 6011. Analysis of the role of research in education of students with mild or moderate impairments.

6010. Issues, Trends, and Law in Special Education (3) Analysis of laws, current issues, and trends in special education with attention to legislation, definitions, identification, eligibility, inclusion, and placement. Students acquire knowledge of key issues and develop skills for accessing professional journals.

6011. Integrating Technology into Special Education (3) P: 3 s.h. technology course. Strategies for integration of technology into instruction, record keeping, management, productivity, communication, and professional development of special educators.

6012. Assessment in Special Education (3) P: SPED 6010. Selection, administration, interpretation, and application to program planning of assessment instruments and strategies in special education. Examines research, legislative mandates, and APA standards.

6014. Positive Behavior Intervention and Support (3) P: Admission to MAEd in SPED. Applying principles of positive behavior intervention and support to address individual, classroom, and school wide behavior challenges.

6015. Facilitating Systems Change Through Collaboration and Co-Teaching (3) P: SPED 6021 or 6022 or 6023 or 6031. Principles and effective practices of collaboration and co-teaching to induce systemic change on behalf of students with exceptionalities.

6020. Curriculum Development and Program Planning in Special Education for Students with Mild Mental Retardation (3) P: SPED 6011, 6012, 6302. Planning, delivering, monitoring, and modifying instructional programs for students with mild mental retardation.

6021. Instructing Students with Mental Retardation (3) P: SPED 6011, 6020. Planning, delivering, monitoring, and modifying instructional programs. Emphasis on applying research literature to acquire and refine best practices in instruction of students who have mental retardation.

6022. Instructing Students with Learning Disabilities (3) P: SPED 6011, 6025. Planning, delivering, monitoring, and modifying instructional programs. Emphasis on applying research literature to acquire and refine best practices in instruction of students with learning disabilities.

6023. Instructing Students with Behavioral/Emotional Disorders (3) P: SPED 6011, 6027. Evaluation and modification of instructional and management programs for students and youth with behavioral/emotional disorders. Examines research and demonstration of best practices through classroom teaching.

6025. Curriculum Development and Program Planning for Students with Learning Disabilities (3) P: SPED 6011, 6012, 6302. Planning, delivering, monitoring and modifying instructional programs for students with learning disabilities.

6027. Curriculum Development and Program Planning for Students with Behavior Disabilities (3) P: SPED 6011, 6012, 6302. Planning, delivering, monitoring and modifying instructional programs for students with behavior disabilities.

6030. Curriculum Development and Program Planning in Special Education for Students with Low-Incidence Disabilities (3) P: SPED 6012. Planning, delivering, monitoring, and modifying instructional programs for students with low-incidence disabilities.

6031. Instructing Students with Low-Incidence Disabilities (3) P: SPED 6011, 6030. Planning, delivering, monitoring, and modifying instructional programs.

6104. Introduction to Gifted Education (3) Definitions, characteristics, theories of intelligence, and theories of teaching used with gifted students.

6401. Methods and Materials in Gifted Education (3) P: SPED 6104 or consent of instructor. Materials, programs, and theories of educating gifted students.

6402. Differentiated Curriculum for the Gifted (3) P: SPED 6104 or consent of instructor. Student and program assessment and development of differentiated curricula for gifted students.

6403. Practicum in Gifted Education (3) P: SPED 6104, 6401, 6402; or consent of instructor. Classroom experience with gifted students. Planning and implementation of instructional programs.

6701. Assistive Technology Devices and Services (3) Same as OCCT 6701 Broad overview of assistive technology, including legal, educational, and discipline specific information. Provides basic information that prepares students for other certificate courses.

6702. Assessment, Planning, and Implementation of Assistive Technology (3) Same as OCCT 6702 P: SPED 6701 or OCCT 6701. Explores assistive technology assessments and planning and implementation of assistive technology within student/client's environment. Students attain skills in variety of technology using cross-disciplinary team approach.

6703. Collaborative Resource Management of Assistive Technology (3) Same as OCCT 6703 P: SPED 6701 or OCCT 6701. Human, product, electronic, and funding resources to meet technology needs for individuals with disabilities examined within state and national networks. Practical collaborative skills practiced in cross-disciplinary team assignments.

SECTION 8: CURRICULA

6800. Introduction to Students with Autism (3) Definitions, research, characteristics, and intervention alternatives related to students with autism spectrum disorders.

6801. Methods and Materials for Teaching Students with Autism (3) P: SPED 6800. Educational strategies in working with children with autism spectrum disorders in the classroom.

6802. Families and Students with Autism (3) P: SPED 6800. Needs of the family as a unit, family interventions, family services, advocacy strategies, and future planning alternatives for families of students with autism spectrum disorders.

6803. Language and Communication for Students with Autism (3) P: SPED 6800. Alternative communication strategies for students with autism spectrum disorders.

6810. Characteristics, Issues, and Trends in Education for Students with Deaf-Blindness (3) Impact on development and learning and history, issues, relevant resources, and approaches.

6811. Essentials of Communication Development for Students with Deaf-Blindness (3) P/C: SPED 6810. Communication acquisition from pre-symbolic/pre-linguistic levels through formal language and literacy.

6812. Assessment and Educational Program Design for Students with Deaf-Blindness (3) P: SPED 6810. Assessment approaches to design effective instruction and supports.

6813. Effective Teaching and Learning for Students with Deaf-Blindness (3) P: SPED 6812. Strategies for providing quality instruction.

6814. Internship with Students with Deaf-Blindness (3) P: SPED 6813. Supervised teaching and leadership experiences to integrate valid effective practices in assessment, teaching and learning.

6832. Policy, Procedures and Fiscal Issues in the Administration of Special Education (3) Same as LEED 6832 P: Acceptance into NC DPI New Exceptional Children Program Directors' Leadership Institute. Interpretation, development, and implementation of fiscal resources, and federal, state and local policies and procedures in public school special education programs.

6833. The Role of the Special Education Administrator in Curriculum and Instruction and Personnel Supervision (3) Same as LEED 6833 P: Acceptance into NC DPI New Exceptional Children Program Directors' Leadership Institute. Planning, implementation, evaluation, and supervision of education programs for students with disabilities in the public schools.

6834. Leadership and Public Relations for the Special Education Administrator (3) Same as LEED 6834 P: Acceptance into NC DPI New Exceptional Children Program Directors' Leadership Institute. Building professional partnerships for special education in the public schools through supervision, communication, collaboration, and cooperation.

6994. Research Review and Planning in Special Education (3) P: EDUC 6480 or 6482 or SCIE 6500; SPED 6010, 6014; SPED 6021 or 6022 or 6023 or 6031. Analyzing literature and designing educational research in special education.

7000. Thesis in Special Education (1-6) May be repeated. May count 3 s.h. toward degree. P: SPED 6994.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7002. Action Research Project in Special Education (3) May be repeated. May count 3 s.h. toward degree. P: SPED 6994.

SPED Banked Courses

5102. Perspectives in Mental Retardation (3)
5301. Tests and Measurements in Special Education (3)

6301. Seminar in Multiple Disabilities (3)
6302. Research in Special Education (3)
6999. Project Planning in Special Education (3)

TCHR: TEACHER EDUCATION

6010. The Learner and the Learning Environment (3) Learning theory, motivational theory, and assessment within school environment. Focus on cognitive, affective, and social development of students.

6011. The Teacher and the Teaching Experience (3) Teaching within school environment. Teaching cycle, teaching as a profession, culture of teaching, and general strategies for instruction.

6020. MAT Classroom Management (3) Concurrent internship experience required. P: TCHR 6010, 6011. Roles and responsibilities of teacher in organizing and managing classroom setting. Approaches to handling discipline problems.

6024. MAT Internship (9) P: TCHR 6010, 6011. Supervised teaching in appropriate subject and level classroom. Emphasis on reflective decision-making.

6030. Literacy Development in the Content Area Classroom (3) May receive credit for one of READ 5317; TCHR 6030. Development of literacy abilities in content area classrooms. Identification of literacy requisites, evaluation of content area materials, and assessment of student competencies. Development of strategies and teaching materials to enhance learning.

6430. Computer Concepts and Applications for Career and Technical Educators (3) May require additional lab time. Business-related computer concepts and applications. Hands-on experience using various microcomputers.

TESL: TEACHING ENGLISH AS A SECOND LANGUAGE

6100. Planning, Implementing and Managing ESL Instruction (3) Contemporary methods and strategies appropriate for providing comprehensible instruction for second language learners in K-12 classrooms with a foundation for understanding multiple perspectives on ESL approaches to education.

6200. Culture and Language in ESL Instruction (3) P: TESL 6100 or permission of chair. Issues relevant to cross-cultural dynamics of ESL settings in K-12 schools, as well as adaptations appropriate for development and implementation of a multicultural curriculum with culturally and linguistically diverse students and families.

6300. Assessment in ESL Instruction (3) P: TESL 6100, 6200; or permission of chair. Current issues in assessing and teaching English language learners in K-12 settings, including assessment protocols, placement, development of appropriate plans and reports in schools, and informing instruction based on assessment.

6500. Professionalism and Evidence-Based Accountability (3) P: TESL 6100, 6200, and 6300; or permission of chair. Provides a critically reflective process of developing a cross-culturally sensitive portfolio of artifacts and tools for use with English language learners and their families in the K-12 setting.

DEPARTMENT OF EDUCATIONAL LEADERSHIP

William A. Rouse, Jr., Chair, 208 Ragsdale Building

The Department of Educational Leadership offers three degree programs to prepare individuals for positions as educational leaders. Additional information regarding the application process and program requirements is available on line.

MASTER OF SCHOOL ADMINISTRATION (MSA)

The master of school administration degree (MSA) is designed to prepare individuals to become school leaders. Program studies include positive impact on student learning and development, teacher empowerment and leadership, community involvement and engagement, organizational management, school culture and safety, school improvement, and leadership skill application. The program consists of **42 s.h.** (including a one year internship experience) and is designed to allow full-time or part-time study. With successful completion of the appropriate licensure exam, the MSA may lead to license in the areas of administration North Carolina principal license (012, class P) and supervision North Carolina curriculum instructional specialist level I license (113, class S).

SECTION 8: CURRICULA

Candidates for the MSA program should have entry-level school license and a minimum of three years teaching/public school experience. For additional information concerning admission, contact the Department of Educational Leadership or view the departmental Web site.

EDUCATIONAL SPECIALIST IN EDUCATIONAL ADMINISTRATION AND SUPERVISION (EdS)

The educational specialist in administration and supervision degree (EdS) is a sixth-year post master's degree which requires a minimum of **38 s.h.** and is designed to prepare individuals for senior leadership positions in education. Program studies are adapted for the challenges of unique school district roles such as personnel administrator, curriculum supervisor, and directors of special program areas. Upon completion of the program, individuals are eligible to upgrade previously held licenses. Individuals holding administration license (012, class P) are eligible for administrator II license (012, class AP) and superintendent license (011, class AS). Individuals holding supervision license (113, class S) are eligible for curriculum-instructional specialist II license (113, class AS).

Candidates for the EdS program should have a master's degree and Level I licensure in administration or supervision. Three years of successful leadership experience is desirable for candidates applying to the EdS program. For additional information concerning admission, contact the Department of Educational Leadership or view the departmental Web site.

DOCTOR OF EDUCATION IN EDUCATIONAL LEADERSHIP (EdD)

The doctor of education in educational leadership (EdD) degree is designed to develop skills and abilities for individuals to resolve educational issues and problems. Program studies include leadership theory, human resource development, organizational theory, policy analysis, planning studies, curriculum and instructional leadership, and political systems analysis. The degree prepares senior level administrators for leadership positions in public schools or in higher education. A minimum of 60 semester hours beyond a master's degree is required. Requirements include a research-based dissertation completed under the direction of an appropriate faculty member, as well as a supervised internship experience.

Candidates seeking the EdD with a focus on public school administration must hold Level I licensure in administration or supervision. Upon completion of the program, individuals are eligible to upgrade previously held licenses. Individuals holding administration license (012, class M or class AP) and/or (011, class AS) are eligible for (012, class DP) and superintendent license (011, class DS). Individuals holding supervision license (113, class S) are eligible for curriculum-instructional specialist (113, class D). Candidates seeking the EdD with a concentration in higher education administration are not required to hold a previous license and are not eligible for North Carolina license in administration or supervision upon completion of the program.

In addition, it is desirable for all candidates for the EdD program to have three years of successful leadership experience.

The degree requires **60 s.h.** of credit as follows:

Core: LEED 8010, 8015, 8035, 8050; 8055 or 8056.....	15 s.h.
(LEED 8056 is required for higher education administration concentration)	
Research: LEED 8410, 8420, 8430, 8440.....	12 s.h.
Concentration areas (Choose one.)	21 s.h.
<i>PreK-12 administration:</i>	
LEED 8025; 6 s.h. chosen from LEED 8000 courses; 12 s.h. chosen in consultation with advisor.	
<i>Higher education administration:</i>	
LEED 8020, 8027, 8030, 8040, 8045, 8060; choose 3 s.h. in consultation with advisor.	
Internship: LEED 8991, 8992.....	6 s.h.
Dissertation: LEED 9000.....	6 s.h.

LEED: EDUCATIONAL LEADERSHIP

6000. Leadership and Communication (3) For teachers providing educational leadership. Importance of effective communication. Skills and knowledge needed to speak, write, and listen effectively.

6334. Home, School, and Community: The Communication Process (3) P: Admission to MSA program. Principles, practices, and problems of home, school, and community relations.

6800. Theory and Application of Technology for Administrators (3) P: Admission to MSA program. Introduces technology that provides greater efficiency and productivity. Theoretical basis and instruction and practice in administrative and managerial software in K-12 educational facilities.

6801. Strategic Problem Solving (3) P: Admission to MSA program. Educational problems solved using strategic problem-solving processes. Emphasis on retrieving, evaluating, and synthesizing research as applied to educational programs.

6802. Reflecting and Communicating About Educational Issues (3) P: Admission to MSA program. Current educational issues from variety of perspectives. Effective communication of those issues in oral, written, and multi-media modes.

6803. Ethical and Legal Decision-Making for Teachers (3) Not open to educational leadership students. Study fundamentals in school law and ethical and moral decision making for school teachers.

6804. The Law, Policy, and Politics of Education (3) P: Admission to MSA program. Influence of laws, educational policies, and power structures of communities on goals and operations of schools.

6805. Ethical and Societal Aspects of Educational Leadership (3) P: Admission to MSA program. Personal values, understanding of core values of society, and sensitivity to societal dimensions of educational decision making.

6806. Managing Organizational Change (3) P: Admission to MSA program. Process of changing and improving complex educational organizations. Application of variety of planning and organizational development processes.

6807. School-Based Management (3) P: Admission to MSA program. Essential elements of school quality that impact program operations. Relationships of schools to other agencies. Leadership in securing support for schools.

6808, 6809. Administration and Supervision Internship: Level I (4,4) 2-semester internship. P for 6808; admission to MSA; LEED 6810; C for 6809: LEED 6812. Joint supervision of public leaders and university supervisor.

6810. Introduction to School Leadership (2) To be taken during first semester of enrollment in MSA program. P: Admission to MSA program. Introduces state and national standards for school leaders and skills required to meet them.

6812. School Leadership Skills Development (2) P: Admission to MSA program; C: LEED 6809. Educational problems, cases, and simulations used to evaluate student's leadership skills and plan for skill development during administration and supervision internship.

6820. Advanced Technology for School Administrators (3) P: Admission to MSA program; LEED 6800 or equivalent or consent of instructor. Research, theories, and practical use of advanced technology for curriculum, student, and fiscal management. Decision making and other administrative applications.

6823, 6824. Learning Centered Leadership (3,3) P: Admission to MSA program. Essential elements of quality learning and school-based visionary leadership. Improvement of curriculum and instruction through application of appropriate leadership styles and models.

6830. Teacher Leadership (3) Essential elements of teacher leadership and shared decision making. Application of knowledge to organize teams and solve school problems.

6832. Policy, Procedures and Fiscal Issues in the Administration of Special Education (3) Same as SPED 6832 P: Acceptance into NC DPI New Exceptional Children Program Directors' Leadership Institute. Interpretation, development, and implementation of fiscal resources, and federal, state and local policies and procedures in public school special education programs.

6833. The Role of the Special Education Administrator in Curriculum and Instruction and Personnel Supervision (3) Same as SPED 6833 P: Acceptance into NC DPI New Exceptional Children Program Directors' Leadership Institute. Planning, implementation, evaluation, and supervision of education programs for students with disabilities in the public schools.

SECTION 8: CURRICULA

6834. Leadership and Public Relations for the Special Education Administrator (3) Same as SPED

6834 P: Acceptance into NC DPI New Exceptional Children Program Directors' Leadership Institute. Building professional partnerships for special education in the public schools through supervision, communication, collaboration, and cooperation.

6993, 6994. Curriculum Instructional Specialist Internship: Level I (3) Full-time or on-the-job experience. Supervised by instructional leader of recognized capability.

7000. Thesis (1-6) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7408. Public School Administration (3) P: Admission to EdS program. Advanced course based on administrative principles and techniques encountered by superintendents in NC schools.

7410. Staff Personnel Problems (2) P: Admission to EdS program. Underlying philosophy of personnel administration case studies and problems. Relations to local and state administrative authority. Teacher participation in administration, selection of teachers, and orientation of new teacher. Programs for professional growth in service, teacher's relation to community, merit schedules, salary schedules, and relations within schools.

7411. Problems in Educational Administration (2) P: Admission to EdS program. For advanced school administration students with administrative experience. Research school administration problem and presentation of results for critical analysis and discussion.

7415. Introduction to Internal Evaluation in Education (3) P: Admission to EdS program. Concepts of evaluation research. Emphases on theory and techniques of internal monitoring evaluations.

7420. Theories of Educational Administration (3) P: Admission to EdS program. Theoretical dimensions.

7429. Problems in Educational Supervision (3) P: Admission to EdS program. For practicing administrators and supervisors. Advanced research of selected problem in supervision and presentation of results for critical analysis and discussion.

7460. School and Community Cultures (3) P: Admission to EdS program. Cultures and effective communication.

7470. School Business Management (3) P: Admission to EdS program. For principals and superintendents. Background necessary for efficient school system operation. Based on philosophy that administration must facilitate instruction.

7472. Issues, Problems, Research in Education (2) P: Admission to EdS program. International, national, and state levels. Emphasis on contemporary educational problems. Review of educational research for possible solutions.

7483. Advanced School Law (2) P: Admission to EdS program. In-depth study of current educational problems. Emphasis on legal background.

7520. Special Topics Seminar in Educational Leadership (3) May be repeated with a change of topic with a maximum of 9 s.h. counting toward the degree. Advanced topics in educational leadership based on student interest and current educational priorities.

7521, 7522, 7523. Directed Readings in Educational Leadership (2,2,2) P: Consent of instructor. Selected topics.

7991. Educational Leadership: Level I (4) P: Completion of 50 percent of courses in educational specialist degree; completion of two years' experience in a level-one administrative position; or consent of program coordinator. Observation and analysis of administration and instructional supervision at state and system level under guidance of experienced educational leaders.

7993. Educational Leadership Internship: Level II (4) Directed field study. P: Completion of 50 percent of courses in EdS degree; completion of two years' experience in a level-one administrative position; or consent of program coordinator. Supervised by department member.

- 8010. Organizational Theory and Culture (3)** P: Admission to EdD in educational leadership. Application of organizational theory in educational administration to social systems in education.
- 8015. Doctoral Seminar in Human Resource Development (3)** P: Admission to EdD in educational leadership. Advanced study of theory, research, and exemplary practice in developing human resources in educational organizations.
- 8020. Politics and Power in Education (3)** P: Admission to EdD in educational leadership. Formal process for developing educational policy through federal, state, and local governments. Involvement and power of elected officials, political parties, lobbyists, and media in developing policy, both formally and informally. Impact of social issues, economics, and other forces on educational policy development.
- 8025. Doctoral Seminar in Political and Social Issues in Educational Leadership (3)** P: Admission to EdD in educational leadership. Process through which political and social issues affect education. Analysis of some contemporary issues that affect NC.
- 8027. Doctoral Seminar in Higher Education Law and Public Policy (3)** P: Admission to EdD in educational leadership. Legal system and how constitutional and case law impact higher education practices. Analysis of educational policy development at federal, state, and institutional levels.
- 8030. Educational Planning (3)** P: Admission to EdD in educational leadership. Concepts, strategies, and practices of educational planning utilized for school and school district leadership.
- 8035. Doctoral Seminar in Educational Leadership (3)** P: Admission to EdD in educational leadership. Advanced study of theory, research, and exemplary practice in changing nature of educational leadership.
- 8040. Policy Development and Analysis (3)** P: Admission to EdD in educational leadership. Policy making and role of educational leader in policy development and implementation. Emphasis on skills used in policy analysis and policy development in education.
- 8045. Cases and Concepts in Educational Leadership (3)** P: Admission to EdD in educational leadership. Key concepts of educational leadership examined primarily through case study analysis.
- 8047. Student Development in Higher Education (3)** P: Admission to EdD in educational leadership. Historical and philosophical foundations of student development theory. Application of theory to best practices.
- 8050. Ethics in Educational Leadership (3)** P: Admission to EdD in educational leadership. Applied ethics.
- 8055. Doctoral Seminar in Curriculum and Instruction (3)** P: Admission to EdD in educational leadership. Advanced study of current theory and research in curriculum and instruction and their applications in educational settings.
- 8056. Doctoral Seminar in Curriculum Theory and Practice in Higher Education (3)** P: Admission to EdD in educational leadership. Curriculum theory as related to higher education programs and courses. Development of skills and knowledge required to implement higher education curricula.
- 8060. Program Evaluation (3)** P: Admission to EdD in educational leadership. Theory and research on program evaluation. Techniques used in designing, implementing, and reporting program evaluations.
- 8410. Advanced Research in Educational Leadership (3)** P: Admission to EdD in educational leadership. Evaluation and use of quantitative and qualitative research in the practice of educational leadership.
- 8420. Quantitative Research in Educational Leadership (3)** P: Admission to EdD in educational leadership. Descriptive and inferential quantitative methods used in educational research.
- 8430. Qualitative Research in Educational Leadership (3)** P: Admission to EdD in educational leadership. Philosophy and methodology of various forms of qualitative research used in educational leadership.
- 8440. Applied Research Design in Educational Leadership (3)** Knowledge and skills needed to plan and implement a major independent research project in educational leadership.
- 8991. Doctoral Internship: Leadership Practicum (3)** P: Admission to EdD in educational leadership. Advanced internship. Participation in series of structured and supervised field experiences at local, regional, and state levels.

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8992. Doctoral Internship: Research Practicum (3) P: Admission to EdD in educational leadership; LEED 8991. Advanced internship. In-depth practical experience in educational organization. Completion of field study at site.

9000. Dissertation (3-6) P: Admission to EdD in educational leadership. May be repeated. May count maximum of 6 s.h.

DEPARTMENT OF LIBRARY SCIENCE

Mary E. Yontz, Chair, 104 Umstead Building

MLS

The master of library science program is designed for students seeking employment as librarians and information professionals in Pre K-12 schools, universities, community colleges, public libraries, and related settings. All students are eligible for NC Public Library Certification upon completion of the MLS degree requirements. The MLS requires a minimum of **39 s.h.** of credit. Eight core courses (24 s.h.) are required of all students: LIBS 6010, 6012, 6014, 6018, 6026, 6031, 6042, and 6991 or 6992.

School library media (courses required for public school licensure): LIBS 6135, 6142 and 6144; one of the following educational core competency courses: EDUC 6001, ELEM 6550 or ADED 6550, SPED 6002; and one elective (3 s.h.) to be selected in consultation with an advisor. Additional pre-requisites may be required for students seeking media coordinator licensure and lacking an initial teaching licensure.

Public library: LIBS 7050 and electives (12 s.h.) selected in consultation with an advisor.

Academic library: All electives are selected in consultation with an advisor to meet the career goals of the student.

Applicants holding a graduate degree in library science or education who are seeking school licensure are required to submit transcripts for evaluation. Upon review, a course of study will be determined to meet the competencies of the North Carolina Department of Public Instruction and the American Association of School Librarians of the American Library Association working with the National Council for Accreditation of Teacher Education.

NORTH CAROLINA SCHOOL MEDIA SUPERVISOR LICENSURE

Students seeking school media supervisor licensure must have three years of successful experience as a media coordinator and are required to take 18 s.h. above the master's degree. Courses must include LIBS 7010, a course in educational curriculum development, and LIBS 7991.

LIBS: LIBRARY STUDIES

6010. Foundations of Library and Information Studies (3) P: Admission to MLS program or consent of chair; demonstrated competency in the basic operation of word processing, data bases, and spreadsheets. Development and functions of libraries and information centers, professional practice and ethics, and current issues and trends.

6012. Analyzing and Synthesizing Professional Library Information (3) P/C: LIBS 6010. Analysis and synthesis of professional library literature and resources.

6014. Introduction to Reference (3) P/C: LIBS 6010 or consent of chair. Major general reference sources used to answer information needs of library users.

6018. Collection Development (3) P/C: LIBS 6010 or consent of chair. Principles and methods of selecting print and nonprint materials, intellectual freedom, and formulation of selection policies.

6026. Organization of Information in Libraries (3) Organization of information resources, including classification, cataloging (MARC), and subject headings.

6031. Library Administration and Management (3) P/C: LIBS 6010 or consent of chair. Theory and principles of management with relevant application for public, school, and academic libraries.

6042. Technology for Library Services (3) P/C: LIBS 6010 or consent of chair. Use of technology in effective programs for youth services. Evaluative criteria for hardware and software and methods and strategies to integrate technology into instructional process.

6045. Human-Computer Interface Design (3) Same as EDTC 6045 P: Basic computer knowledge. Design and evaluate human-computer interfaces for information and instructional products. Applies human-computer interface principles and user-centered design perspective to project development.

6060. Using the World Wide Web for Research (3) Identification and evaluation of research resources found on World Wide Web. Search strategies, copyright, and censorship.

6133. Materials for Early Childhood (3) Survey of materials for infants, toddlers and preschool age children, emphasizing the evaluation and selection of print and non-print resources for use in early literacy-enriched story-time programming.

6135. Materials for Children (3) Evaluation, selection, and use of contemporary fiction, informational books, and other media for elementary through middle school age children in grades K-8.

6137. Materials for Young Adults (3) Formerly LIBS 5115 Evaluation, selection and use of contemporary fiction, informational books and other media for high school age young adults, grades 9-12.

6142. Instructional Foundations of the School Library Media Program (3) P: LIBS 6010, 6012, 6014, 6026, 6031, and 6042; or consent of instructor. Educational standards, models of information literacy, assessment, and their impact on student achievement.

6144. Instructional Strategies and Leadership for School Media Specialists (3) P: LIBS 6142. Strategies for education, collaboration, leadership, and assessment.

6160. The Art of Storytelling (3) Storytelling techniques and performance for varied audiences. Historical origins, story memory, and development of storytelling programs for all ages.

6215. Genealogy for Librarians (3) One or more field trips. Roles of libraries and librarians as related to genealogical collections and services. Review of genealogical resources in other libraries, archives, and institutions. Emphasis on materials and methods of genealogical research.

6220. History of Books and Libraries (3) Origin and development of the book in its various forms from earliest times to twentieth century. Evolution of library as institution.

6225. Government Publications (3) Forms, distribution, care, and use of all types of federal government publications.

6240. Virtual Reality: Principles and Applications (3) Same as EDTC 6240 Basic principles of virtual reality. Emphasis on applications in education and other fields. Students select special projects according to their interests and build virtual environment.

6242. Building and Using Graphics-Based Virtual Environments for Education (3) Same as EDTC 6242 P: EDTC/LIBS 6240 or consent of chair. Graphics-based environment design, building, application, and evaluation for education.

6244. Building and Using Text-Based Virtual Reality Environments for Education (3) Same as EDTC 6244 P: EDTC/LIBS 6240 or consent of chair. Text-based environment design, building, applications, and evaluation for education.

6320. Advanced Reference (3) P: LIBS 6010, 6014, 6018, 6026; or consent of chair. Sources of information in major subject areas.

6345. Library of Congress Classification System (2) P: LIBS 6014; or consent of chair. Construction, use, and notation. Development of subject headings.

6735. Seminar on Intellectual Freedom (2) Intellectual freedom principles in library and information studies. Pressure groups, censorship, and strategies for coping with attempts to limit access to information.

6810. Academic Libraries (3) P: LIBS 6010, 6012, 6014, 6018, 6026, 6031 and 6042, or permission of the instructor. Issues and trends in community college, college and university libraries.

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6848. Seminar on Virtual Reality and Education (3) Same as EDTC 6848 P: EDTC/LIBS 6242, 6244; or consent of chair. Explores problems and issues affecting building, use and evaluation of virtual reality environments in educational settings.

6900. Electronic Portfolio Development (3) Same as EDTC 6900 Practical application of theory, assessment, and reflection addressing state and national standards in professional electronic portfolios.

6901, 6902, 6903, 6904. Special Topics in Library Studies (1,2,3,4) May be repeated for credit with change of topic for given course number. P: LIBS 6014, 6018, 6031; or consent of chair. Variety of newly developed and special courses offered as sections.

6972. Research Methods in Library and Information Studies (3) P: LIBS 6014, 6018, 6031; or consent of chair. Various available resources and problems of research in library and information studies.

6973. Research Paper (3) Directed by assigned faculty member. P: LIBS 6972. Research project developed in proposal form in LIBS 6972. Select methodology, collect and analyze data, draw conclusions, and present findings in written report.

6981, 6982, 6983. Directed Independent Study (1,2,3) May be repeated for credit for maximum of 6 s.h. P: Consent of chair. Topic not otherwise offered in curriculum or more in depth than is possible within context of regular course.

6989. Early Internship (3) 110 hours of observation and practical experience. For students seeking initial licensure. P: 9 s.h. in LIBS or consent of chair. Placement in school library media setting.

6991, 6992. Internship: Seminar (3,3) 110 hours of observation and practical experience. P: 30 s.h. in LIBS or consent of chair. Placement in library setting appropriate to student's field of concentration.

7000. Thesis (1-6) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7010. Supervision of School Media and Technology Programs (3) Same as EDTC 7010 P: Consent of CAS-LS or MAEd program director. Principles and practices of supervision involved in comprehensive media and technology programs in school district and/or region.

7030. Financial Management of Public Library Organizations (3) P: LIBS 6010, 6031 or consent of instructor. Introduction to theory, resources, concepts, and current practices of the financial management of public libraries.

7050. Seminar on Public Libraries (3) P: LIBS 6031 or equivalent or consent of chair. Characteristics, operations, and problems of public libraries.

7060. Seminar on Community College Learning Resource Centers (2) P: LIBS 6031 or equivalent or consent of chair. Characteristics, operations, and problems of learning resource centers in technical institutes and community colleges.

7070. Seminar on Library Automation (2) P: LIBS 6046 or equivalent or consent of chair. Problems of library automation. Emphasis on current trends in design and implementation.

7110. Advanced Storytelling (3) For those with some storytelling background. P: LIBS 6160 or equivalent or consent of chair. Develop and enhance storytelling performance. Presentation of self as entrepreneurial storyteller.

7150. Programs for Youth in Public Libraries (3) P: LIBS 6014, 6031, 6042, 6135; or consent of chair. Theory and methods of building effective public library programs for children and young adults.

7160. The Adult Reader (3) Internet connectivity required. P: LIBS 6014, 6031, 6042, 6135; or consent of chair. Examines selection of sixteen popular genres for adult readers, including readers' advisory services.

7210. Computer-Assisted Instruction in Librarianship (3) Theory, design, application, and evaluation of computer-assisted instruction in librarianship.

7250. Qualitative Research and Evaluation in Librarianship (3) Qualitative methods for research and evaluation as applied to information needs of groups, libraries, and similar institutions.

7901, 7902, 7903, 7904. Special Topics in Library Studies (1,2,3,4) May be repeated for credit with change of topic for a given course number. P: Consent of chair. Variety of newly developed and special courses offered as sections.

7981, 7982, 7983. Directed Independent Study (1,2,3) May be repeated for maximum of 6 s.h. in the CAS-library science program. P: Admission to CAS-library science program; consent of chair. Topic not otherwise offered in curriculum or more in-depth than is possible within context of regular course.

7991. CAS Internship: School Media Supervision, Seminar (3) 110 hours of observation and practical experience in school media supervisory settings. P: 15 s.h. in CAS-library science program. Supervisory responsibilities and problems of school media centers.

7992. CAS Internship: Seminar (3) 110 hours of observation and practical experience. P: 15 s.h. in CAS-library science program. Placement in setting appropriate to student's specialization area.

7995, 7996. Seminar: CAS Project (3,3) P: 18 s.h. in CAS-library science program. Problem in library studies. Report defended before faculty committee.

LIBS Banked Courses

6003. Reference in the Social Sciences (3)

6004. Reference in the Humanities (3)

6005. Reference in the Pure and Applied Sciences (3)

6046. Automation in Libraries (3)

6120. Information Storage and Retrieval (2)

6340. Online Cataloging (2)

6360. Telecommunications (3)

6725. Seminar on Technical Services (2)

6730. Seminar on Organization of Special Materials (2)

DEPARTMENT OF MATHEMATICS, SCIENCE, AND INSTRUCTIONAL TECHNOLOGY EDUCATION

Susan Ganter, Chair, 342-A Flanagan Building

Carol A. Brown, MAEd in IT Program Director

William Sugar, MS in IT Program Director

Michael Bossé, MAEd in Mathematics, Program Director

Frank Crawley, MA in Science Education, Program Director

MA IN SCIENCE EDUCATION

The MA in science education is specifically designed for individuals who intend to teach in a community college or junior college setting or who simply wish to increase their expertise in a science content area. The program is open to those students who hold undergraduate degrees in science education or in a science content area.

Admission requirements: Satisfactory entrance examination score; minimum GPA of 2.7 on all undergraduate work or a minimum GPA of 3.0 for classes taken in the senior year or in the undergraduate major; favorable recommendation from the departmental admission committee.

Course requirements: A minimum of **36 s.h.** is required, with at least 18 s.h. at the 6000 level or above. The specific program of courses must meet the requirements below and be approved by the student's advisor:

1. A minimum of 18 s.h. of concentration in either biological, physical, and/or earth science. Appropriate prefixes include BIOL, CHEM, GEOL, or PHYS.
2. Six s.h. of suitable electives taken under advisement.
3. Twelve s.h. of course work in science education, including specified core courses.

A thesis is required. A comprehensive examination in science education must be passed at the completion of the program.

MAEd IN INSTRUCTIONAL TECHNOLOGY

The MAEd in instructional technology is designed for students seeking employment in schools or other agencies as technology facilitators, coordinators, or program directors. The mission of the program is to prepare professionals in the field of instructional

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technology to plan, implement, and evaluate technology programs within a collaborative teaching environment. See the MAEd as listed under the College of Education general information for Master of Arts in Education (MAEd) for requirements for the MAEd in instructional technology. Students completing the MAEd in instructional technology are eligible for NC licensure 077 – Instructional Technology Specialist Computers.

MAEd IN MATHEMATICS

The MAEd in mathematics is designed for a teacher whose primary teaching assignment has been in the area of pre-secondary or secondary mathematics. Prior teaching experience is not necessary for admission to this program, but certification to teach is required for admission.

Students holding the equivalent of an undergraduate mathematics major and certified to teach at the secondary level will complete the secondary level concentration. Students who earned the equivalent of an undergraduate concentration in mathematics and are certified to teach at the pre-secondary level will complete the pre-secondary-level concentration. Admission materials must include a letter of recommendation from someone aware of the applicant’s performance or potential as a classroom teacher.

Degree Requirements

Minimum degree requirement is **39 s.h.** of credit.

- 1. Common core21 s.h.
EDUC 6001; 6482 or SCIE 6500; MATE 6200, 6206, 6211
6 s.h. of mathematics analysis and algebra as follows:
 Pre-secondary concentration students take MATH 5521. Readings and Lectures in Mathematics (3) once as analysis and once as algebra.
 Secondary concentration students take MATH 5101 or 5102; 5021 or 5064 or 5581 or 6011
- 2. Concentration area 18 s.h.
 Pre-secondary concentration:
 Choose 9 s.h. mathematics education electives in consultation with advisor; MATE 6320 or 6321 is normally included unless the student has credit for a similar course
 Choose 9 s.h. electives from the following: MATE 5263, 5264, 6221, 6222, 6223; MATH 5521, 6263
 Secondary concentration:
 Choose 9 s.h. mathematics education electives in consultation with advisor; MATE 6323 is normally included unless the student has credit for a similar course
 Choose 9 s.h. from the following: MATH 5021, 5031, 5064, 5101, 5102, 5110, 5121, 5122, 5131, 5132, 5311, 5322, 5521, 5551, 5581, 5601, 5801, 6001, 6011, 6012, 6022, 6111, 6112, 6121, 6122, 6251, 6252, 6401, 6402, 6411, 6412, 6561, 6601, 6611, 6612, 6651, 6802, 6803, 6804, 6805
- 3. Other requirements
 Capstone experience:
 The capstone experience will consist of either a research project or a portfolio that is modeled on the National Board Professional Teaching Standards or other equivalent project. The graduate student will be able to show knowledge of and skills in the use of appropriate materials, pedagogy, and technology in the construction of a portfolio or research project.
 School-based experience:
 Teaching experience at the K-12 level is not mandatory for admittance to the MAEd program. However, for the graduate student not teaching at the pre-college level, some of the course work will require a practicum with an approved school.

MAEd AND MAT IN SCIENCE EDUCATION

For requirements for the master of arts in education (MAEd) in science education, please see the MAEd as listed under the College of Education general information for Master of Arts in Education (MAEd). For requirements for the master of arts in teaching (MAT), please see the Department of Curriculum and Instruction. The MAEd program leads to advanced licensure; the MAT program leads to initial licensure.

MS IN INSTRUCTIONAL TECHNOLOGY

The MS in instructional technology is designed for students seeking employment in institutions of higher education, governmental agencies, businesses, and industry as developers of computer-based instructional materials and other types of instructional materials. The MS in instructional technology program provides a thorough foundation in the design of instruction and the development of instructional materials. The program also helps students develop advanced skills in media production and distance education.

The degree requires a minimum of **36 s.h.** of credit as follows: EDTC 6010, 6020, 6025, 6030; 6040, 6135, 6991, 7030, 7040; one research course; and 6 s.h. of electives.

CERTIFICATE IN COMPUTER-BASED INSTRUCTION

The certificate in computer-based instruction enables interested persons to learn basic instructional design, visual design and interface design principles and then, apply these principles using various software tools, including computer-based, online and virtual reality tools. Applicants to the certificate program must have a bachelor's degree and undergraduate GPA of at least 2.5.

The certificate program requires **18 s.h.** of graduate-level course in computer-based instruction. Required courses include EDTC 6020, 6030, 6045, 6135, 6240 or 6242, 7030.

CERTIFICATE IN DISTANCE LEARNING AND ADMINISTRATION

The certificate in distance learning and administration provides interested persons an opportunity to learn the basic principles of distance delivery of classes, to manage distance-delivered classes, and to evaluate their effectiveness. Applicants to the certificate program must meet the same admission requirements as East Carolina University's Graduate School.

The certificate program requires **18 s.h.** of graduate-level course work in distance delivery of courses. Required courses include EDTC 6010, 6020, 6300, 7030, 7040, 7330.

CERTIFICATE IN ELEMENTARY MATHEMATICS EDUCATION

The elementary mathematics education certificate provides interested elementary education licensed teachers the opportunity to fulfill requirements to apply for the add-on license in K-6 mathematics. Applicants to the certificate program must currently have a teaching license and meet graduate school standards for admission.

Applicants seeking admission must be graduate students or education professionals working in their respective fields. Professionals can enroll as nondegree seeking students. Admission is based on completion of the ECU certificate application and approval by the program coordinator.

The certificate program requires **18 s.h.** of graduate-level course work in a program of study designed by a consortium of UNC universities and approved by the NC State Board of Education. Required courses include MATE 6058, 6059, 6060, 6061, 6062, and 6063.

CERTIFICATE FOR SPECIAL ENDORSEMENT IN COMPUTER EDUCATION

The certificate for the special endorsement in computer education provides interested licensed teachers the opportunity to fulfill requirements to apply for the endorsement for the position of Technology Facilitator. Applicants to the certificate program must currently have a NC teaching license and meet graduate school standards for admission. Students with an advanced teaching license or MLS may add-on 077 licensure by completing EDTC 6992 Internship Seminar in addition to requirements for the 18079 Special Endorsement.

The certificate program requires **18 s.h.** of graduate-level course work in educational technology. Required courses include EDTC 6010, 6020, 6035, 6070, 6139, and 6149.

CERTIFICATE IN VIRTUAL REALITY IN EDUCATION

The certificate in virtual reality in education and training provides interested persons the opportunity to learn to use basic virtual reality software and to apply that knowledge in educational and training settings. Applicants to the certificate program must meet the same admission requirements as East Carolina University's Graduate School.

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The certificate program requires **15 s.h.** of graduate-level course work in virtual reality, emphasizing educational and training applications. Required courses include EDTC 6240, 6242, 6244, 6848, 6991, 6992.

EDTC: EDUCATIONAL TECHNOLOGY

5010. Computers in Education (3) Application of computers in education. Operation of microcomputers and selection, evaluation, and application of educational software.

6010. Introduction to Instructional Technology (3) Historical background, theories, instructional design and development, deliverers of instruction, current issues, and trends.

6020. Principles of Instructional Design (3) Systematic process for design of instruction. Task analysis and task analysis diagrams, learner and context analysis, and development of instructional strategies.

6025. Analysis and Evaluation in Instructional Technology (3) P: EDTC 6020. Introduces development of instructional analyses, strategies, and formative evaluation methods. Practical experiences in traditional and alternative instructional development and evaluation techniques.

6030. Authoring Systems for Instructional Product Development (3) Use of authoring systems for design, development, and testing of instructional course ware.

6035. Integrating Technology into the English/Language Arts, Social Studies, and Information Skills Curriculum (3) Open to other graduate education majors. In-depth study of NC K-12 computer skills curriculum. Emphasis on development of strategies, materials, and staff development to integrate technology into English/language arts, social studies, and information skills curricula.

6037. Integrating Technology into the Math, Science, and Healthful Living Curriculums (3) Open to other graduate education majors. In-depth study of NC K-12 computer skills curriculum. Emphasis on developing strategies, materials, and staff development to integrate technology into math, science, and health curricula.

6040. Multimedia Instructional Product Development (3) P: EDTC 6010, 6025. Process of instructional product development using multimedia technologies. Develops multimedia instructional modules.

6045. Human-Computer Interface Design (3) Same as LIBS 6045 P: Basic computer knowledge. Design and evaluate human-computer interfaces for information and instructional products. Applies human-computer interface principles and user-centered design perspective to project development.

6050. The Internet: Organization, Design, and Resource Discovery (3) Organization and design of Internet. Emphasis on tools available for discovering useful resources for instructional and other purposes.

6060. Using the World Wide Web for Research (3) Identifies and evaluates resources for research available on World Wide Web. Examines issues such as search strategies, copyright, and censorship.

6070. Digital Literacy for 21st Century Classrooms (3) Prepare educators in the use of information communication and technology (ICT) literacy skills.

6110. Media Literacy (3) Critical examination of mass media in terms of implicit and explicit messages. Strategies and activities to develop cognitive and viewing skills necessary for effective evaluation of media.

6125. Performance Technology: Principles and Strategies (3) P: EDTC 6020. Interrelationship of computer technology with instructional technology and its application to corporate training.

6130. Development of Video Instruction (3) Design and development of desktop video for instructional applications. Integration of digital video with other media for instruction. Analog video production and principles of instructional television.

6135. Instructional Graphics for Educational Media (3) Design and production of graphic and visual elements for instructional applications. Covers electronic and print-based static and interactive media.

- 6139. Selection and Integration of Multimedia for PreK-12 Schools (3)** Methods and materials for selecting and using a variety of multimedia formats in PreK-12 classrooms.
- 6149. Planning and Administration of School Technology Programs (3)** Theory and principles of planning and administering school technology programs.
- 6230. Local Area Networks in Instructional Settings (3)** Planning, designing, implementing, and managing local area networks in instructional settings.
- 6240. Virtual Reality: Principles and Applications (3) Same as LIBS 6240** Basic principles of virtual reality. Emphasis on applications in education and other fields. Students select special projects according to their interests and build virtual environment.
- 6242. Building and Using Graphics-Based Virtual Environments for Education (3) Same as LIBS 6242** P: EDTC/LIBS 6240 or consent of chair. Graphics-based environment design, building, application, and evaluation for education.
- 6244. Building and Using Text-Based Virtual Reality Environments for Education (3) Same as LIBS 6244** P: EDTC/LIBS 6240 or consent of chair. Text-based environment design, building, applications, and evaluation for education.
- 6300. Introduction to Distance Learning (3)** Internet connectivity required. Distance learning from administrative and program development standpoint.
- 6848. Seminar on Virtual Reality and Education (3) Same as LIBS 6848** P: EDTC/LIBS 6242, 6244; or consent of chair. Explores problems and issues affecting building, use, and evaluation of virtual reality environments in educational settings.
- 6900. Electronic Portfolio Development (3) Same as LIBS 6900** Practical application of theory, assessment, and reflection addressing state and national standards in professional electronic portfolios.
- 6901, 6902, 6903, 6904. Selected Topics in Instructional Technology (1-4)** May be repeated for maximum of 6 s.h. with change of topic for a given course number. Variety of newly developed and special courses.
- 6981, 6982, 6983. Directed Independent Study (1-3)** For intermediate or advanced student. P: Minimum of 15 s.h. of credit in MAEd program; consent of chair. Study of topic not otherwise offered in curriculum or pursuit of topic beyond or in greater depth than is possible within context of regular course.
- 6991. Capstone Project in Instructional Technology (3)** P: EDTC 6010, 6025, 6030, 6135, and 7030 or permission from MS in Instructional Technology program coordinator. Initiation, development and completion of a capstone project.
- 6992. Internship Seminar (3)** 110 hours of observation and practical experience in school or other setting appropriate to student's area of specialization. P: 24 s.h. in MAEd program or consent of chair. Periodic group meetings with internship supervisor.
- 7000. Thesis (1-6)** May be repeated. May count maximum of 3 s.h.
- 7001. Thesis: Summer Research (1)** May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.
- 7010. Supervision of School Media and Technology Programs (3) Same as LIBS 7010** P: Consent of CAS-LS or MAEd program director. Principles and practices of supervision of media and technology programs for school district and/or region.
- 7030. Web Teaching: Design and Development (3) Formerly EDTC 7320** Principles of Internet (web-based) instruction, including instructional design components, and designing web pages for delivery of instruction.
- 7035. Designing K-12 Professional Development for Delivery in Online and Blended Learning Environments (3)** Practical application of instructional strategies and delivery methods.

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7040. Instructional Strategies for Distance Learning (3) Formerly EDTC 7310 Principles and theories of distance learning, including design, delivery, and evaluation.

7120. Learning Theories for Instructional Development (3) Formerly EDTC 6120 Advanced examination of learning theories that affect development of instruction.

7125. Training Systems Engineering (3) Explores issues associated with building the training systems and subsystems necessary for training and sustaining human performance. Topics include performance analysis and needs assessing, life cycle training concerns, training development, training devices and strategies for use, cost and performance analysis, and technology used in training delivery.

7220. Instructional Systems Analysis (3) Advanced examination of instructional systems analysis. Includes conducting needs analysis, performance analysis, task analysis, learner analysis, and environmental analysis in preparation for instructional design.

7330. Management of Distance Education (3) Introduces management of distance education programs, covering online course management, strategic planning, faculty development and support services, student services, issues, and future trends.

7400. Doctoral Seminar in Instructional Technology (3) P: Admission to doctoral program. Advanced seminar focusing on theory, research, models, delivery, and current issues of instructional technology in schools, higher education, and training.

7901, 7902, 7303. Selected Topics in Instructional Technology (1,2,3) May be repeated for a maximum of 6 s.h. with change of topic. P: Consent of chair. Variety of newly developed and special courses.

7981, 7982, 7983. Directed Independent Study (1,2,3) For advanced or doctoral student. P: Consent of chair. Topics not otherwise offered or offered in greater depth than in the context of a regular course.

8020. Doctoral Seminar in Models and Theories of Instructional Development (3) P: Admission to EdD in educational leadership or consent of instructor. Advanced study of established and emerging models of instructional design and development. Includes descriptive and prescriptive theories of instructional development.

8025. Doctoral Seminar in Educational Evaluation (3) P: Admission to EdD in educational leadership or consent of instructor. Advanced study of established and emerging methods of educational evaluation. Includes both program evaluation and product evaluation with emphasis on technology programs and products.

8120. Doctoral Seminar in Foundations of Instructional Systems (3) P: Admission to EdD in educational leadership or consent of instructor. Advanced study of theoretical foundations of instructional systems.

8130. Doctoral Seminar in Diffusion and Adoption of Innovations (3) P: Admission to EdD in educational leadership or consent of instructor. Advanced seminar in diffusion and adoption of innovations, including models of change, research-based practice, adaptation due to contextual constraints, and challenges particular to adoption of technology.

8140. Doctoral Seminar in Instructional Development for Higher Education (3) P: Admission to EdD in educational leadership or consent of instructor. Advanced seminar on instructional development as it relates to organization and faculty development, and instructional change within higher education settings.

EDTC Banked Courses

6140. Planning for Technology (3)

MATE: MATHEMATICS EDUCATION

5251. Modern Mathematics for Elementary Teachers I (3) Formerly MATH 5251 Not open to undergraduate or graduate mathematics majors or minors. A teacher taking this course would receive certificate renewal credit and/or 3 s.h. of graduate elective credit in elementary education. P for undergraduate students: MATE 3223 or consent of instructor; P for graduate students: MATE 2129; MATH 2127; 3219 or 3221; or equivalent; or consent of instructor. Numeration systems and real numbers from axiomatic approach. Topics in geometry, algebra, probability theory, and number theory. Emphasis on relationship between these topics and school mathematics.

5263, 5264. Modern Mathematics for Junior High School Teachers I, II (3,3) Formerly MATH 5263, 5264 May not count toward MATH or CSCI major or minor. P for 5263: Consent of instructor; P for 5264: MATH 5263 or consent of instructor. Set theory, mathematical systems and proofs, number systems, elementary number theory, applications of mathematics in business, science, and other areas. Basic concepts of geometry, algebra, probability, and statistics.

5265, 5266. Microcomputers in Secondary Education (3,0) Formerly MATH 5265, 5266 2 lecture and 2 lab hours per week. May not count toward a MATH or CSCI major or minor. P: MATE 3166 or MATH 1075 or 1085; consent of instructor. Operation and programming of microcomputers in secondary school system.

5267, 5268. LOGO: A Computer Language for Educators (3,0) Formerly MATH 5267, 5268 2 lecture and 2 lab hours per week. May not count toward MATH major or minor. P: MATE or MATH 3166 or consent of instructor. LOGO and its uses with students K-12.

6058. Number Systems and Operations: K-5 Mathematical Tasks (3) P: Teacher Licensure. Analysis and construction of effective mathematical tasks in teaching number systems and operations at the K-5 level; attention also given to the expansion of content knowledge.

6059. Rational Numbers and Operations: K-5 Learning Trajectories (3) P: MATE 6058. Focus on rational number concepts through learning trajectories at the K-5 level; attention also given to problem solving and content knowledge.

6060. Data Analysis and Measurement: K-5 Classroom Interactions (3) P: MATE 6058. Focus on statistical literacy of elementary teachers and the teaching of data analysis and measurement to K-5 students; attention also given to learning methods which facilitate appropriate classroom interactions.

6061. Algebraic Reasoning: K-5 Discourse and Questioning (3) P: MATE 6058. Focus on the early algebra concepts of functional thinking and generalized arithmetic in relationship to pedagogical practices centered on questioning in the mathematics classroom.

6062. Geometry and Spatial Visualization: K-5 Assessment (3) P: MATE 6058. Geometric concept development along with formative and summative assessment strategies of students' geometric thinking; attention also given to geometric content knowledge and diagnosis of student errors.

6063. Mathematical Modeling: K-5 Leadership (3) P: MATE 6058, 6059, 6060, 6061, 6062. Generating mathematical representations and making explicit connections between concepts. Pedagogy designed to equip elementary teachers to become mathematics teacher-leaders in school settings; attention also given to topics integrated within mathematical strands.

6110. Algebra and Number Theory for Teachers (3) P: Admission to the MAT in mathematics education. Specialized mathematical knowledge necessary to support the successful teaching and learning of algebra and number theory.

6120. Geometry for Teachers (3) RP/C: MATE 6110. Specialized mathematical knowledge necessary to support the successful teaching and learning of geometry.

6130. Statistics and Probability for Teachers (3) RP/C: MATE 6110. Specialized mathematical knowledge necessary to support the successful teaching and learning of probability and statistics.

6140. Functions and Analysis for Teachers I (3) P: MATE 6110. Specialized mathematical knowledge necessary to support the successful teaching and learning of polynomial and rational functions.

6150. Functions and Analysis for Teachers II (3) P: MATE 6140. Specialized mathematical knowledge necessary to support the successful teaching and learning of exponential, logarithmic, trigonometric and other special functions.

SECTION 8: CURRICULA

6200. Mathematics Assessment for the Classroom Teacher (3) Formerly MATH 6200 P: Consent of instructor. Theory, methods, and techniques of assessment for improving mathematics learning. Requires assessment and intervention project adapted to local classroom setting.

6206. Leadership in Mathematics Education (3) Formerly MATH 6206 P: Admission to MAEd program; consent of instructor. Mathematics content and information necessary for service as leader in public school mathematics education.

6211. Research in Mathematics Education (3) Formerly MATH 6211 Readings, reports, and syntheses of research literature on teaching and learning K-12 mathematics. Projects based on this literature.

6221, 6222, 6223. Current Topics in Mathematics Education (1,2,3) Formerly MATH 6221, 6222, 6223 May be repeated once with change of topic. May not count toward mathematics requirement for MAEd. P: Consent of instructor. Exhaustive study of current topic in mathematics education.

6226, 6227, 6228. Leadership in Mathematics (1,2,3) Formerly MATH 6226, 6227, 6228 Each course may be repeated once with change of topic. May not count toward mathematics requirement for MAEd. P: Consent of instructor. Mathematics content and information necessary for service as leader in public school mathematics education.

6229. Leadership in Mathematics Education (4) Formerly MATH 6229 May not count toward mathematics requirement for MAEd. P: Consent of instructor. Mathematics content and information necessary for service as leader in public school mathematics education.

6261. Diagnostic Approach to Teaching Elementary Mathematics I (3) Formerly MATH 6261 May not count toward mathematics requirement for MATH MA. May count as elective in other programs. P: MATE 5251 or 5263 or consent of instructor. Methods of diagnosing and prescribing for individual difficulties in mathematics at elementary and secondary school levels. Applies principles and techniques during clinical work.

6265. Technology in Mathematics Education (3) Technology applications in grades 6-12 based on national recommendations, research, and issues pertaining to equity and access.

6320. Advanced Elementary Mathematics Methods (3) Formerly MATH 6320 May not count toward mathematics requirement for MAEd. P: Certification in elementary education at undergraduate level. Current research, materials, methods, and curricula for teaching and learning elementary school mathematics.

6321. Advanced Middle-Level Mathematics Methods (3) Formerly MATH 6321 May not count toward mathematics requirement for MAEd. P: Certification in mathematics at middle grades undergraduate level. Current research, materials, methods, and curricula for teaching and learning middle-level mathematics.

6323. Issues and Trends in Mathematics Education (3) Formerly MATH 6323 May not count toward mathematics requirement for MAEd. P: Graduate standing and certification in secondary mathematics. Current research, materials, methods, and curricula for teaching and learning high school mathematics.

6331. Reasoning with Number and Algebra (3) Rational numbers, proportional reasoning, and linear relations as tools to explore mathematical relationships in grades 6-8.

6341. Teaching and Learning of Geometry (3) Analysis of middle school student work using the van Hiele model to examine relationships of shape, size, symmetry, and transformations in two- and three- dimensional space.

6351. Data Analysis and Probability in the Middle Grades (3) Data analysis, probability concepts, and pedagogical issues for middle grade teachers.

6361. Measurement Across the Curriculum (3) Key issues in teaching and learning measurement as it supports other mathematical strands.

6371. Teaching and Learning of Algebra (3) Current mathematical learning theory and research as it pertains to algebra taught from a problem-solving, student-centered perspective.

6391. Teaching with Mathematical Modeling (3) Historical and contemporary models applied to real-world situations to demonstrate the power and limitations of modeling.

6400. Capstone Project in Mathematics Education (3) Research project, portfolio modeled on the National Board Professional Teaching Standards, or equivalent project.

SCIE: SCIENCE EDUCATION

5000. Contemporary Approaches to Teaching Biological Science (3) P: BIOL 1100, 1101, 1200, 1201; or equivalent; minimum of 16 s.h. in BIOL. Effective teaching in biology using current curricula materials. Emphasis on investigative nature of biology.

5010. Applications of Microcomputers in Teaching Physical Science (3) 2 1-hour lectures and 1 2-hour lab per week. Use of microcomputer to assist in teaching physical science. Topics include operation of microcomputer, review and evaluation of available software, and computer techniques to illustrate physical science concepts.

5020. Applications of Microcomputers in Teaching Biological Science (3) Use of microcomputer to assist in teaching biological science. Topics include operation of microcomputer, review and evaluation of available software, and computer techniques to illustrate biological concepts.

5990. Apprenticeship Science (3) Direct supervision in lab procedures by members of science staff.

6000. Science and Society (3) Selected topics to demonstrate social, historical, and philosophical aspects of science. Emphasis on science-society interaction.

6003. Selected Topics in Life Science for Middle Grades Teachers (3)

6004. Selected Topics in Physical Science for Middle Grades Teachers (3)

6006. Chemistry for Middle Grades Teachers (3) P: Minimum of 1 year teaching experience in grades 6-9 or consent of instructor. Content and instructional methods for chemistry for grades 6-9 teachers. Emphasis on demonstrations and hands-on activities.

6010. The History and Philosophy of Science (3) Develop scientific ideas, their origin, growth, and relationship to present.

6019. Science in Elementary Education (3) P: Initial Teaching Licensure in elementary or special education. Current trends and issues. Emphasis on contemporary literature and classroom implementation.

6020. Recent Developments in Science Teaching (3) Curricular trends and innovations. Emphasis on development of philosophical analyses of science teaching and learning practices reflective of past, current, and future science education reform agendas.

6050. Developmental Approaches to Science Teaching (2) P: NC teaching licensure or equivalent; formal acceptance into DASH summer institute. Developmental Approaches in Science and Health (DASH) program is an interdisciplinary science curriculum designed for grades K-2. Focus on methodology and content. Follow-up sessions.

6081. Astronomy Methods for Teachers (2) P: PHYS 1080, 1081; or 2 years' teaching of astronomy unit in school; PHYS 1050 or PHYS 1250. Methods of teaching astronomy using activities, experiments, observations, and library/computer resources.

6200. Environmental Education (3) Critical examination of issues arising from human interaction with natural environment. Focus on themes such as history of environmental movement, environmental ethics and values, and local, state, and global environmental issues.

6310. Advanced Methods in Teaching Science (3) Applies theoretical, philosophical, and research bases for improvement of education practice. Planning, instruction, and evaluation techniques expected of master teacher.

6420. Marine Education (3) P: Initial Teaching Licensure in elementary, middle, or secondary education or consent of instructor. Current status of marine education. Emphasis on student involvement and development of classroom instruction materials.

SECTION 8: CURRICULA

6500. Understanding and Engaging in Educational Research (3) Research on human development and learning and pedagogical knowledge and skills expected of master teacher. Current trends and issues in education, skills in data collection, and application of research in classroom.

6501. Experimental Evaluation in Science (3) Experimental design, evaluation, and research methods as related to classroom and lab teaching and coordination of various sciences.

6505. Problems in Science Education (Elementary) (3) Research in science teaching at elementary school level.

6506. Problems in Science Education (Secondary) (3) Research in science teaching at middle and senior high school levels.

6507. Problems in Science Education (College) (3) Research in science teaching at college level.

6522. Readings in Science Education (1) Special topics to improve student's background selected in collaboration with instructor of student's choice. Readings selected from sources appropriate to any level of science teaching.

6525. Selected Topics in Biological Science for Elementary Teachers (3)

6530. Selected Topics in Physical Science for Elementary Teachers (3)

6535. Selected Topics in Earth Science for Elementary Teachers (3)

6600. Action Research in Teaching (3) Development of systematic reflection by teachers through action research strategies to examine issues in learning and teaching.

7000. Thesis (1-6) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

COLLEGE OF FINE ARTS AND COMMUNICATION

Michael A. Dorsey, Interim Dean, 106 Erwin Hall
Susan Beck-Frazier, Associate Dean, 103 Erwin Hall

The College of Fine Arts and Communication is comprised of the Schools of Art and Design, Communication, Music, and Theatre and Dance.

SCHOOL OF ART AND DESIGN

Michael Drought, Director, 2000 Jenkins Fine Arts Center
Scott Eagle, Assistant Director and Director of Graduate Studies, 2000 Jenkins Fine Arts Center

ACCREDITATION

The National Association of Schools of Art accredits the School of Art and Design graduate programs. The North Carolina State Department of Public Instruction and the National Council on Accreditation of Teacher Education accredits the MAEd in art.

ADMISSION REQUIREMENTS

As a prerequisite to graduate study in a degree program, the School of Art and Design requires that the applicant meet the admission requirements of the university Graduate School. In addition, applicants must meet all admission requirements of the School of Art and Design, including a portfolio showing competence in a studio area or areas as well as sufficient undergraduate preparation in art history. Portfolio evaluation is a primary criteria used in making an admissions decision. Applicants with deficiencies in undergraduate course requirements or preparation will be required to remove them. All application materials should be submitted to the Graduate School by January 15 for fall semester and October 15 for spring semester.

MAEd IN ART EDUCATION

The master of arts in education is the professional degree in art education. Applicants for the MAEd must possess at least the initial teaching license. Graduate certification requires demonstrated competence and recommendations from the certifying institution. This is a one-year or equivalent degree (33-36 s.h.). The total time limit for completing requirements for this degree is six years. Students interested in applying for admission to this degree program must submit a portfolio of slides of their work to indicate their competence in art as well as a satisfactory score on the Miller Analogies Test or the Graduate Record Examinations.

1. Education: EDUC 6001; SPED 6002..... 6 s.h.
Art education: ART 6800, 6801, 6898..... 9 s.h.
Art electives..... 9 s.h.
Art history elective 3 s.h.
2. Thesis options (Choose one of the following)..... 33-36 s.h.
(33 s.h. minimum) The student may choose to do a thesis for 6 s.h. of credit. The thesis must be conventional research dealing with a significant problem in the field of art education.
(36 s.h. minimum) The student may choose to take, in place of the thesis, and with the approval of the advisor, an additional 6 s.h. of art courses and 3 s.h. of electives. The final product of these courses is a cumulative project that demonstrates professional competence.
3. Students must achieve a passing score on a comprehensive examination in art education and education.

MFA IN ART

The master of fine arts degree is the terminal professional degree in studio art. This is a three-year or equivalent degree (60 s.h.). Assessments of progress are provided on a regular and periodic basis. Students must present the equivalent of the bachelor of fine arts degree, School of Art and Design program, which is described in the undergraduate catalog. The MFA degree does not require standardized test scores to apply. Students interested in applying for the MFA degree must present a portfolio of slides of their work prior to acceptance in the studio area in which they wish to major. Concentrations are offered in all areas represented by course work except art history and video art.

Art: Studio concentration for which candidate is qualified..... 24 s.h.
Studio art electives (outside concentration area) 12 s.h.
Art history..... 12 s.h.

SECTION 8: CURRICULA

ART 6000 or art course approved by area coordinator	3 s.h.
ART 7000.....	6 s.h.
General electives.....	3 s.h.
Thesis: A creative thesis and a written report of the thesis are required	

MAT IN ART EDUCATION

Please refer to the College of Education for the degree requirements for the master of arts in teaching and the master of arts in education, both of which lead to advanced certification.

ART: ART AND DESIGN

6000. Readings in Art (3) P: Graduate standing in the School of Art and Design. Explores ideas, theories, emergent issues, and trends in art through selected readings in art and philosophy. Discussion and analysis of reading as applied to students' personal aesthetic and studio production.

ART: ART EDUCATION

5323. Art in the Secondary School (3) P: Acceptance in MAT program. Art education philosophy, methodology, media, and techniques for teaching junior and senior high school students.

5810. Arts and Crafts for Elementary Teachers (3) Workshop course. Not open to ART majors. Drawing, painting, printmaking, sculpture, and craft processes suitable for elementary school classes.

5851. Art in the Elementary School (3) P: Acceptance in MAT program. Art education philosophy, methodology, materials, processes, and specific projects for elementary classes.

5860. Classroom Participation in Art (1) P: Acceptance in MAT program. Classroom practice in the teaching of art and discussion of procedures used.

5870. Computers in Art Education (1) P: Acceptance in MAT program. Entry-level basic computer operations applicable to the K-12 art education classroom.

6800. History and Philosophy of Art Education (3) P: Admission to Graduate School and MAEd in art program; consent of instructor. History of art instruction in American schools, philosophies of art education, past and present, the influences on current and past art instruction, and recent trends in art education.

6801. Supervision of Art Education (3) P: Admission to Graduate School and MAEd in art program. Duties of art supervisor, philosophies of supervision as applied to art, curriculum development in art, personnel practices and staff development in art supervision, public relations, preparation of art budgets, and legal aspects of art supervision.

6804. Current Topics in Art Education (3) P: Admission to the Graduate School and MAEd in art program; consent of instructor. Issues relevant to the discipline of art education will be explored through critical analysis of readings and review of contemporary methods.

6805. Interdisciplinary Topics in Visual Art Education (3) P: Admission to the Graduate School and MAEd in art program; consent of instructor. Interdisciplinary art education across the life span for diverse populations.

6898. Research in Art Education (3) P: Admission to Graduate School and MAEd in art program. History, significant findings, practical applications and implications, recent studies, areas needing further research, and research procedures in art education.

ART: ART HISTORY

6900. History of Prints and Drawings (3) History of printmaking and drawing from Renaissance to present.

6901. Northern Renaissance Art (3) Northern European painting, sculpture, and architecture from 1300-1600.

6902. Northern Baroque Art (3) Painting, architecture, and sculpture in Low Countries, Germany, Central Europe, England, Spain, and Portugal during Baroque Period.

- 6903. Nineteenth Century Painting (3)** Neo-classicism, romanticism, realism, impressionism, postimpressionism, and related trends of nineteenth century.
- 6906. Twentieth-Century Architecture (3)** Sources and development of contemporary architecture of the world.
- 6908. Research Methods in Art History (3)** Readings and research in theory and methodology of art history.
- 6909. Seminar in Art History (3)** May be repeated with different instructor. May count for a maximum of 6 s.h. Theory, methodological studies, and reading in history of art.
- 6910. Art of the Middle Ages (3)** Major directions in art and architecture of Europe from Early Christian period to ca. 1300.
- 6911. History of Nineteenth- and Twentieth-Century Design (3)** Major artists and movements in history of textile, ceramic, metal, wood, and graphic design.
- 6912. African Art (3)** Traditional and contemporary art of west and central Africa.
- 6913. Asian Art (3)** Significant traditions in art of India, China, and Japan from antiquity to modern times.
- 6915. Italian Renaissance Art: 1500 to 1600 (3)** Significant artists and art theories of Renaissance Italy.
- 6916. Art of India (3)** Significant art periods, traditions, and artists of ancient and modern India.
- 6917. Ceramic History of North Carolina and the Southeastern United States (3)** NC ceramics from colonial times to present.
- 6918. Art and Power in Mesoamerica (3)** Chronological survey of major Mesoamerican cultures and how visual arts they produced reflect aspects of religious and political power.
- 6919. Native North American Art and Ritual (3)** Overview of major native North American cultures and how visual arts created by native artists were part of their ritual, religious, and everyday lives. Covers cultural changes attributed to European impact.
- 6925. African American Art (3)** Survey of African American art in North America from Colonial Period through the twentieth century. Examines works of art and craft in different media. Explores various cultural impacts upon art production.
- 6930. Italian Renaissance Art: 1300-1500 (3)** Significant artists and art theories of Renaissance Italy.
- 6935. Italian Baroque Art: 1600-1700 (3)** Significant artists and art theories of Baroque Italy.
- 6940. Twentieth-Century Modern Art: 1900-1950 (3) Formerly ART 6905** European and North American art from first half of twentieth century.
- 6942. Twentieth-Century Modern Art: 1950-2000 (3) Formerly ART 6914** European and North American art from second half of twentieth century.
- 6944. Studies in Contemporary Art: Post 1960s (3) Formerly Art 5981** Critical look at art since the 1960s that deals with the political economy of representation.
- 6946. Studies in Contemporary Art: Post 1980s (3)** Critical look at art since the 1980s that has been engaged in a representation of a political economy.
- 6948. Art in the United States (3) (S) Formerly ART 5900** Visual culture in the U.S. from the colonial times to the present.
- 6950. Architectural History of the Middle East Before 1600 (3)** Architecture of ancient Babylon, Assyria, Persia, and Egypt and early Christian and Islamic cultures of Middle East.
- 6951. History of Architecture (3)** Architectural history in the West from prehistory to 21st century.

SECTION 8: CURRICULA

6952. Byzantine Art and Architecture (3) Art and architecture of the Byzantine Empire (ca. 300-1500) and artistic realms of its cultural influence (Armenia, Bulgaria, Georgia, Italy, Romania, Russia, Serbia, Turkey, and the United States).

6953. Russian Art and Architecture (3) Art and architecture of Russia from medieval to modern times.

ART: CERAMICS

5100. Ceramics Studio IX (3) P for graduate students: May count as an elective with consent of instructor. Senior projects in ceramic art and design. Slide portfolio requirement and senior exhibition.

5110. Ceramics Studio X (3) P for graduate students: May count as an elective with consent of instructor. Advanced projects in ceramic art and design.

6100, 6101, 6102, 6103, 6104, 6105, 6106, 6107. Problems in Ceramics (3 each) To be taken in sequence.

ART: COMMUNICATION ARTS

5210. Advanced Graphic Design (3) For students specializing in the discipline. P: ART 4210. Advanced problems in graphic design history. Develops self-promotional materials and professional portfolio.

5230. Advanced Illustration (3) P: ART 4230. Advanced problems in illustration. Emphasis on exploring aesthetic issues related to various forms of image making for illustrators. Develops creative professional illustration portfolio.

6200, 6210, 6220, 6230, 6240, 6250, 6260, 6270. Problems in Communication Arts (3 each) To be taken in sequence.

ART: DRAWING

5550. Advanced Figure Drawing (3) P: ART 3553. In-depth investigation of the figure for exploring various drawing issues.

5551. Advanced Drawing (3) P: ART 4551. In-depth exploration of drawing as depiction, organizational device, metaphor, and object. Drawing for exploring aesthetic issues related to various forms of image making.

6550, 6551, 6552, 6553. Problems in Drawing (3 each) To be taken in sequence.

ART: FABRIC DESIGN

5306. Fabric Design Studio VIII (3) P: ART 4326. Original research in nonstructural textile design.

5316. Fabric Design Studio IX (3) P: ART 5306. Original research in nonstructural textile design.

6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370. Problems in Design (3 each) Same as ART 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370 (Weaving) To be taken in sequence

6306, 6316, 6326, 6336, 6346, 6356, 6366, 6376. Problems in Fabric and Textile Design (3 each) To be taken in sequence.

ART: INTERDISCIPLINARY AND INDEPENDENT STUDY

5500. Independent Study (3) P: Consent of instructor, curricular coordinator, and dean.

6070. Visual Problems in Computer-aided Design (3) For artists and art educators. P: Minimum of 12 s.h. graduate-level ART courses or consent of instructor. Computer use for solving advanced visual problems related to experiences in specific areas of concentration and professional practice. Develop electronic portfolios and presentations of artwork and resumes.

6500. Independent Study (3) P: Consent of instructor, curricular coordinator, and director.

6510, 6511, 6512. Directed Graduate Field Study in Art (1,1,1) Minimum of 35 hours of instruction at a qualified off-campus institution or program. May count toward studio major. P: Graduate standing; consent of area coordinator and supervising instructor. Studio research supervised by School of Art and Design faculty in conjunction with another structure program or institution. Strengthens competence in areas related to School of Art and Design programs.

6515. Directed Graduate Field Study in Art (3) Minimum of 105 hours of instruction at a qualified off-campus institution or program. May count toward studio major. P: Graduate standing; consent of area coordinator and supervising instructor. Studio research supervised by School of Art and Design faculty in conjunction with another structure program or institution. Strengthens competence in areas related to School of Art and Design programs.

6991, 6992, 6993, 6994. Problems in Interdisciplinary Studies in Art (3 each)

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

ART: METAL DESIGN

5301. Metal Design Studio VIII (3) Original research in metal design.

5311. Metal Design Studio IX (3) Original research in metal design.

6301, 6311, 6321, 6331, 6341, 6351, 6361, 6371. Problems in Metal Design (3 each) To be taken in sequence.

ART: PAINTING

5560. Advanced Painting VI (3) Personal direction in painting. Individual and group criticism.

5561. Advanced Painting VII (3) Personal direction in painting.

6560, 6561, 6562, 6563, 6564, 6565, 6566, 6567. Problems in Painting (3 each) To be taken in sequence.

ART: PHOTOGRAPHY

5220. Advanced Photography (3) P: ART 2220. Advanced photographic techniques, sequential problems, animation, and film.

6221, 6222, 6223, 6224, 6225, 6226, 6227, 6228. Problems in Photography (3 each) To be taken in sequence.

ART: PRINTMAKING

5610. Printmaking Studio X (3) Independent investigation of specific problems in printmaking.

6600, 6601, 6602, 6603, 6604, 6605, 6606, 6607. Problems in Printmaking (3 each) To be taken in sequence.

ART: SCULPTURE

5700. Sculpture Studio VIII (3) Concentrated studio pursuit and development of strong personal aesthetic sculptural statement.

5710. Sculpture Studio IX (3) Concentrated studio pursuit and development of strong personal aesthetic sculptural statement (architectural scale).

6700, 6701, 6702, 6703, 6704, 6705, 6706, 6707. Problems in Sculpture (3 each) To be taken in sequence.

ART: WEAVING DESIGN

5305. Weaving Design Studio VII (3) P: ART 4315. Original research in weaving and fiber design.

5315. Weaving Design Studio VIII (3) P: ART 5305. Original research in weaving and fiber design.

SECTION 8: CURRICULA

6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370. Problems in Design (3 each) Same as ART 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370 (Fabric) To be taken in sequence.

6305, 6315, 6325, 6335, 6345, 6355, 6365, 6375. Problems in Weaving and Fiber Design (3 each)
To be taken in sequence.

ART: WOOD DESIGN

5302. Wood Design Studio VIII (3) Original research in wood design.

5312. Wood Design Studio IX (3) Original research in wood design.

6302, 6312, 6322, 6332, 6342, 6352, 6362, 6372. Problems in Wood Design (3 each) To be taken in sequence.

SCHOOL OF COMMUNICATION

Linda G. Kean, Director, 102 Joyner East

Laura C. Prividera, Interim Associate Director and Graduate Program Director, 102 Joyner East

The School of Communication offers a master of arts in communication with an emphasis in health communication. Admission to this program requires that the applicant meet the admissions requirements of the Graduate School, as well as the School of Communication.

MA IN COMMUNICATION

The MA in communication prepares students for careers or advanced academic training in communication with an emphasis in health communication focusing on interpersonal communication and the media. The 30-hour program provides students with a thesis or non-thesis option.

1. Core	18 s.h.
COMM 6000, 6030.....	6 s.h.
COMM 6230 (required for health communication emphasis).....	3 s.h.
Choose 9 s.h. from the following courses (required for the health communication emphasis).....	9 s.h.
COMM 6210, 6220, 6221, 6224, 6240	
2. Options.....	12 s.h.
a. Thesis:	
COMM 7000.....	3-6 s.h.
*Electives (COMM or related areas).....	6-9 s.h.
b. Non-thesis:	
*Electives (COMM or related areas).....	12 s.h.
3. Successful completion of comprehensive exams or thesis.	

*Electives are chosen in consultation with the graduate program coordinator. Courses in related areas (outside of COMM) must be at the 5000 level or above. A maximum of 3 s.h. may be taken at the 5000 level.

COMM: COMMUNICATION

6000. Communication Theory (3) P: Admission to MA in communication or consent of graduate program coordinator. Examination and analysis of principal communication theories, including interpersonal, intercultural, organizational, small group communication and media.

6030. Research Methods (3) P: Admission to MA in communication or consent of graduate program coordinator. Qualitative and quantitative methodologies used in the field of communication.

6031. Communication Pedagogy (3) P: Admission to MA in communication or consent of graduate program coordinator. Focuses on communication education, research, theory, and application.

6110. Media Effects (3) P: Admission to MA in communication or consent of graduate program coordinator. Survey of psychological and sociological effects that media has on attitudes, knowledge, values and behaviors.

6120. Interpersonal Communication (3) P: Admission to MA in communication or consent of graduate program coordinator. Impact of research and theory on academic and pragmatic issues in communication and relationships.

6124. Organizational Communication (3) P: Admission to MA in communication or consent of graduate program coordinator. History of organizational communication with emphasis on current research and practice.

6131. Social Influence (3) P: Admission to MA in communication or consent of graduate program coordinator. Examination and application of social influence communication theories, practices, effects and ethics.

6140. Special Topics in Communication (3) P: Admission to MA in communication or consent of graduate program coordinator. Examination of new or advanced topics in communication.

6141. Independent Study (3) P: Admission to MA in communication or consent of graduate program coordinator. May be repeated for a maximum of 6 s.h. Directed study of communication research and practice.

6210. Media and Health Communication (3) P: Admission to MA in communication or consent of graduate program coordinator. Theory and research of issues involving media and health.

6220. Interpersonal Health Communication (3) P: Admission to MA in communication or consent of graduate program coordinator. Theories and practices in various health care contexts, with emphasis on relationships among patients and health care providers.

6221. Intercultural Communication in Health Contexts (3) P: Admission to MA in communication or consent of graduate program coordinator. Intercultural communication theory and research as they apply to health contexts.

6224. Communication and Health Organizations (3) P: Admission to MA in communication or consent of graduate program coordinator. Analysis and practice of communication in health care settings.

6230. Introduction to Health Communication (3) P: Admission to MA in communication or consent of graduate program coordinator. Introduction to the area of health communication covering interpersonal, organizational and media issues.

6240. Special Topics in Health Communication (3) P: Admission to MA in communication or consent of graduate program coordinator. Examination of new or advanced topics in health communication.

7000. Thesis (I-6) P: Admission to MA in communication or consent of graduate program coordinator. May be repeated. May count a maximum of 6 s.h. toward the degree.

SCHOOL OF MUSIC

J. Christopher Buddo, Director, A-118, A.J. Fletcher Music Center

Christopher Ulfers, Associate Director, A-119B, A.J. Fletcher Music Center

Kerry Carlin, Chair, Keyboard Music, A-374, A.J. Fletcher Music Center

Michelle Hairston, Chair, Music Education, A-213, A.J. Fletcher Music Center

Thomas J. Huener, Chair, Theory, Composition, and Musicology, A-301, A.J. Fletcher Music Center

Robert Scott Carter, Chair, Instrumental Music, A-307, A.J. Fletcher Music Center

John Kramar, Interim Chair, Vocal Studies, A-268, A.J. Fletcher Music Center

The School of Music offers three master of music degrees: the MM in music education, the MM in performance, and the MM in theory-composition. The MM in music education has seven options, each focusing on an area of emphasis, six are approved for North Carolina teacher licensure. The MM in performance offers concentrations in accompanying; organ, piano, voice, strings, percussion, or wind instruments; sacred music; woodwind or brass specialist; choral conducting; jazz; instrumental conducting; and pedagogy (piano, string, or vocal). The MM in theory-composition offers concentrations in composition and theory.

ADMISSION

All applicants must meet the requirements established by the Graduate School and complete its admission process. Applicants must have the equivalent of a bachelor of music degree from an accredited institution and a minimum average grade of 3.0 in all previous course work. As part of the admission process, all applicants must demonstrate a basic knowledge of music

SECTION 8: CURRICULA

history and theory with an acceptable evaluation on an examination administered at the time of the audition or interview. Students with identified deficiencies may be required to remediate with appropriate courses (MUSC 6206, 6216).

All applicants for the MM in music education must submit a portfolio as detailed in the *School of Music Graduate Handbook* and *Graduate Music Education Handbook*. Applicants for the MM in music education with emphases in pedagogical studies, choral or instrumental conducting, performance, or theory/composition must submit a current music teaching license. Applicants for the MM in music education with emphasis in music therapy must submit a letter of intent which states the student's professional goals and background experiences relevant to music therapy. Applicants for all concentrations within the MM in performance must demonstrate an acceptable level of musical accomplishment through an audition. Applicants for the MM in theory/composition must submit examples of creative and scholarly work such as compositions, research, or analytical papers. The master of music degree shall be awarded only after candidates pass a comprehensive examination that includes the presentation and defense of a final project or thesis.

All candidates for master of music degrees in performance concentrations shall participate in conducted or coached ensembles as determined by individual degree area requirements. Additional information detailing specific requirements for the various degree programs can be found in the admission requirements section of the *School of Music Graduate Handbook*.

MAT IN MUSIC EDUCATION

Please refer to Section 8, College of Education, for the degree requirements for the master of arts in teaching, which leads to initial licensure.

MM IN MUSIC EDUCATION

The MM in music education includes emphases in pedagogical studies, music therapy, choral or instrumental conducting, Suzuki string pedagogy, performance, or theory-composition. All emphases, with the exception of music therapy, are approved for North Carolina teacher licensure. The MM in music education with emphasis in music therapy provides entry-level music therapy credentials and eligibility to sit for the national board certification examination.

Minimum degree requirement is **33-35 s.h.** as follows:

- 1. Music Education Core..... 16 s.h.
MUSC 6836, 6837, 6838* , 6839
Choose one: MUSC 6990 or 7000
*Students in music therapy emphasis will take MUSC 5267 and 5287 in lieu of MUSC 6838.
- 2. Teacher Education.....3 s.h.
EDUC 6001 (Students in music therapy emphasis need not take EDUC 6001)
- 3. Advanced Analysis.....3 s.h.
MUSC 6006 or 6016
(MUSC 6206 may be required without degree credit for remedial study in music theory)
- 4. Choose an area of emphasis:
Pedagogical Studies (33 s.h.)
Required: 2-3 s.h.
Choose one of the following: MUSC 5937, 5957, 5977
Other studies in music: 6 s.h.
Choose two of the following: MUSC 5516, 5257, 6403, 6507, 6508, 6509, or other theory and analysis, history, and literature courses as approved by the chair and academic advisor:
Applied Music: 2 s.h.
Choose from 6105, 6115, 6316, or other applied music courses as approved by the chair and academic advisor:
Choral Conducting (34 s.h.)
Required: 8 s.h.
MUSC 5706, 5716; MUSC 5906 or 5916
Ensembles: 2 s.h.
MUSC 6625, 6635 or 6665, or other ensembles as approved by the chair and academic advisor:

*Applied Music: 2 s.h. (1,1)**

Choose from applied music courses (voice or piano recommended).

*(1, 1) indicates the recommendation that an applied, private lesson is taken for 1 s.h. (1/2 hour lesson) for two consecutive semesters.

Instrumental Conducting (35 s.h.)

Required: 9 s.h.

MUSC 5706, 5716; MUSC 5926 or 6226

Ensembles: 2 s.h.

MUSC 6715, 6735, 6745, 6785, or other ensembles as approved by the chair and academic advisor.

*Applied Music: 2 s.h. (1,1)**

Choose from applied music courses primary instrument recommended).

*(1, 1) indicates the recommendation that an applied, private lesson is taken for 1 s.h. (1/2 hour lesson) for two consecutive semesters.

Music Therapy (33 s.h.)

Required: 9 s.h.

MUSC 5257, 5297, 5997, 6257, 6357

Applied Music: 2 s.h.

Choose from applied music courses.

Electives: 3 s.h.

Music education electives selected in consultation with music therapy advisor.

Music therapy advisor will review candidate's undergraduate training and provide academic advising to ensure that undergraduate music therapy equivalency and other behavioral science courses required for professional credentials have been completed. Prerequisite course work may be required.

Suzuki Violin Pedagogy (35 s.h.)

Required: 8 s.h.

MUSC 6645, 6646, 6647, 6648

Other studies in music: 3 s.h.

Choose from the following: MUSC 5516, 5257, 6403, 6507, 6508, 6509, or other theory and analysis, history, and literature courses as approved by the chair and the academic advisor.

*Applied Music: 2 s.h. (1,1)**

Choose from applied music courses (violin recommended).

*(1, 1) indicates the recommendation that an applied, private lesson is taken for 1 s.h. (1/2 hour lesson) for two consecutive semesters.

Performance (35 s.h.)

Required: 8 s.h.

Choose 8 s.h. of graduate applied music in any area, as approved by the chair and academic advisor.

Ensembles: 2 s.h.

MUSC 6625, 6635, 6665; 6715, 6735, 6745, 6775, 6785, or other ensembles as approved by the chair and academic advisor.

Other studies in music: 3 s.h.

MUSC 5257, 5516, 6403, 6507, 6508, 6509, or other theory and analysis, history, and literature courses as approved by the chair and academic advisor.

Music Theory/Composition (35 s.h.)

Required: 8 s.h.

MUSC 6326 or 6336 or 6366; MUSC 6327 or 6356; MUSC 6328 or 6536

Other studies in music: 3 s.h.

MUSC 5257, 5516, 6403, 6507, 6508, 6509, or other theory and analysis, history, and literature courses as approved by the chair and academic advisor.

Applied Music: 2 s.h.

Choose from 6316, or other applied music courses as approved by the chair and academic advisor.

MM IN PERFORMANCE

Minimum degree requirement is 30-36 s.h. as follows:

- 1. Core: MUSC 6006 or 6016; MUSC 6887; 8-9 s.h. applied music; 2 s.h. recital 16-17 s.h.
 - 2. Concentration area (Choose one.)..... 13-18 s.h.
- Minimum of 6 s.h. in theory and analysis, history and literature.

Accompanying (16 s.h. core; 14 s.h. concentration):

Applied music and recitals: MUSC 6457, 6467, 6557, 6567, 6993, 6994
Other studies in music: MUSC 6627, 6637, 6639; select others in consultation with advisor 10 s.h.
Electives.....4 s.h.

Choral conducting (16 s.h. core; 14 s.h. concentration):

An audition is required for admission. Candidates for this degree must participate in at least one large ensemble each semester of residence and conduct a public performance of a major choral composition as a final project.
Applied music and recital: MUSC 5706, 5716, 5906, 6995
Other studies in music: MUSC 5916, 6706, 6837; select others in consultation with advisor 12 s.h.
Electives.....2 s.h.

Instrumental conducting (17 s.h. core; 13 s.h. concentration):

An audition is required for admission. Audition repertoire will be chosen from the standard repertoire by the auditioning committee. Graduate students accepted into this degree program must demonstrate keyboard proficiency at an acceptable level. Opportunities for satisfying keyboard proficiency requirements exist through noncredit applied study. Candidates for this degree must participate in at least one large ensemble each semester in residence and conduct a public performance of a major composition as a final project.
Applied music and recitals: MUSC 5706, 5716, 6706, 6995
Other studies in music: MUSC 5926 or 6226; select others in consultation with advisor..... 10 s.h.
Electives.....3 s.h.

Jazz (16 s.h. core; 14 s.h. concentration):

An audition is required for admission. Candidates for this degree must perform a public recital while in residence at East Carolina University and complete at least one original composition per semester. Students must perform in at least one large and one small ensemble each semester while in residence.
Applied music and recitals: MUSC 6195, 6196, 6296, 6336, 6995
Other studies in music: MUSC 6095, 6096, 6295, 6395, 6396..... 10 s.h.
Electives.....4 s.h.

Organ, piano, voice, strings, percussion, or any wind instrument (16 s.h. core; 14 s.h. concentration):

A graduate student accepted into the voice performance master of music degree program must show evidence of proficiency in French, German, and Italian diction equivalent to MUSC 1627, 1637, and 1647. This may be done by examination. In the event that the student is not able to demonstrate proficiency, MUSC 1627, 1637, and 1647 will be required as remedial course work without credit.
Applied music and recitals: MUSC 6__1, 6__2, 6__3, or 6__4; 6995
Other studies in music: MUSC 6657 (woodwind, brass, percussion) or 6667 (strings) (Piano only: MUSC 6757; Voice only: MUSC 6617; Organ only: MUSC 5657); select others in consultation with advisor 11 s.h.
Electives.....3 s.h.

Pedagogy (Choose piano, string, or vocal.) (16-17 s.h. core; 13-20 s.h. concentration):

Piano (15 s.h.):
Candidates for the master of music in piano pedagogy must fulfill one of the following recital options while in residence at East Carolina University: full solo recital or lecture recital. The performance of recital works and the lecture portion of the lecture recital must be approved by departmental audition. The nature of the lecture recital must be approved by the graduate committee.
Applied music and recitals: MUSC 6012 or 6013; 6727, 6995
Other studies in music: MUSC 6707, 6717, 6757; accompanying and/or chamber music 12 s.h.
Electives 3 s.h.

String (Suzuki) (20 s.h.):

Candidates for this degree must perform a full solo recital while in residence at East Carolina University. The recital must include advanced repertoire from the Suzuki Violin School and supplementary literature. Also, candidates must exhibit a thorough understanding of the Suzuki approach and its materials through demonstration teaching. A student may qualify for registration with the Suzuki Association of the Americas after completing the degree requirements.

Applied music and recitals: MUSC 6__2 or 6__3; 6646, 6648; 6995

Other studies in music: MUSC 6645, 6647, 6649, 6650, 6655, 6656; 6745, 6805
(both may be repeated).....17 s.h.

Electives 3 s.h.

Vocal (17 s.h.):

Candidates for this degree must perform a full recital while in residence.

Applied music and recitals: MUSC 6062 (for 6 s.h.); 6618, 6619, 6995

Other studies in music: MUSC 5616, 6617, select others in consultation with advisor 10 s.h.

Electives 3 s.h.

Sacred Music (Choose organ or choral conducting.)

(16-17 s.h. core; 17-18 s.h. concentration):

Prior to enrollment, all graduate students accepted into the sacred music program must take aural and keyboard skills proficiency examinations to determine whether remedial work is necessary. Students may be directed to review aural and/or keyboard skills in undergraduate courses for no credit. All proficiency requirements should be completed by the end of the second semester of degree work.

Organ (16 s.h. core; 18 s.h. concentration):

Applied music and recitals: MUSC 6022 (8 s.h. total), 6995

Other studies in music: MUSC 5706, 6517, 6525, 6526, 6527, 6537, 6988, 6989.....16 s.h.

Electives 2 s.h.

Choral Conducting (17 s.h. core; 17 s.h. concentration):

Applied music and recitals: MUSC 5706, 5716, 6706, 6995

Other studies in music: MUSC 5906, 5916, 6061, 6525, 6526, 6527, 6988, 6989.....14 s.h.

Electives 3 s.h.

Woodwind or brass specialist (16 s.h. core; 14 s.h. concentration):

Applicants must demonstrate graduate-level potential in the major performance medium and proficiency on two other woodwind instruments, equivalent to a first-semester junior music major working toward the BM.

Applied music and recitals: MUSC 6__1, 6__2, 6__3, or 6__4; 6995

Other studies in music:.....12 s.h.

Additional applied study in other instruments in student's instrumental family 8 s.h.

MUSC 6657; ensemble participation on one or more minor instruments..... 4 s.h.

Electives..... 2 s.h.

MM IN THEORY-COMPOSITION

Candidates for the master of music in composition must submit an original composition-thesis of substantial proportions and present a full concert recital of pieces composed while in residence at East Carolina University. Candidates for the theory option must submit a thesis.

Minimum degree requirement is 32-33 s.h. as follows:

1. Core.....18 s.h.

MUSC 6006, 6016, 6327, 6328, 6887, 7000

2. Concentration area (Choose one.).....14 s.h.

Composition:

Other studies in music: MUSC 6136, 6326 or 6336 (may be repeated for credit), 6366 (may be repeated for credit); select repetitions in consultation with advisor..... 13 s.h.

Electives.....2 s.h.

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Theory:

Other studies in music: MUSC 6326 or 6336, 6356, 6536; select others in consultation with advisor...10 s.h.
Electives.....4 s.h.

Secondary Areas of Emphasis:

Music Theory: Any MM Student may elect a secondary area of emphasis in Music Theory by completing a minimum of 8 s.h. from the following: MUSC 6327, 6328, 6356, 6536.

Performance Practice: Any MM Student may elect a secondary area of emphasis in Performance Practice by completing a minimum of 6 s.h. from the following: MUSC 5887, 5897, 6855, 6898.

CERTIFICATE IN ADVANCED PERFORMANCE STUDIES (CAPS)

The certificate of advanced performance studies is a highly focused one-year program that provides concentrated training and performance experiences for post-baccalaureate students who demonstrate superior performance ability. It is considered a preparatory program for graduate school or a performing career and can be obtained in the following areas of emphasis: cello, clarinet, double bass, flute, guitar, horn, jazz studies, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, and voice.

The program requires 16 s.h. of applied music studies and advanced coursework in music history, music theory, pedagogy and/or music technology. Ensemble participation and at least one full solo recital are required. An average of 3.0 is mandatory for all coursework.

Minimum certificate requirement is 16 s.h. as follows: MUSC 6995 (organ majors must repeat, others may repeat in lieu of ensemble requirement), 6 s.h. of applied music in principal area, 2 s.h. of graduate ensembles (may be replaced with a second recital), 6 s.h. of advanced coursework in music history, music theory, pedagogy, and/or music technology (must include courses from two of the four areas). All courses must be approved by the program advisor.

CERTIFICATE IN SUZUKI PEDAGOGY

The educational objective of the graduate certificate in Suzuki pedagogy is to prepare students as teachers proficient in the Suzuki pedagogical method. Students who complete the course of study may have course completion registered with the Suzuki Association of the Americas. Admission is according to standards established by the National Association of Schools of Music and requires a bachelor of music degree or its equivalent.

The program requires 18 s.h. of pedagogy course work with a minimum grade of B, a written pedagogical project, a full solo recital, and a final oral exam. The recital must include advanced repertoire from the Suzuki Violin School and supplementary literature. Certificate candidates must exhibit a thorough understanding of the Suzuki approach to pedagogy and its materials through demonstration teaching and the written project.

Minimum certificate requirement is 18 s.h. as follows: MUSC 6645, 6646, 6647, 6648, 6649, 6650, 6655, 6656, 6995.

MUSC: ACCOMPANYING

6457, 6467. Advanced Vocal Accompanying (2,2) May be repeated for credit. Extensive study of techniques correlated with practical experience of performing with vocal majors. Accompanying of vocal music major in half recital in one of two semesters.

6557, 6567. Advanced Instrumental Accompanying/Chamber Music (2,2) May be repeated for credit. Extensive study of techniques correlated with practical experience of performing with instrumental majors. Accompanying of instrumental music major in half recital in one semester.

6993. Graduate Recital (I) May be repeated for credit. P: Acceptance in MM degree in accompanying; prior approval by appropriate faculty necessary before recital may be scheduled. Public performance of instrumental musical compositions appropriate to MM degree in accompanying.

6994. Graduate Recital (I) May be repeated for credit. P: Acceptance in MM degree in accompanying; prior approval by appropriate faculty necessary before recital may be scheduled. Public performance of vocal musical compositions appropriate to MM degree in accompanying.

MUSC: APPLIED MUSIC

5_ _1, 5_ _2. Graduate Applied Music (1,2) May be repeated for credit. P: Graduate status in music; consent of instructor. Applied music study with appropriate instrument or voice. One thirty-minute lesson weekly (1 s.h.) or one one-hour lesson weekly (2 s.h.).

6_ _1, 6_ _2, 6_ _3, 6_ _4. Graduate Applied Music (1,2,3,4) May be repeated for credit. P: Graduate status in music; consent of instructor. Applied music study with appropriate instrument or voice. One thirty-minute lesson weekly (1 s.h.) or one one-hour lesson weekly (2-4 s.h.).

Instruction is available for the following instruments:

01-Piano	08-Viola	14-Bassoon	19-Trombone
02-Organ	09-Cello	15-Clarinet	20-Euphonium
03-Harpsichord	10-String Bass	16-Saxophone (alto or tenor)	21-Tuba
05-Guitar	11-Flute	17-Trumpet	22-Percussion
06-Voice	13-Oboe	18-Horn	23-Jazz
07-Violin			

6105, 6115. Guitar Class (1,1) May be repeated for credit. May count toward graduate minor applied music requirement. P: Graduate status in music; consent of instructor. Fundamentals of beginning (6105) and intermediate (6115) guitar performance, including use of guitar as an accompanying instrument.

6231, 6232, 6233, 6234. Graduate Jazz (1,2,3,4) May be repeated for credit. P: Graduate school admission as non-degree or degree student. Technique and repertoire appropriate to jazz performance medium.

6995. Graduate Recital (2) May be repeated for credit. P: Acceptance into a degree or certificate program that requires a recital for graduation; prior approval by the requisite applied music faculty committee is necessary before the recital may be scheduled. Public performance of musical compositions appropriate to the student's specific degree or certificate program.

MUSC: CONDUCTING

5706, 5716. Advanced Applied Conducting (3,3) May be repeated for credit. Applied instrumental or choral conducting techniques. Score reading and analytical studies to develop knowledgeable interpretation of compositions for performance.

6706. Advanced Conducting (3) May be repeated for credit. Prepare musical compositions for performance. Develop advanced skills in conducting technique, score reading, and musical analysis.

MUSC: GENERAL

6228. Arts Marketing (3) Key concepts, background, public relations strategies, and arts-specific marketing solutions for teachers, sacred musicians, and community-sponsored arts program directors to promote music, theatre, and art programs effectively.

MUSC: JAZZ

6095. Jazz Harmony (2) P: Consent of instructor. Principles of twentieth-century jazz keyboard harmony, form, and structure from ragtime to present.

6096. Advanced Jazz Harmony (2) P: Consent of instructor. Advanced principles of twentieth-century jazz keyboard harmony, form, and structure.

6097. Jazz Rhythm Concepts (3) May be repeated for credit. P: Audition or consent of instructor. Performance practices and concepts used in performance and rehearsal settings by the traditional, contemporary, and augmented rhythm section.

6195. Jazz Improvisation (2) May be repeated for credit. P: Consent of instructor. Techniques.

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6196. Advanced Jazz Improvisation (2) May be repeated for credit. P: Consent of instructor. Advanced techniques.

6295. Jazz Theory (2) P: Consent of instructor. Jazz music theory and analysis of various styles performed in twentieth century.

6296. Jazz Arranging (2) May be repeated for credit. P: Consent of instructor. Jazz arranging for various combinations of performance ensembles.

6395. Jazz Recording Technique (2) P: Consent of instructor. Studio and recording technique for the jazz musician. Emphasis on performance practice for quality studio recording.

6396. Jazz History (2) P: Consent of instructor. Emphasis on major artists and styles of twentieth century.

MUSC: MUSIC EDUCATION

5937. Teaching Music in the Elementary School (3) May not count toward general education fine arts requirement. Materials, techniques, and all phases of elementary school music program.

5947. Choral Problems and Techniques (2) Seminar in problems pertaining to rehearsal and performance of choral music.

5957. Instrumental Problems and Techniques (3) Seminar in problems pertaining to elementary, middle school, and secondary school instrumental music programs.

5977. General Music in the Secondary Schools (3) May not count toward general education fine arts requirement. Contemporary concepts in teaching at middle, junior, and senior high school levels. Examination of literature and materials.

6048. Music for Children with Exceptionalities (2) Materials, procedures, methods, and activities applicable to teaching music for children with exceptionalities.

6217. Foundations of Instruction for Instrumental Music (2) Criteria for selection and use of music and materials in elementary school. Role of beginning instrumental music in schools and its relationship to entire school program.

6237. Foundations of Instruction for Vocal and General Music Education (2) Planning and evaluation of instruction for general music classroom. Elements of music and their related components. Voice classification, vocal technique, and role of choral program in elementary school.

6287. Laboratory Choral Experience in Music Education (2) Application of conducting skills and refinement of music teaching and rehearsal skills. Teaching approaches and choral rehearsal techniques for middle- and high-school singers.

6323. Materials and Methods in Music Education (2) Relevant issues in music education. Develop individual philosophy of music and musical instruction and specific techniques for teaching instrumental music in primary and secondary schools.

6333. Materials and Methods for Choral and Vocal Music Education (2) Organization, administration, motivation, discipline, and innovative methodology for choral and vocal teaching in primary and secondary schools.

6405. Laboratory Instrumental Experience in Music Education (2) Application of conducting skills and refinement of music teaching and rehearsal skills. Teaching approaches and instrumental rehearsal techniques for middle- and high-school students.

6836. Foundations, Leadership, and Communication in Music Education (3) Adaptations and implications for current practices to historical, philosophical, psychological, sociological, and theoretical foundations of music education and how these factors influence music teaching, leadership, communication, and learning.

6837. History and Philosophy of Music Education (3) Detailed survey from antiquity to present which lead to advancement of personal philosophy of music education.

6838. Research for Practitioners in Music Education (4) Recent developments in music education. Emphasis on research strategies for conducting field-based research.

6839. Methods, Materials, and Pedagogy in Music Education (3) Instructional techniques, methods, materials, pedagogy, and diversity in music education through critical analysis and review of contemporary methods.

6897. Seminar: Music in Higher Education (2) Historical development of music offerings at college level. Comparison of curriculum patterns in major divisions of collegiate music offerings. Relationship of music curricula to general education and professional subject areas.

6927. Seminar: Problems in Music Education (2) Research into specific problems in some phase of music education.

6937. Seminar: Problems in Music Education (2) Research into new problem in music education or continuation of problem first begun in MUSC 6927 that merits additional time and research.

6977. Curriculum Issues and Trends in Music Education (3) May be repeated for maximum of 6 s.h. Contemporary philosophies and objectives of music education in public education. Scope and sequence of K-12 music curriculum. Trends and developments of evaluative criteria.

6990. Final Project in Music Education (3) Written research project with oral presentation.

MUSC: MUSIC HISTORY AND LITERATURE

5456. Introduction to Ethnomusicology (2) P: MUSC or ANTH major with consent of instructor. Theories, methods, techniques, and fundamental concepts used in study of non-Western and primitive music.

5466. Folk and Indigenous Music of Europe and the Americas (2) P: Area minors and ANTH majors with consent of instructor; undergraduate MUSC course. Ethnic music of the West surveyed with particular attention to society, culture, and tradition.

5476. African Music (2) P: Open to area minors and ANTH majors with consent of instructor. Sub-Saharan African music surveyed in context of African society and culture.

5506. Early Music in the West: to 1600 (3) P: MUSC 1406, 2406, 2416; or equivalent. Genres, sources, theoretical literature, and cultural contexts of western art music from Late Antiquity through end of Renaissance. Proseminar format.

5516. Ibero-American Musics of the Twentieth Century (3) P: MUSC 2166 or consent of instructor. Comprehensive overview from ethnomusicological perspective. Vernacular musics of Spanish- and Portuguese-speaking cultures and their influence on art-music composers of twentieth century.

5616. Historical Development of Solo Vocal Literature (3) (WI) P: Senior/graduate standing; undergraduate survey of music history. History with concentration on literature of major composers.

5667, 5677. Organ History, Literature, and Design (2,2) Same as MUSC 5667, 5677 (Sacred Music) P: MUSC 2416 or consent of instructor. Recommended to be taken in sequence. Historical survey of organ literature from earliest manuscripts through music of J. S. Bach in first term. From J. S. Bach to present in second term. Basic principles of organ construction and style. Emphasis on relationship between organ and its repertoire throughout centuries.

5737. Piano Literature and Advanced Pedagogy (3) Recommended that MUSC 5737, 5747 be taken in sequence. Literature for piano in relation to contemporary pedagogical use. Intermediate through advanced-level literature from Renaissance through Beethoven and Schubert.

5747. Piano Literature and Advanced Pedagogy (3) Recommended that MUSC 5737, 5747 be taken in sequence. Literature for piano in relation to contemporary pedagogical use. Intermediate through advanced-level literature from Chopin and Schumann to present.

5757. Lute and Guitar Literature (3) Comprehensive survey of solo literature for lute and guitar from Renaissance to twentieth century.

5887, 5897. Survey of Performance Practice (2,2) P: MUSC 2416 or consent of instructor. Original and secondary sources on performance practices from Renaissance to present. Development of instruments and comparison of notated music with actual performance practices.

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5906, 5916. Choral Literature (2,2) Historical and stylistic survey and critical evaluation of choral literature for use with school, community, and sacred choirs.

5926. Wind Instrument Literature (3) Chamber music, band, wind, and percussion literature for all phases of instrumental instruction.

6106. Music of the Baroque Era (3) Formerly MUSC 5406 Detailed consideration of analytical and historiographic issues in a variety of representative musical genres from ca. 1600-1750.

6116. Music of the Classic Era and Enlightenment (3) Formerly MUSC 5416 Detailed consideration of analytical and historiographic issues in a variety of representative musical genres from 1720 to 1820, including works of precursors and acknowledged proponents of Classic style (Haydn, Mozart, Beethoven). Exploration of the relationship of this music to Enlightenment figures such as Rousseau and Goethe.

6126. Music of the Romantic Era (3) Formerly MUSC 5426 Detailed consideration of analytical and historiographic issues in a variety of representative musical genres of the 19th century, including developments in symphonic forms, instrumental and vocal chamber music, and opera, from Schubert to Debussy.

6136. Music of the Modern and Postmodern Eras (3) Formerly MUSC 5436 Detailed consideration of central analytical, historiographic, and philosophical issues in music of the 20th and 21st centuries, focusing primarily on post-tonal developments in traditional genres as well as crossovers with vernacular, non-western, and popular influences.

6216. Introduction to Graduate Study in Music History (3) May not count toward degree. Emphasis on chronological development of musical styles and resources from Gregorian Chant to present.

6226. Orchestral Literature (3) Major orchestral compositions. Score analysis and performance practice research. Development of skills for interpretative decisions by conductor.

6436. Symphonic Music (2) Growth and development of orchestra from Baroque to present. Emphasis on development of symphony, symphonic poem, and other forms of orchestra composition.

6466. Special Problems in Music History (3) May be repeated for maximum of 6 s.h. Proseminar with topics and projects selected according to needs and interests of class.

6496. History of Lyric Theatre (3) History of lyric theatre from late sixteenth century to present. Emphasis on examples from outstanding operas of various periods in music history.

6596. Historical Development of Vocal Literature (3) Music history with concentration on vocal literature of major composers.

6658. Musical Aesthetics and Criticism (3) Examination of the nature and value of music through the discipline of aesthetics, as exemplified by such figures as Aristotle, Kant and Adorno, through various modes of music criticism.

6757. Seminar: Keyboard Literature (3) History and development of keyboard music. Emphasis on styles and forms in eighteenth, nineteenth, and twentieth centuries.

6898. Selected Topics in Performance Practice (2) P: MUSC 5887 or 5897 or consent of chair. Advanced study of performance practice issues in music from the Middle Ages to the present.

MUSC: MUSIC RESEARCH

6254, 6255, 6256. Music Therapy Research (1,2,3) P: Consent of instructor. May be repeated for credit. Basic research methodology in music therapy studied through completion of research projects. Emphasis on applying principles and methods of evaluative research by critical examination of appropriate research studies.

6507, 6508, 6509. Topics and Issues in Music (1,2,3) May be taken for 1, 2, or 3 credit hours. May be repeated for credit. Class meetings may or may not be required. Hours and specific course requirements must be arranged prior to enrollment. P: Consent of appropriate instructor and director of graduate studies in music. Research into relevant problems and issues. For each course, student must develop a proposal(s) for independent investigation with support and advice of appropriate professor.

6600. Music in Contemporary Society (3) Sociological, philosophical, and educational assumptions that underlie changing functions of music in contemporary society.

6887. Introduction to Research in Music (3) Preparation for scholarship in music through development of research and writing skills.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

MUSC: MUSIC TECHNOLOGY

6300. Selected Topics in Music Technology (2) May be repeated for credit. Topics in acoustics, electronic instruments, computer synthesis, computer composition, digital sampling, and editing. Practical experience with audio media and computer music programs.

6346. Music Notation, Layout, and Printing with Software (2) P: Graduate status in School of Music or consent of professor. Computer technology and software for music notation, layout, and printing.

6400. Seminar in Multimedia Software Development (2) May be repeated for credit. Existing multimedia software and its development.

6403. Music Multimedia for the Internet (3) May be repeated for credit. Offered only via the Internet. Create and implement multimedia project for publication on Internet using Hypertext Markup Language, sound, Musical Instrument Digital Interface, Java Script, and graphics.

MUSC: MUSIC THERAPY

5257, 5267. Psychological Foundations of Music (3,3) Nature and extent of scientific investigations into acoustics of music, human responses to music, learning theory, and basic research in music.

5287. Psychological Foundations of Music Practicum (1) Lab provides opportunity to develop and carry out research in clinical setting.

5297. Music Therapy Practicum III (1) Supervised practicum for music therapy majors. Applies music therapy procedures and techniques with individual clients.

5997. Clinical Internship (1) Supervised internship. P: Music therapy major; completion of academic requirements for degree. Placement in approved music therapy clinical training program with registered music therapist as director.

6257. Seminar in Music Therapy I (3) May be repeated for credit. P: Undergraduate music therapy degree; internship; or consent of instructor. Models of music therapy practice in traditional and innovative treatment settings. Current models examined with reference to theory and philosophy, research, assessment procedures, intervention strategies, and approaches to evaluation and documentation.

6267. Seminar in Music Therapy II (3) May be repeated for credit. P: Undergraduate music therapy degree; internship; or consent of instructor. Issues affecting the education and clinical training, supervision, certification, and career opportunities of music therapists. Regulatory, fiscal, legal, ethical, administrative, curricular, and accreditation issues will be addressed.

6357. Advanced Clinical Practicum I (1) May be repeated for credit. P: Undergraduate music therapy degree; internship; or consent of instructor. Supervised practicum which provides the opportunity to plan and implement advanced music therapy procedures in a clinical setting.

6367. Advanced Clinical Practicum II (2) May be repeated for credit. P: Undergraduate music therapy degree; internship; or consent of instructor. Supervised practicum which provides the opportunity to apply advanced music therapy procedures and to develop and evaluate an innovative music therapy program in a clinical setting.

6677. Music in Therapy (3) Influence of music on human behavior; the scientific bases for music as therapy; and current music therapy techniques as practiced in health care, education, and community settings.

SECTION 8: CURRICULA

6998. Music Therapy Internship (1) May be repeated for credit. Clinical intern experience in professional setting under supervision of qualified music therapist.

MUSC: PEDAGOGY

5647. Orchestral and String Pedagogy (3) P: MUSC 3697 or consent of instructor. Methodology and materials for studio teaching. Orchestral organization, rehearsal, and repertoire, and their practical application. Minor repair.

5657. Organ Pedagogy (2) P: Completion of 4 semesters of applied organ. Technical, artistic, and philosophical aspects of teaching organ at all levels of development. Survey of organ methods, appropriate graded repertoire in wide range of styles, and practice teaching.

5707. Seminar: Topics and Problems of Piano Pedagogy (2) C: MUSC 5727. Emphasis on teaching intermediate-level pre-college student, including psychology of adolescent student, piano technique, keyboard skills, and working with transfer students.

5717. Advanced Piano Performance Problems (2) C: MUSC 5727. Preschool music, adult beginner, teaching in group settings, and nonmajor and secondary college piano.

5727. Piano Pedagogy: Observation and Student Teaching (2) 4 hours per week. May be repeated for credit. C: MUSC 5707 fall semester; MUSC 5717 spring semester. Supervised teaching and observation in piano pedagogy program and/or through internship in independent piano teaching studio.

5967. Choral Practicum (2) Same as MUSC 5967 (Sacred Music) P: MUSC 5706, 5716; or consent of instructor. Student derives solutions to specific problems encountered in preparing chorus for performance.

6356. Pedagogy of Theory (2) Methods of presenting the materials of current freshman and sophomore theory classes. Emphasis on texts used in various colleges. Students will work with selected students in the presentation of materials.

6617. Vocal Pedagogy (3) History of vocal pedagogy from seventeenth through twentieth century. Current research and findings about anatomy, physiology, and function of singing voice.

6618. Studio Vocal Techniques (2) May be repeated for credit. P: MUSC 6617 or consent of instructor. Physical, acoustical, and psychological factors involved in teaching of singing.

6619. Studio Vocal Internship (1) May be repeated for credit. P: Admission to vocal pedagogy degree program or consent of instructor; C: MUSC 6617. Internship in studio vocal teaching.

6620. Teaching Specific Voice Types (3) P: MUSC 6617, 6618, 6619. Vocal anomalies and their ramifications for applied voice teacher when teaching specific voice types, i.e., tenor or soprano.

6621. Vocal Pedagogy I (3) Physiology of the singing voice, physiological phonation, and concepts of vocal pedagogy.

6627. Italian Lyric Diction (2) Pronunciation and enunciation of Italian based on principles of Middle (Tuscan) Italian for the lyric and theatrical stage. Transliteration using International Phonetic Alphabet.

6637. French Lyric Diction (2) Pronunciation and enunciation of French based on principles of the Academie Francaise for lyric and theatrical stage. Transliteration using International Phonetic Alphabet.

6639. German Lyric Diction (2) Pronunciation and enunciation of German based on principles of hochdeutsch for lyric and theatrical stage. Transliteration using International Phonetic Alphabet.

6645, 6647. Suzuki Pedagogy I, II (3,3) P for 6647: MUSC 6645, 6646; C for 6645: MUSC 6646; C for 6647: MUSC 6648. Philosophy and principles of Suzuki approach to teaching and playing violin. Material presented in volumes 1 and 2 (for 6645) and 3 and 4 (for 6647) of Suzuki Violin School.

6646, 6648. Suzuki Observation I, II (1,1) 2-semester sequence. P for 6648: MUSC 6645, 6646; C for 6646: MUSC 6645; C for 6648: MUSC 6647. Field observation of Suzuki approach to teaching and playing violin.

6649, 6650. Suzuki Observation III, IV (I,I) 2-semester sequence. P for 6649: MUSC 6646, 6648; C for 6649: MUSC 6655; P for 6650: MUSC 6649; C for 6650: MUSC 6656. Field observation of the Suzuki approach to teaching and playing the violin.

6655. Suzuki Pedagogy III (3) P: MUSC 6646, 6648. Philosophy and principles of Suzuki approach to teaching and playing violin as presented in volumes 5 -7 of the Suzuki Violin School. Supervised teaching of material from the Suzuki repertoire.

6656. Suzuki Pedagogy IV (3) P: MUSC 6655. Philosophy and principles of Suzuki approach to teaching and playing string instruments from material presented in volumes 8-10 of the Suzuki Violin School. Supervised teaching of material from Suzuki repertoire.

6657, 6667. Directed Study in Instrumental Pedagogy for Woodwinds, Brass, Percussion, or Strings (2,2) May be repeated for credit. Professional methodology, concepts, and materials for teaching of applied music at all levels in student's individual area of specialization.

6707. Seminar: Elementary Piano Pedagogy Literature (3) Repertoire selection, practice, and presentation techniques; curriculum design and methodology; group musicianship skills; and studio teaching approaches.

6717. Seminar: Intermediate Piano Pedagogy Literature (3) Repertoire selection, practice, and presentation techniques; curriculum design; historical foundations of piano instruction; and development of pianist technique and interpretative performance.

6727. Piano Pedagogy Practicum (2) May be repeated for credit. Supervised teaching and observation of methods of group and private studio piano lessons.

MUSC: PERFORMANCE GROUPS, LARGE

6620. Teaching Specific Voice Types (3) P: MUSC 6617, 6618, 6619. Vocal anomalies and their ramifications of the applied voice teacher when teaching specific voice types, i.e., tenor or soprano.

6625. Concert Choir (I) Open to all graduate students. May be repeated for credit. Study and performance of musical compositions for choral ensemble.

6635. University Chorale (I) Open to all graduate students. May be repeated for credit. Study and performance of musical compositions for large mixed voice choral ensemble.

6665. Chamber Singers (I) Open to all graduate students by audition. May be repeated for credit. Study and performance of repertoire for small mixed voice vocal ensemble.

6705. Marching Band (2) Open to all graduate students. May be repeated for credit. Prepare and perform selected marching band repertoire.

6715. Concert Band (I) Open to all graduate students by audition. May be repeated for credit. Prepare and perform selected concert band repertoire.

6735. Wind Ensemble (I) Open to all graduate students by audition. May be repeated for credit. Prepare and perform wind ensemble repertoire.

6745. Symphony Orchestra (I) Open to all graduate students by audition. May be repeated for credit. Prepare and perform orchestral repertoire.

6775. Jazz Ensemble (I) Open to all graduate students by audition. May be repeated for credit. Prepare and perform jazz repertoire.

6785. Symphonic Band (I) Open to all graduate students by audition. May be repeated for credit. Prepare and perform selected symphonic band repertoire.

6925. Men's Glee Club (I) Open to all male graduate students by audition. May be repeated for credit. Prepare and perform selected repertoire for men's chorus.

SECTION 8: CURRICULA

6935. Women's Glee Club (I) Open to all women graduate students by audition. May be repeated for credit. Prepare and perform selected repertoire for all women's chorus.

MUSC: PERFORMANCE GROUPS, SMALL

6605. Opera Theatre (I) Membership by audition only. May be repeated for credit.

6805. String Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6815. Woodwind Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6825. Percussion Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6835. Saxophone Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6845. Early Music Ensemble (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6846. World Music Ensemble (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6855. Jazz Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6865. Brass Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6875. Keyboard Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6885. Contemporary Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

6895. Vocal Chamber Music (I) Membership by audition only. 2 rehearsals per week. May be repeated for credit.

MUSC: SACRED MUSIC

5667, 5677. Organ History, Literature, and Design (2,2) Same as MUSC 5667, 5677 (Music History and Literature) Recommended to be taken in sequence. Historical survey of organ literature from earliest manuscripts through music of J. S. Bach in first term. From J. S. Bach to present in second term. Basic principles of organ construction and style. Emphasis on relationship between organ and its repertoire throughout centuries.

5967. Choral Practicum (3) Same as MUSC 5967 (Pedagogy) P: MUSC 5706, 5716; or consent of instructor. Student derives solutions to specific problems encountered in preparing chorus for performance.

6476. Introduction to Service Playing (I) Offered only during spring. I lecture and I studio hour per week. P: I semester of applied organ or consent of instructor. Basic techniques and materials of service playing. Includes hymn playing, registration, and accompanying.

6517, 6537. Advanced Service Playing I, II (2,2) Formerly MUSC 5517, 5527 Must be taken in sequence. Advanced techniques and repertoire related to service playing. Includes creative hymn playing, composition for service, improvisation, accompanying, and console conducting.

6525. History of Sacred Music and Worship (3) Liturgical ritual and worship practices. Special emphasis on music and hymnody related to these practices from pre-Christian roots to modern day.

6526, 6527. Philosophy and Practice of Sacred Music I, II (2,2) Must be taken in sequence. Explores philosophical and theological dimensions of music in worship; administration of a sacred music program; direction of handbell choirs; composition and arranging for services; choral techniques and repertoire for children's and youth choirs; and multi-cultural and non-traditional contemporary trends in sacred music.

6577. Directed Study in Sacred Music (2) May be repeated for credit. Research and directed study in selected areas of sacred music.

6988, 6989. Sacred Music Internship (1,1) Recommended to be taken in sequence. C for 6988: MUSC 6597. 2-semester internship for skill development under direct supervision of site supervisor and university advisor.

MUSC: THEORY COMPOSITION

5336. Advanced Orchestration (2) Scoring for orchestra and symphonic band. Techniques from Classic period through contemporary idioms.

5346. Modern Instrumental Arranging (2) P: MUSC 3176 or consent of instructor. Develop arranging skills and techniques as applied to instrumental music (e.g., stage band, marching band, symphonic band, and orchestra).

5366. Special Studies in Music Theory (3) May be repeated for credit with consent of chair; P: MUSC 2166 or graduate standing in MUSC or consent of instructor. Subject matter determined by needs and interests.

6006, 6016. Music Structure and Style (3,3) Selected historical and contemporary musical works using variety of analytical approaches.

6206. Introduction to Graduate Study in Music Theory (2) May not count toward degree. Forms and compositional techniques of music. Emphasis on Baroque, Classic, and Romantic periods.

6316. Score Analysis (2) Analysis of choral and instrumental scores. Harmony, rhythm, dynamics, style, form, and interpretation.

6326, 6336. Composition (2) May be repeated for credit. Composing in major forms.

6327. Counterpoint (3) Formerly MUSC 5316 Counterpoint from sixteenth to twentieth century. Emphasis on eighteenth century genres through listening, analysis, and written assignments.

6328. The Language of Post-tonal Music (3) Formerly MUSC 5326 Materials and techniques used by composers since beginning of twentieth century. Stylistic writing and analysis of works by selected composers of the century.

6366. Special Problems in Electronic Music (2) I seminar and I private conference per week. May be repeated for maximum of 6 s.h. P: Consent of instructor. Electronic music composition. Practical experience in studio technique, electronic music synthesis, and real-time performance according to individual level and interest.

6506. Directed Study in Theory (2) May be repeated for credit. Research and directed study in selected areas.

6536. Introduction to Schenkerian Analysis (3) P: MUSC 2166 or consent of instructor. Tonal music using graphic analytical techniques of Heinrich Schenker. Includes contemporary extensions of Schenker approach.

SCHOOL OF THEATRE AND DANCE

John Shearin, Director, 105 Messick Theatre

THEA: THEATRE ARTS

5000. Dramatic Arts Workshop (3) Presentation and evaluation of workshop projects in various aspects of theatre arts.

COLLEGE OF HEALTH AND HUMAN PERFORMANCE

Glen G. Gilbert, Dean, 60 Minges Coliseum

James Decker, Associate Dean, 79 Minges Coliseum

Susan McGhee, Associate Dean, 72 Minges Coliseum

The College of Health and Human Performance offers graduate degree programs in each of its three departments: health education and promotion, kinesiology, and recreation and leisure studies. Admission to these programs requires that the applicant meet the admissions requirements of the Graduate School, including a satisfactory score on either the Graduate Record Examinations or the Miller Analogies Test. Admission requirements vary slightly among the programs in health and human performance. Applicants should inquire regarding these requirements for specific degree programs/options. Each prospective student should consult with the director of the degree program to which they seek admission.

DEPARTMENT OF KINESIOLOGY

Stacey R. Altman, Chair, 176 Minges Coliseum

PHD IN BIOENERGETICS AND EXERCISE SCIENCE

The doctoral degree in bioenergetics and exercise science is an interdisciplinary degree program housed in the Department of Kinesiology and offered in conjunction with the Departments of Biochemistry and Physiology in the Brody School of Medicine at East Carolina University. This program uses a unique interdisciplinary approach to address the role of energy transportation under varying metabolic and pathological states. Students address research questions that range from the whole body to the gene level as they investigate the mechanisms by which physically active lifestyles influence disease processes, prevention, and treatment. Graduates are prepared for employment in health care, government, and academic and private institutions. The curriculum comprises **69 s.h.** as follows:

Required Courses: EXSS 7004, 7211, 7335 (4 s.h.), 8310, 8330 (6 s.h.), 8333 (6 s.h.); PHLY 7702

Select a 3 or 4 s.h. molecular biology course, and 6 s.h. of approved electives

Minimum of 27 s.h. in dissertation hours: EXSS 9000

Select a 3 s.h. advanced statistics course

Up to 12 s.h. may be waived if equivalent coursework of sufficient depth has been successfully completed. Petitions to waive s.h. must be approved by the EXSS Director of Graduate Studies, and the Graduate School.

MS IN EXERCISE AND SPORT SCIENCE

The master of science degree in exercise and sport science prepares students for careers or advanced academic training in the broad realm of exercise and sport science. Students whose undergraduate preparation lacks essential prerequisite course work or whose baccalaureate degree is in a non-related field may have additional requirements. All degree candidates must pass the exercise and sport science comprehensive examination. Students may choose from two options: thesis and non-thesis.

The basic curriculum plan for each option within the MS in exercise and sport science is as follows:

Thesis option:

Adapted physical education: BIOS 7021; EXSS 5303, 5305, 5903, 6300, 6301, 6990, 6991, 7000 (6 s.h.); select 6 s.h.

from the following: EXSS 5020, 5800, 5904, 6102, 6104, 6200, 6201, 6202, 6207, 6445, 6500; 3 s.h. of SPED

electives; 3 s.h. of general electives.....36 s.h.

Biomechanics: BIOS 7021; EXSS 6200, 6204, 6207, 6300, 6301, 6991, 7000 (6 s.h.); 12 s.h. of electives.....36 s.h.

Exercise physiology: EXSS 6207, 6208, 6210, 6300, 6301, 7000 (6 s.h.); advisor approved graduate statistics course (3 s.h.); 15 s.h. of electives.....36 s.h.

Physical activity promotion: BIOS 7021; EXSS 6115, 6201, 6207, 6300, 6301, 6401, 6440, 6992, 7000 (6 s.h.); 6 s.h. of electives.....36 s.h.

Physical education pedagogy: BIOS 7021 or EDUC 6430; EXSS 6101, 6104, 6108, 6109, 6110, 6202, 6300, 6301, 6990, 6991, 7000 (6 s.h.); select one from the following: EXSS 5020, 5303, 5305, 5903, 6102, 6200, 6207, 6445.....36 s.h.

Sport and exercise psychology: BIOS 7021; EXSS 6300, 6301, 6401, 6650, 6990, 6991, 7000 (6 s.h.); select 6 s.h. from the following: EXSS 6202, 6440, 6445; 9 s.h. of approved electives.....36 s.h.

Sport management: EXSS 6102, 6106, 6131, 6132, 6133, 6136, 6300, 6301, 6990, 6991, 7000 (6 s.h.); 6 s.h. of electives.....36 s.h.

SECTION 8: CURRICULA

Non-thesis option:

Adapted physical education: EXSS 5303, 5305, 5903, 6201, 6300, 6301, 6990, 6991, 6994; select 9 s.h. from the following:

EXSS 5020, 5800, 5904, 6102, 6104, 6200, 6202, 6207, 6445; 3 s.h. of SPED electives; 3 s.h. of general electives	36 s.h.
Biomechanics: BIOS 7021; EXSS 6200, 6204, 6207, 6300, 6301, 6500, 6990, 6991, 6994; 12 s.h. of electives	36 s.h.
Exercise physiology: EXSS 6207, 6208, 6209, 6210, 6212, 6300, 6301, 6994; 15 s.h. of electives.....	36 s.h.
Physical activity promotion: BIOS 7021; EXSS 6115, 6201, 6207, 6300, 6301, 6401, 6440, 6992, 6994; select 6 s.h. from the following: BIOS 5010, 7022; EXSS 5001, 5020, 5800, 6200, 6445; HLTH 6011, 6013, 6600; MKTG 6162; PSYC 6333, 6353; RCLS 6100; 3 s.h. of general electives.....	36 s.h.
Physical education pedagogy: EXSS 6101, 6104, 6108, 6109, 6110, 6202, 6300, 6301, 6990, 6991; select 6 s.h. from the following: EXSS 5020, 5303, 5305, 5903, 6102, 6200, 6207, 6445; 3 s.h. of EDUC electives; 3 s.h. of general electives	36 s.h.
Sport and exercise psychology: BIOS 7021; EXSS 6300, 6301, 6401, 6650, 6990, 6991, 6994; select 6 s.h. from the following: EXSS 6202, 6440, 6445; 12 s.h. of approved electives.....	36 s.h.
Sport management: EXSS 6102, 6106, 6131, 6132, 6133, 6136, 6300, 6301, 6992 (6 s.h.); 9 s.h. of electives.....	36 s.h.

MAEd AND MAT IN PHYSICAL EDUCATION

Please refer to Section 8, College of Education, for the degree requirements for the master of arts in teaching and the master of arts in education, both of which lead to advanced certification.

PHYSICAL EDUCATION CLINICAL SUPERVISION CERTIFICATE

The certificate in physical education clinical supervision will provide licensed physical educators with the knowledge and skills necessary to successfully provide clinical supervision for physical education teacher candidates and practicing physical educators. Specifically, candidates who complete the certificate will have the knowledge and skills to (1) understand the role of mentoring and reflective teaching necessary for supervising teacher candidates and practicing physical educators; (2) implement a wide range of reflective practices that enhance teaching creativity and diversity in physical education; (3) foster effective instruction emphasizing current technology implementation; and (4) prepare teacher candidates as advocates and leaders who will work collaboratively with families, related service specialists, and other specialists to facilitate student academic achievement and skill development. Professionals can enroll as nondegree seeking students, or be enrolled in the MAEd in physical education or the MS in exercise and sport science pedagogy concentration. The 12 s.h. of graduate-level course work will be applicable to the MAEd in physical education or the MS in exercise and sport science pedagogy concentration. Admission is based on completion of the ECU certificate application and approval by the program coordinator. The certificate program requires 12 s.h. of graduate-level course work with completion of the following courses: EXSS 6101, 6108, 6109, and 6110, and successful completion of a written and practical proficiency test in physical education clinical supervision.

SPORT MANAGEMENT CERTIFICATE

Applicants must be concurrently enrolled in a graduate degree program or possess a graduate degree. In the case of concurrent enrollment students must obtain approval of the director of graduate studies of the program in which they are enrolled as well as the approval of the graduate director in EXSS.

12 s.h. are required: EXSS 6106, 6132; choose two from: EXSS 6001, 6102, 6131, 6133, RCLS 6005.

EXSS: EXERCISE AND SPORT SCIENCE

5020. Exercise Adherence (3) P: PSYC 1000; P/C: EXSS 4806; HHP major or minor or consent of instructor. Personal and situational factors which result in adherence to an exercise program. Focus on application of strategies for improving adherence.

5278. Advanced SCUBA Diving (3) 2 lecture and 3 lab hours per week. P: Satisfactory performance on the NAUI Swimming Test; EXSS 2278 or consent of instructor; a notarized statement releasing the instructor and the university from all liability; a satisfactory medical history and medical examination. Variety of safe diving experiences under controlled conditions beyond basic open water diving levels.

5303. Physical Activity Programs for Individuals with Developmental, Emotional, and Learning Disabilities (3) 2 lecture and 3 field work hours per week. P: EXSS 3545 or 3546; SPED 5101; or consent of instructor. For physical educators, special educators, therapeutic recreation specialists, and others concerned with providing physical activity programs to individuals with developmental, emotional, or learning disabilities.

5305. Motor Development (3) P: EXSS 2800 or equivalent or consent of instructor. Applies motor development theory and techniques to numerous settings. Descriptions of changes in movement patterns and skills and examination of underlying processes which influence these changes.

5800. Physical Activity and Aging (3) (SL) P: GERO 2400 or consent of instructor. Role of physical activity and exercise in enhancing quality of life and remediating normal aging deficits and age-related disease. Includes physiological, cognitive, and affective perspectives.

5903. Physical Activity Programs for Individuals with Orthopedic, Neurologic, and Sensory Impairments (3) 2 lecture and 3 field work hours per week. P: BIOL 2130 or equivalent. For physical educators, special educators, therapeutic recreation specialists, and others concerned with providing physical activity programs to individuals with orthopedic, neurologic, and sensory impairments.

5904. Methods in Adaptive Aquatics (2) 1 classroom and 3 lab hours per week. P: Advanced lifesaving certification. Swimming techniques as adapted for individuals with acute and chronic disabling conditions.

6001. Administration of Physical Education and Athletics (3) Administrative process in physical education and athletics from elementary school through college.

6005. Intramural and Extramural Activities for Schools and Colleges (3) Philosophy, organization, and administration of intramural and recreational sports and activities.

6101. Technology and Assessment for Physical Education Teacher Education (3) Technology and assessment strategies to support physical education instruction and assessment in K-12 settings.

6102. History and Philosophy of Sport (3) History of ideas that have defined sport from ancient times to present. Emphasis on mind/body relationships, types of knowledge, and right behavior.

6104. Curriculum and Instruction in Physical Education (3) Methods of physical education curriculum model delivery that integrate short and long-term planning with creative and effective teaching practices.

6105. Instruction in Physical Education (3) Pedagogical knowledge and research integrated with motor development and motor learning content for studying effective teaching practices in physical education.

6106. Contemporary Sport (3) Intensive study of amateur, educational, international, and professional sport in the contemporary world.

6108. Analysis of Teaching in Physical Education (3) P/C: EXSS 6104 or permission of instructor. Teaching behavior analysis related to class management, student activity levels, skill feedback, and verbal and nonverbal interactions through the use of systematic and informal observation techniques.

6109. Clinical Supervision in Physical Education (3) P/C: EXSS 6104 or permission of instructor. Application of the clinical supervision model for teacher development in physical education.

6110. Professional Issues in Physical Education Teacher Education (3) Current issues and trends in contemporary K-12 physical education teacher education.

6115. Physical Activity and Public Health (3) P: Admission to a graduate degree program in the College of Health and Human Performance, MPH graduate program, or consent of instructor. Examination of physical activity and its role in health status and public health, emphasizing the chronic effects of exercise.

6131. Management and Leadership in Sport (3) Examines management responsibilities in sport organizations. Topics include organizational effectiveness and organizational behavior theory, personnel management, and facility planning and design.

SECTION 8: CURRICULA

- 6132. Legal Aspects of Sport Management (3)** Tort liability, product liability, contract law, antitrust, and administrative and constitutional claims as they apply to sport.
- 6133. Sport Marketing and Public Relations (3)** Consumer behavior trends and contemporary marketing principles related to sporting events of various competitive levels, public and private sport organizations, and sport equipment and products. Historical overview of sport marketing.
- 6136. Financial Management in Sport (3)** Financial management, planning, and budgetary components of sports industry.
- 6200. Biomechanics (3)** 2 classroom and 2 lab hours per week. P: Admission to HHP graduate program; EXSS 3850 or equivalent or consent of instructor. Basic principles of mechanics as applied to human movement. Introduces measurement of kinematic and kinetic variables inherent in human motion.
- 6201. Advanced Measurement and Evaluation in Exercise and Sport Science (3)** Applies measurement theory to assessment techniques in exercise and sport science. Measurement research in exercise and sport science, basic statistical analyses, and practical computer applications and methods to assess test validity and reliability.
- 6202. Motor Learning (3)** In-depth study of theories, concepts, and principles of motor skill acquisition applied to teaching, coaching, and therapeutic settings.
- 6204. Techniques of Biomechanical Assessment (3)** 1 classroom and 6 lab hours per week. P: EXSS 3850 or equivalent or consent of instructor. Basic, intermediate, and advanced techniques in measurement of biomechanical variables through use of videography, cinematography, force platforms, transducers, and electromyography (EMG).
- 6205. Clinical Exercise Testing (2)** Theory and skills development in clinical exercise testing.
- 6206. Clinical Exercise Assessment (1)** P: EXSS 6205. Applied clinical assessment, EKG interpretation, and exercise prescription.
- 6207. Physiology of Exercise (3)** Individual and group study and experiences. Physiological responses to exercise. Emphasis on effects of physical training and other factors that affect physical performance.
- 6208. Cardiopulmonary Physiology (3)** P: EXSS 6207. Current topics in cardiopulmonary physiology as related to clinical and basic science aspects of exercise science. Topics include cardiopulmonary anatomy and function, ECG basics and interpretation, cardiovascular pharmacology, metabolic evaluation/ assessment/programming during exercise, and other issues related to clinical exercise science.
- 6209. Advanced Exercise Prescription (3)** P: EXSS 6208. Applies basic physiological principles in prescription of exercise and administration of training programs for individuals of differing age, health status, and occupational status. Emphasis on design of safe and effective programs of physical activity. Utilizes sound principles of exercise prescription in relation to probable professional and clinical experiences.
- 6210. Theory and Techniques in Bioenergetics (3)** Lab and lectures. P: Exercise physiology or physiology course; consent of instructor. In-depth description and theoretical constructs of procedures used in bioenergetics research and clinical settings.
- 6212. Cardiopulmonary Rehabilitation and Diagnostic Procedures (3) Formerly EXSS 7212** P: EXSS 6208. Clinical experience in cardiopulmonary rehabilitation and theories and rationale for diagnostic cardiopulmonary procedures.
- 6300. Research Techniques in Exercise and Sport Science (2)** C: EXSS 6301. Preparation to design, conduct and report research. Emphasis on planning research, utilizing research methods, and interpreting data.
- 6301. Research Seminar in Exercise and Sport Science (1)** C: EXSS 6300. Preparation to develop and write research proposals and reports.
- 6323. Advanced Middle and High School Instruction in Physical Education (3)** Advanced teaching theories and methodology in secondary school physical education settings that support student learning and assessment.

6401. Assessment of Physical Activity and Fitness (3) Methods to assess physical activity and fitness, understanding of determinants of physical activity, and relationship of physical activity and fitness to health.

6440. Physical Activity Psychology (3) P: EXSS 6300, 6301; or consent of instructor. Examines relationship between psychological processes and physical activity and fitness behaviors. Primary focus on influence of social-psychological factors on physical activity participation and impact of physical activity participation on psychological outcomes.

6445. Sport Psychology (3) Same as PSYC 6445 P: Admission to a graduate program in the College of Health and Human Performance or consent of instructor. Seminar. Theories and psychological principles that may influence sport involvement and performance. Emphasis on practical application of psychology in order to improve quality of performance and meaningfulness of participation.

6500, 6501. Independent Study (1-3, 1-3) May be repeated for a maximum of 6 s.h. Current research topics in exercise and sport science.

6600. Seminar in Physical Activity Instruction (1) May be repeated. May count a maximum of 3 s.h. P: Admission into EXSS graduate program or consent of instructor. Physical activity instruction in various settings and with diverse learners. Special attention to college and university settings. Emphasis on reflective teaching and improvement of instructional design, implementation, and evaluation.

6650. Seminar in Exercise and Sport Science (1) May be repeated. May count a maximum of 3 s.h. P: Consent of instructor. Reviews recent research in EXSS. Emphasis on areas of adapted physical education, biomechanics, exercise physiology, pedagogy, physical activity promotion, and sport management.

6801, 6802, 6803. Special Topics in Exercise and Sport Science (1,2,3) May be repeated. May count a maximum of 6 s.h. P: Graduate standing in EXSS. New or advanced topics.

6990, 6991. Practicum in Exercise and Sport Science (1,2) Students are assigned to an on- or off- campus mentor to gain fieldwork and/or research experience. Emphasis is placed on the application of theory into practice.

6992. Exercise and Sport Science Internship (3,6) P: Consent of screening committee. On-site visitation and on-the-job training with fitness/health management leaders/directors in industry/health club and other approved agencies.

6994. Culminating Research Project (3) P: EXSS 6300, 6301; or consent of instructor. Independent research culminating with written report and oral examination.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7002. Nutrition and Exercise (3) (S) Formerly EXSS 5001 P: Consent of instructor. Relationship of basic nutrition principles to sport and physical activity.

7004. Research Ethics for a Complex World (2) Same as GRAD 7004 P: Current enrollment in EXSS master's or bioenergetics doctoral program. Introductory graduate course. Case studies, readings, policy review, assignments, and discussions with guest faculty examine areas of ethical concern for researchers. Areas include scientific misconduct, conflict of interest, abusive mentoring, improper authorship practices, protection of human participants, animal subjects of research, and others.

7211. Bioenergetics (4) Formerly EXSS 6211 P: Graduate exercise physiology or cell physiology course and consent of instructor. Concise summary of bioenergetics using cellular and subcellular approaches. Focus on metabolic perturbations evident with exercise and disease and interactions between the two.

7220. Muscle Physiology (3) P: Graduate cell or systems physiology, graduate exercise physiology, or consent of instructor. Physiology of skeletal, cardiac, and smooth muscle at cellular and whole-organ level. Topics include muscle development, detailed anatomy/physiology, structure-function relationships, nerve-muscle interactions, pathophysiology, and muscle plasticity with exercise training, disuse, aging, and damage/regeneration.

SECTION 8: CURRICULA

7335. Seminar in Bioenergetics (1) Formerly EXSS 6335 May be repeated. May count a maximum of 4 s.h. P: Consent of instructor. Critique of current bioenergetics literature.

8310. Pedagogy in Bioenergetics (3) P: Master's degree in bioenergetics or related field. Fundamentals in teaching in area of bioenergetics, including instruction in course development, syllabus construction, lecture preparation, examination preparation, and grading. Students involved in teaching lecture and lab for EXSS 3805, Physiology of Exercise.

8320. Bioenergetics II: Regulation of Metabolism (4) Same as BIOC 8320 P: BIOC 7301 or EXSS 7211 or consent of chair. Regulation and integration of metabolism of carbohydrates, lipids, nucleic acids, and amino acids in humans, with an emphasis on primary research literature.

8330. Introduction to Research (3) Formerly EXSS 6330 May be repeated. May count a maximum of 6 s.h. P: Consent of instructor. Student assigned to faculty preceptor. Opportunity to learn design of experimental protocols and to collaborate in some aspects of preceptor's program.

8331, 8332, 8333, 8334, 8335, 8336. Advanced Topics in Bioenergetics (1-6) May be repeated for a maximum of 12 s.h. P: EXSS 7211 and consent of chair.

9000. Dissertation (3-12) May be repeated. May count maximum of 27 s.h.

9001. Dissertation Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

EXSS Banked Courses

6003. Group Dynamics and Community Leadership (3)

DEPARTMENT OF HEALTH EDUCATION AND PROMOTION

Timothy R. Kelley, Chair, 2202 Belk Building

MS IN ATHLETIC TRAINING

The master of science in athletic training offers advanced-level study in athletic training for BOC certified (or eligible) candidates. Completion of the **40 s.h.** program requires 34-37 s.h. in core classes, including 12 s.h. of practicum; and 3-6 s.h. of approved electives. A separate packet for the degree program is required and is available from the program director. Students may choose either a thesis or independent project as their culminating experience, seeking National Athletic Trainers' Association program approval.

1. Core	34-37 s.h.
ATEP 6020. Research Methods in Sports Medicine.....	3 s.h.
ATEP 6040, 6041, 6042, 6043. Sports Medicine Practicum	12 s.h.
ATEP 6045. Advanced Organization and Administration in Sports Medicine.....	3 s.h.
ATEP 6050. Sports Medicine Related Injuries and Illness.....	3 s.h.
ATEP 6320. Applied Anatomy in Sports Medicine	4 s.h.
ATEP 6350. Evidence-Based Rehabilitation and Treatment.....	3 s.h.
ATEP 6500. Master's Project or HLTH 7000.Thesis	3-6 s.h.
HLTH 5900. Stress Management.....	3 s.h.
2. Electives	3-6 s.h.
EXSS 5001. Nutrition and Exercise.....	3 s.h.
EXSS 6131. Management and Leadership in Sport.....	3 s.h.
EXSS 6132. Legal Aspects in Sports Management	3 s.h.
EXSS 6133. Sports Marketing and Public Relations	3 s.h.
EXSS 6200. Biomechanics.....	3 s.h.
EXSS 6201. Advanced Measurement and Evaluation in Exercise and Sport Science.....	3 s.h.
EXSS 6204. Techniques in Biomechanical Assessment.....	3 s.h.
EXSS 6207. Exercise Physiology	3 s.h.
EXSS 6445. Sport Psychology	3 s.h.

HLTH 6011, Introduction to Epidemiology.....	3 s.h.
RCLS 5130, 5131, Biofeedback: Principles and Practices.....	3,1 s.h.

ATEP: ATHLETIC TRAINING

6020. Research Methods in Sports Medicine (3) P: Current enrollment in MS in athletic training or permission of instructor. Development and interpretation of quantitative research theory, design, and statistical analyses for the sports medicine professional.

6040. Practicum in Athletic Training (3) P: Current enrollment in MS in athletic training. Practical experience in athletic training, emphasizing athletic training-related research and best practices.

6041. Practicum in Athletic Training (3) P: Current enrollment in MS in athletic training. Practical experience in athletic training, emphasizing organization and administration related to assigned practicum settings.

6042. Practicum in Athletic Training (3) P: Current enrollment in MS in athletic training and BOC certification. Practical experience in athletic training that may include supervision of undergraduate athletic training students in designated practicum settings. Emphasis on time management and professional communication.

6043. Practicum in Athletic Training (3) P: Current enrollment in MS in athletic training and BOC certification. Practical experience in athletic training that may include supervision of undergraduate athletic training students in designated practicum settings. Emphasis on leadership and professional responsibility.

6045. Advanced Organization and Administration in Sports Medicine (3) P: Current enrollment in MS in athletic training or consent of instructor. Organizational theory and administration of sports medicine facilities and personnel.

6050. Sports Medicine Related Injury and Illness (3) P: Current enrollment in MS in athletic training or consent of instructor. Integration of pathology of medical conditions and injuries within physically active populations.

6320. Applied Anatomy in Sports Medicine (4) P: Current enrollment in MS in athletic training or consent of instructor. Integration of human musculoskeletal and neural anatomy with athletic-related movements and pathological function associated with athletic trauma.

6350. Evidence-Based Rehabilitation and Treatment (3) P: Current enrollment in MS in athletic training or consent of instructor. Evidence-based practical approach to developing rehabilitation protocols and therapeutic techniques.

6500. Master's Project (3) P: Current enrollment in MS in athletic training and consent of chair. Investigates current research and methodology in athletic training.

7000. Thesis (1-6) P: Current enrollment in MS in athletic training and consent of chair. To be repeated for a maximum of 6 s.h.

MS IN ENVIRONMENTAL HEALTH (MSEH)

The master of science in environmental health requires completion of a minimum of **34 s.h.** A student having no prior environmental health experience must take EHST 6010 (3 s.h.) and EHST 6980 (3 s.h.) in addition to the 34 s.h. minimum. All students must pass a written, comprehensive examination.

Environmental health offers two degree paths:

Research Option: Students must complete a thesis and also must take at least 4 s.h. of approved laboratory credit. A student may not count more than 15 s.h. from 5000-level courses or take more than 15 s.h. through online courses.

Applied Option: This option is intended only for Registered Sanitarians and Registered Environmental Health Specialists. Permission to choose this option must be obtained from the environmental health sciences program faculty. Students must complete a professional paper and may not count more than 15 s.h. from 5000 level courses.

SECTION 8: CURRICULA

1. Research Option Courses.....13 s.h.
HLTH/MPH 601 I. Introduction to Epidemiology (3) or BIOS 5010. Epidemiology for Health Professionals (3)
BIOS 702 I. Biostatistics for Health Professionals I (3)
EHST 500 I. Seminar in Environmental Health (1)
MPH 6020. Research Methods (3)
EHST 7000. Thesis (1-6)

All students write and orally defend a thesis. The thesis proposal and thesis must be approved by the student's advisor and a committee comprised of at least 3 graduate faculty members, 2 of whom must be environmental health sciences faculty, and 1 reviewer from outside the department.

- Applied Option Courses.....13 s.h.
HLTH/MPH 601 I. Introduction to Epidemiology (3) or BIOS 5010. Epidemiology for Health Professionals (3)
BIOS 702 I. Biostatistics for Health Professionals I (3)
EHST 500 I. Seminar in Environmental Health (1)
EHST 6800. Environmental Health Program Management (3)
EHST 6990. Environmental Health Professional Paper (3)

All students write and orally defend a professional paper that reflects an applied learning experience leading to an environmental health action, intervention, or increased knowledge in the field. Paper may take many forms but summarizes a project selected by student and defended before student's committee comprised of at least 3 faculty members, 2 of whom must be environmental health sciences faculty, and 1 reviewer from outside the program.

2. Additional Environmental Health/Related Coursesat least 21 s.h.

Course selection in consultation with the student's advisor:

- EHST 5010, 501 I. Principles of Toxicology and Laboratory (3, 1)
- EHST 5020. Environmental Toxicology (3)
- EHST 5164. Radiological Health Field Operations (1)
- EHST 5165. Advanced Radiological Health Physics Laboratory (ORAU) (1)
- EHST 5510. Physical Safety (2)
- EHST 5520. Biological Safety (2)
- EHST 5530. Chemical Safety (2)
- EHST 5540. Radiation Safety (2)
- EHST 5800, 5801. Solid and Hazardous Waste and Laboratory (3,0)
- EHST 6100. Elements of Environmental Engineering (3)
- EHST 6201, 6202, 6203. Individual Studies (1,2,3)
- EHST 6210, 6220, 6230. Topics in Environmental Health and Safety (1, 2,3)
- EHST 6300, 6301. Public Health Pests and Vector Borne Disease and Laboratory (3,1)
- EHST 6400. Technical Advances in Water Supply and Waste Water Treatment (3)
- EHST 6420. Sanitary Microbiology and Safety of Foods (3)
- EHST 6600. Air Quality Control Methods (3)
- EHST 6700, 6701. Industrial Hygiene Application and Laboratory (3,1)
- EHST 6710. Ventilation and Indoor Air Quality and Laboratory (3,0)
- EHST 6800. Environmental Health Program Management (3)
- GEOL 5710, 571 I. Ground Water Hydrology (3,0)
- PLAN 6301. GIS and CAD applications for Planning (3)

CERTIFICATE IN SECURITY STUDIES

The department participates in the offering of a graduate certificate in security studies. See College of Arts and Sciences, Department of Political Science, for certificate requirements.

EHST: ENVIRONMENTAL HEALTH

5001. Seminar in Environmental Health (1) Student, staff, and guest speakers on current research.

5010, 5011. Principles of Toxicology and Laboratory (3,1) For EHST majors but other majors accepted. P: Senior or graduate standing; 8 s.h. of general chemistry; 6 s.h. of biology, including BIOL 2130; or consent of instructor. Basics of toxicology such as physiological response and environmental sources as well as specifics of major toxins.

5020. Environmental Toxicology (3) P: EHST 5010, 5011; or consent of instructor. Effect of anthropogenic and naturally occurring toxins on environment. Toxin sources, distribution, and bioaccumulation. Covers pesticides, metals, solvents, radioactive isotopes, food additives, air pollutants, and natural plant/animal toxins.

5164. Radiological Health Field Operation (1) P: Consent of instructor. Field observation of radiological health physics, practices at nuclear fuel cycle facilities, and government nuclear facilities.

5165. Advanced Radiological Laboratory (1) P: Consent of instructor. Intensive radiological lab training at Oak Ridge Associated Universities. Tour of research facilities.

5510. Physical Safety (2) Practical application of physical safety principles in living and work environments.

5520. Biological Safety (3) Formerly EHST 6120 Practical application of biological safety principles in living and work environments.

5530. Chemical Safety (2) Practical application of chemical safety principles in living and work environments.

5540. Radiation Safety (2) Practical application of radiation safety principles in living and work environments.

5800, 5801. Solid and Hazardous Waste Management and Laboratory (3,0) 2 lecture and 2 lab hours per week. P: CHEM 1160, 1161 or consent of instructor. Problems associated with collection, treatment, and disposal of municipal solid waste and hazardous wastes in the United States.

6010. Fundamentals of Environmental Health (3) Effects of environment on human health. Focuses on rural environment. Considers water supply and wastewater disposal, water quality, solid and hazardous wastes, air quality, occupational health and safety, food protection, and vector control.

6100. Elements in Environmental Engineering (3) Practical application of engineering principles to environmental health.

6201, 6202, 6203. Individual Studies (1,2,3) May be repeated for maximum of 3 s.h. P: Declared EHST major; consent of major professor. Advanced knowledge in selected areas of environmental health.

6210, 6220, 6230. Topics in Environmental Health and Safety (1,2,3) Formerly EHST 6200 May be repeated with change of topic. Seminar. Selected environmental health and safety problems considering current studies and efforts at solutions.

6300. Public Health Pests and Vector Borne Disease (3) Identification, management, and ecology of arthropods and other disease vectors, and characteristics and epidemiology of diseases they carry.

6301. Public Health Pests and Vector Borne Disease Laboratory (1) Concentration on mosquitoes and ticks in North Carolina, testing for West Nile Virus, and application of 3-D imaging techniques.

6400. Technical Advances in Water Supply and Waste Treatment (3) State-of-the-art advances in water and waste water treatment. Examines best practical available technology for coping with special water supply and waste disposal problems. Demonstrates principles upon which real life systems function.

6420. Sanitary Microbiology and Safety of Foods (3) P: Consent of instructor. Sanitary microbiology and chemical safety of foods. Topics include natural toxicants, food additives, and regulations for protection of public health.

6600. Air Quality Control Methods and Devices (3) Theory, use, evaluation, advantages, and limitations of procedures and methods employed in air quality control.

SECTION 8: CURRICULA

6700. Industrial Hygiene Application (3) Principles of evaluating and controlling work environment. Emphasis on resolving occupational health problems.

6701. Industrial Hygiene Application Laboratory (1) C: EHST 6700. Methods of measurement and evaluation used by industrial hygienists.

6710, 6711. Ventilation and Indoor Air Quality and Laboratory (3,0) 2 lecture and 2 lab hours per week. P: Consent of instructor. Principles and basic design of ventilation systems for hazardous materials and fundamentals of indoor air quality (IAQ).

6800. Environmental Health Program Management (3) Knowledge and practice in planning, developing, and managing environmental health programs. Applies current management practices toward solutions of environmental health problems.

6980. Environmental Health Practicum (3) Directed work experience in clinical/environmental health agency.

6990. Environmental Health Professional Paper (3) May be repeated. May count a maximum of 3 s.h. toward degree. P: Admission to the applied option of the Master of Science in Environmental Health. Detailed summary of applied learning experience to environmental health action, intervention, or increased knowledge in the field.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

MA IN HEALTH EDUCATION

The master of arts degrees in health education and promotion provide advanced academic training for individuals employed or planning to seek employment as health educators in academic, clinical, community, and corporate settings. Undergraduate training in health education or the social and biological sciences is preferred. Applicants with undergraduate preparation deficient in these areas will be required to remove such deficiencies through supplemental course work as designated by the department's graduate faculty.

The basic curriculum plan for the MA in health education and promotion requires **36 s.h.** All students take the core courses and then select from one of three options: thesis, internship, or course work. Students select electives in consultation with their advisor.

Core courses: HLTH 6001, 6110, 6600, 6900.....	12 s.h.
Thesis option:	
HLTH 7000.....	6 s.h.
Research skills: BIOS 7021; HLTH 6011, 6700, 6800.....	12 s.h.
Guided electives.....	6 s.h.
The student writes and orally defends a thesis. The thesis proposal must be approved by the student's advisor and a committee that comprises three health education and promotion faculty and an outside reviewer.	
Internship option:	
HLTH 6990, 6991.....	6 s.h.
Research skills: HLTH 6011, 6700, 6800.....	9 s.h.
Guided electives.....	9 s.h.
The student completes a 240-hour internship experience and writes an internship report. The student also completes a comprehensive examination covering both core and research skills courses. The graduate advisor selects the committee to examine the student.	
Course work option:	
Research skills: HLTH 6011, 6700, 6800.....	6 s.h.
Guided electives.....	9 s.h.
The student completes a comprehensive examination covering both core and research skills courses. The graduate advisor selects the committee to examine the student.	

MAEd AND MAT IN HEALTH EDUCATION

Please refer to Section 8, College of Education, for the degree requirements for the master of arts in teaching and the master of arts in education, both of which lead to advanced certification.

HLTH: HEALTH

5310. Education for Human Sexuality (3) For school and community professionals working in or consulting with schools. P: Health education major or consent of instructor. Comprehensive knowledge and sex education methodology for effective communication with children and youth.

5345. Alcoholism in Health Education (3) P: HLTH 1000. Effects of alcohol on human body with sociological, psychological, physiological, and economic implications as applicable to everyday living. Methods, procedures, and resource materials for alcohol education.

5900. Stress Management (3) P: Undergraduate course in anatomy and physiology; graduate standing; or consent of chair. Positive and negative aspects of stress as related to performance and health. Emphasis on sources and positive management of stress, including lifestyle and life skills.

6000. Foundations of School Health Education (3) P: Admission to the MAEd in health education or consent of chair. Ethical practice, advanced theory, and integrating school health practice into the larger community.

6001. Foundations of Health Education and Promotion (3) P: Admission to the MA in health education or consent of instructor. Health behavior theory, ethics, and the practice environment.

6002. Maternal and Child Health Education (3) Formerly HLTH 5002 P: Admission to the MA in health education or consent of instructor. Theoretical base and appropriate education strategies for delivery of community health education programs.

6005. Introduction to Worksite Health Promotion (3) P: Admission to the MA in health education or consent of instructor. Principles and benchmarks of worksite health promotion.

6006. Planning and Evaluating Worksite Health Promotion Programs (3) Design, implementation and assessment of health promotion programs in a corporate or industry setting.

6007. Employee Health and Productivity (3) P: Admission to the MA in health education and promotion or consent of instructor. Strategies for measuring the relationship between employee health and productivity.

6011. Introduction to Epidemiology (3) P: Admission to a graduate program or consent of instructor. Overview of principles of epidemiology, including major epidemiologic study designs, measures of association, clinical trials, bias, confounding, and other topics.

6013. Behavioral Sciences and Health Education (3) P: Admission to a graduate program or consent of instructor. Introduces concepts of role of social factors in health, illness, and health education/promotion. Overview of relationships between various social factors with health outcomes. Introduces theories and approaches of health education/promotion programs.

6100. Intervention Strategies for School Health Education (3) P: Admission to the MAEd in health education or consent of chair. Application of existing research and best practices in methods and strategies utilized by school health educators.

6110. Intervention Strategies for Health Education and Promotion (3) P: Admission to the MA in health education and promotion or consent of instructor. Application of existing research and best practices in methods/strategies utilized by health education professionals.

6200. School Health Planning and Evaluation (3) P: Admission to the MAEd in health education or consent of chair. Theory and application of the principles of planning and evaluation for school health professionals.

6300. Coordinated School Health (3) P: Admission to the MAEd in Health Education or consent of instructor. Knowledge and skills in applying a coordinated school health program within a local school district.

SECTION 8: CURRICULA

6310. Sexuality Education in Health Education (3) P: Admission to the MA in health education or consent of instructor. Knowledge and skills in planning, developing, implementing and evaluating sexuality education in a community context.

6355. Alcohol, Tobacco, and Other Drug Education and Prevention (3) P: Admission to graduate program or consent of chair. ATOD abuse education and prevention theory and approaches.

6400. Management of School Health Education Programs (3) P: Admission to the MAEd in health education or consent of instructor. Providing leadership for the management of school health programs; personnel development; program implementation, evaluation, budget and fund raising; and role of government and private agencies in school health.

6501, 6502, 6503. Independent Study (1,2,3) P: Consent of advisor. Investigates current research and methodology in health education.

6600. Needs Assessment in Health Education and Promotion (3) P: Admission to the MA in health education or consent of instructor. Needs assessment planning, implementation and evaluation.

6700. Qualitative Research and Evaluation Methods (3) P: HLTH 6600, Admission to the MA in health education or consent of instructor. Theory, design, methods, management, analysis, and reporting of qualitative data in evaluation and research contexts.

6800. Quantitative Research and Evaluation Methods (3) P: HLTH 6600, 6700, admission to the MA in health education and promotion or consent of instructor. Theory, design, methods, analysis and interpretation and applications in evaluation.

6900. Managing Health Education and Promotion Programs (3) P: HLTH 6660; admission to the MA in health education or consent of instructor. Application of management principles in developing, organizing, funding, leading, and advocating for health education and promotion programs.

6901. Health-Based Nonprofit Management (3) P: Admission to the MA in health education or consent of instructor. Theories, strategies, and skills for managing health-based nonprofit organizations.

6903. Grant Writing (3) P: Admission to the MA in health education, or consent of instructor. Health-related nonprofit and public health grant proposal development, administration, and assessment.

6905. Social Marketing (3) P: Admission to the MA in health education, or consent of instructor. Strategies for health-related nonprofit and public health agencies.

6990, 6991. Internship in Health Education (3,3) P: Minimum of 18 s.h. in health education program or consent of chair. Supervised observation and practice in health education setting.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

7100. Qualitative Research: Analysis and Interpretation (3) Same as NURS 7100, OCCT 7100
P: Consent of chair. Application and evaluation of qualitative research design and methods including data collection, management and analysis approaches, and the art and science of interpretation.

HLTH Banked Courses

6101. Research Methods in Health Education (3) 6201. Program Planning and Evaluation II (1)

DEPARTMENT OF RECREATION AND LEISURE STUDIES

Debra Jordan, Chair, 1404 Belk Building

The department of recreation and leisure studies offers separate degrees in recreation and park administration and recreational therapy administration. The **36-39** semester hour programs are designed for individuals employed in or seeking employment in a diverse range of settings. The master's in recreation and park administration prepares students for positions in leisure services, including community parks and recreation, recreation resource management, recreation sports management, and travel and tourism. The master's in recreational therapy administration provides advanced training for clinical, administrative, and research positions in recreational therapy and healthcare related careers. Prior education and experience facilitates timely graduation. Individuals with undergraduate deficiencies will be required to remove such deficiencies through supplemental course work while enrolled in the graduate program.

MS IN RECREATION AND PARK ADMINISTRATION (36-39 s.h.)

1. Core: RCLS 6000, 6100, 6110, 6120, 6210, 6220..... 18 s.h.
2. Concentration:9 s.h.
 Generalist: MGMT 6102; MKTG 6162, 6642
 Recreational Sports Management: RCLS 5111, 6005; Choose 3 s.h. from: EXSS 6445; PADM 6120; PSYC 6445;
 RCLS 5100, 5101.
3. Thesis or non-thesis option..... 12-15 s.h.
 Thesis option: OMGT 6123; MKTG 6642; RCLS 7000..... 12 s.h.
 Non-thesis option: OMGT 6123; RCLS 6501; 9 s.h. of approved electives..... 15 s.h.

MS IN RECREATIONAL THERAPY ADMINISTRATION (36-39 s.h.)

1. Core: RCLS 6000, 6100, 6110, 6120..... 12 s.h.
2. Concentration: RCTX 6310, 6320, 6330; COHE 6600 12 s.h.
3. Thesis or non-thesis option..... 12-15 s.h.
 Thesis option: BIOS 7021, 7022; RCLS 7000..... 12 s.h.
 Non-thesis option: BIOS 7021; RCTX 6502; 9 s.h. of approved electives..... 15 s.h.

RCLS 6990 (Supervised Field Experience) will be required of recreation and leisure facilities and services administration students who do not have approved prior experience, internship, or certification in the recreation and leisure services industry and recreational therapy administration students who are not currently certified as therapeutic recreation specialists. Recreational therapy administration students not currently certified as therapeutic recreation specialists will also be expected to complete prerequisites required by national and state certification boards.

GRADUATE CERTIFICATE PROGRAMS

Certificate in Aquatic Therapy

The graduate certificate in aquatic therapy provides students with the theory, practical skills, and basic techniques for the use of aquatic therapy modalities including but not limited to Halliwick, Bad Ragaz, Watsu, Ai Chi, and Arthritic exercise. This certificate is open to students enrolled in graduate degree programs as well as nondegree applicants holding a baccalaureate degree. The program is designed to provide allied health practitioners the knowledge and skills necessary to use aquatics as an intervention to promote health, rehabilitation, and independence among individuals with disabilities.

The program requires completion of 12 s.h. in the respective areas as follows: RCTX 5000, 5001; RCLS 5100; 3 s.h. elective chosen in consultation with certificate coordinator. A list of appropriate electives is available from the certificate coordinator.

Certificate in Biofeedback

The graduate certificate in biofeedback will enable students and other health professionals to monitor, measure, and feed back physiological signals to individuals and clients in order to increase human performance and treat medical conditions. Students

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will be able to apply biofeedback as an intervention to predict, prevent and promote health and optimal performance as well as to treat various medical conditions. Those who successfully complete the certificate will have met the requirements necessary to sit for the national biofeedback certification examination offered by the Biofeedback Certification Institute of America. Students must be currently enrolled in a graduate program or admitted as a non-degree earning student. In addition, all students must complete BIOL 2130 and BIOL 2131 or their equivalent before admission to the certificate program.

The program requires completion of 12 s.h. as follows: RCTX 6001, 6002, 6003 and 6 s.h. electives selected in consultation with the certificate director.

RCLS: RECREATION AND LEISURE STUDIES

5100. Aquatic Facility Management (3) Operation, maintenance, and management of aquatic facilities used for recreation, exercise, therapy, competition, education programs, and other aquatic-related programs.

5101. Waterfront Facility Operations (3) Principles and practices of waterfront facility management, maintenance, and operations.

5111. Recreational Facility Management (3) P: RCLS 3104 or 3120; or consent of instructor. Principles and practices of parks and recreational facility management, maintenance, operations, and evaluation.

6000. Philosophical and Social Foundations of Leisure Services (3) P: Admission to graduate program in RCLS or consent of instructor. Social and philosophical foundations for recreation and leisure services in dynamic society.

6005. Recreational Sports and Activities Management (3) P: Consent of instructor. Philosophy, organization, and administration of recreational sports and activities.

6100. Risk Management and Legal Liability in Recreation, Leisure, and Recreational Sport (3) P: Consent of instructor. Legal issues related to delivery of recreation, leisure, and recreational sport services, including legal foundations, liability and tort policy, employment laws, disability services, malpractice concerns, insurance, and current issues.

6110. Research Methods in Recreational Therapy and Recreation and Leisure Services (3) P: Admission to graduate program in RCLS or consent of instructor. Applies basic forms of research. Historical, qualitative, correlational, descriptive, causal-comparative, and experimental research designs as applied to recreational therapy, leisure services, and tourism.

6120. Seminar in Recreation, Leisure, and Recreational Therapy Administration (3) P: Admission to graduate program in RCLS or consent of instructor. In-depth examination and discussion of contemporary topics and issues pertinent to recreation, leisure, and recreational therapy service delivery.

6210. Management and Program Development in Recreation and Leisure Services (3) P: Admission to graduate program in RCLS or consent of instructor. Current theory, empirical research, and practical application of leisure service industry programming and administration.

6220. Managing Commercial and Tourism Industry Leisure Services (3) P: Admission to graduate program in RCLS or consent of instructor. Focus on commercial recreation and tourism environment, principles and concepts of management and marketing, and systematic techniques of analysis and inquiry.

6300. Statistics and Analysis in Health and Human Performance (3) P: Graduate student in RCLS or consent of instructor. Quantitative methods and practices commonly used in social science statistics and analysis.

6501. Capstone Experience in Recreation and Leisure Services Administration (3) P: MIS 6123; RCLS 6110; or consent of graduate program director. Capstone experience involving scientific inquiry of select subject or problem area. Content negotiated between student and the instructor in compliance with departmental guidelines. May be repeated for a maximum of 6 s.h.

6600. Graduate Teaching Seminar (1) May be repeated. May count a maximum of 3 s.h. P: Consent of instructor. Provides foundation of knowledge and skills for teaching at college/university level.

6601. Research Colloquium in Recreation and Leisure Studies (1) May be repeated for a maximum of 3 s.h. Review and critique of current research and applied projects.

6801, 6802, 6803. Special Topics in Recreation and Leisure Studies (1, 2, 3) May be repeated. May count maximum of 6 s.h. P: Graduate standing in RCLS. New or advanced topics in an area of specialization.

6990. Supervised Field Experience (6) P: Admission to graduate program in RCLS or consent of instructor. Develop service delivery skills and understanding of administrative concerns.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

RCLS Banked Courses

6091, 6092. Seminar in Leisure Systems Management (1,2)

6094. Leisure Systems Management Internship (3)

6098, 6099. Directed Research (1,2)

6301. Research Seminar in Leisure Systems Studies (1)

RCTX: RECREATIONAL THERAPY ADMINISTRATION

5000. Theoretical Foundations of Aquatic Rehabilitation (3) Formerly RCLS 5000 Examines treatment principles in aquatic rehabilitation environment. Develop understanding of benefits, contraindications, and use of aquatic therapy to address needs of participants with specific health conditions.

5001. Applied Techniques in Aquatic Rehabilitation (3) Formerly RCLS 5001 P: RCTX 5000 or consent of instructor. Develop fundamental techniques in aquatic therapy. Additional attention to management of aquatic rehabilitation services.

6001. Biofeedback: Principles and Practices (3) Formerly RCLS 6001 P: BIOL 2130, 2131 or equivalent. Overview of biofeedback history, instrumentation, and intervention techniques, including assessment, treatment and evaluation processes.

6002. Biofeedback Laboratory (1) Formerly RCLS 6002 P/C: RCTX 6001. Application of biofeedback measuring and monitoring techniques in a variety of health and human performance settings.

6003. Advanced Biofeedback Laboratory (2) Formerly RCLS 6003 P: RCTX 6002. Assessment, treatment selection, documentation, and evaluation of biofeedback services in health and human performance settings.

6310. Program Development and Management in Recreational Therapy (3) Formerly RCLS 6310 P: Admission to graduate program in RCLS administration or consent of instructor. Advanced program development for systematic design recreational therapy services.

6320. Client Assessment, Evaluation, and Documentation in Recreational Therapy (3) Formerly RCLS 6320 P: Admission to graduate program in RCLS or consent of instructor. Client assessment and documentation. Treatment programming and comprehensive program evaluation.

6330. Administrative Aspects of Recreational Therapy (3) Formerly RCLS 6330 P: Admission to graduate program in RCLS or consent of instructor. Service delivery. Personnel management, quality management, financing and budgeting, and health care accreditation.

6502. Capstone Experience in Recreational Therapy (3) Formerly RCLS 6502 May be repeated for a maximum of 6 s.h. P: MIS 6123; RCLS 6110; or consent of graduate program director. Capstone experience involving scientific inquiry of select subject or problem area. Content negotiated between student and the instructor in compliance with departmental guidelines.

COLLEGE OF HUMAN ECOLOGY

Judy Siguaw, Dean, RW-238 Rivers Building

The college is comprised of the Departments of Child Development and Family Relations, Criminal Justice, Hospitality Management, Interior Design and Merchandising, Nutrition Sciences, and the School of Social Work. (The criminal justice department and social work were previously listed as the Carolyn Freeze Baynes School of Social Work and Criminal Justice Studies.) The college incorporates leadership development and community outreach into the classrooms as well as its research and creative activity endeavors.

The Carolyn Freeze Baynes Institute for Social Justice, established by the generosity of Charles and Hazel Freeze with the support of Michael Ray Baynes, is located within the College of Human Ecology. The institute coordinates research, community partnerships, and scholarship aimed at improving the well-being of individuals and the quality of community life. The institute offers a number of activities for students, including research experiences, scholarship opportunities, and interaction with visiting scholars and alumni.

CHE: COLLEGE OF HUMAN ECOLOGY

5005, 5006, 5007. Special Problems in Human Ecology (1,2,3) May be repeated for credit with different titles. P: Consent of instructor. Variable content and special topics in areas of human ecology.

6100, 6101. Special Topics in Human Ecology (2,1) May be repeated for credit with change of topic. P: Consent of instructor. Variable content and current topics in human ecology.

6488. Research in Human Ecology (3) Research methods and development of research proposal.

6500, 6501, 6502. Independent Study (3,3,3) P: Consent of instructor. Advanced study of selected subject in small group or independently.

DEPARTMENT OF CHILD DEVELOPMENT AND FAMILY RELATIONS

Cynthia Johnson, Chair, 108 Rivers Building

The department offers two MS degrees: child development and family relations and marriage and family therapy; a MAEd degree in birth through kindergarten education (BK) and family and consumer sciences education (FACS); and a PhD in medical family therapy. All teacher education degrees lead to advanced licensure. See College of Education for additional information about licensure and teaching requirements for the MAT. Course work and training prepare students for professional practice, research, and administrative roles in teaching as well as in agencies and organizations that provide services and support to children and families. Applicants must meet the admissions requirements of the Graduate School. Completion of an undergraduate degree in child development, birth through kindergarten, family studies, family and consumer sciences, the behavioral or social sciences or closely related area from an accredited institution is required for admission. Applicants may be required to take additional courses as part of the degree requirements in order to make up deficiencies or meet certification requirements. Research and clinical experiences are available through the departments' child development laboratory and the family therapy clinic. For more information, visit our webpage at www.ecu.edu/chelcdfri/.

MS IN CHILD DEVELOPMENT AND FAMILY RELATIONS

The master of science in child development and family relations (CDFR) is designed for students whose career goals are in child and family services. With advanced study in child development and family relations, students are able to fill a variety of professional roles in the administration of programs serving children, families, and older adults; in teaching young children, preadolescents, and young adults; and in specialized clinical roles in child life, early intervention, developmental evaluation, and other mental health and human services programs. Each student's program of study is tailored to fit his or her needs and interests, and students are encouraged to select an area of specialization that will prepare them for in-depth study in a related discipline. Opportunities for national and international internships are available for CDFR students to expand their study and experience. Students may apply for the National Council on Family Relations' certification in family life education and other certifications.

The MS degree in CDFR requires 36 semester hours. Students may choose one of two options: a thesis option, which includes the building of research skills and the completion of independent research or a research project option, which includes a

practicum in the area of the student's concentration and passing the comprehensive examination. Program requirements include the following:

1. Core..... 15 s.h.
CDFR 6401, 6402, 6404, 6406, 6420
2. Specialization.....9 s.h.
6 s.h. must be CDFR courses
3. Research6 s.h.
CDFR 7007, 7400
4. Research Project (CDFR 7900) or thesis (CDFR 7000)6 s.h.

Students seeking eligibility for child life certification who have not completed an undergraduate internship will need to complete a 6 s.h. child life internship in addition to the required hours for degree completion.

MS IN MARRIAGE AND FAMILY THERAPY

The marriage and family therapy (MFT) program at East Carolina University is accredited by the Commission on Accreditation for Marriage and Family Therapy Education of the American Association for Marriage and Family Therapy. Enrollment in the marriage and family therapy program is limited and admission is competitive. Acceptance into the program is contingent on prior admission to the Graduate School, application to the marriage and family therapy program, a personal interview with the clinical faculty, and a favorable recommendation from the MFT faculty. Decisions regarding acceptance into the program are based on the following criteria: undergraduate and graduate GPA, standardized test scores (MAT or GRE), work or practicum experiences, a statement of professional objectives, and performance during the personal interview. Upon acceptance into the program, students typically begin course work in the fall semester.

A minimum of 51 s.h. is required in the following areas of study:

1. Theoretical foundations in marriage and family therapy: CDFR 6407, 6408
2. Clinical practice: CDFR 6300, 6303, 6409, 6410, 6412, 6425
3. Human development and family studies: CDFR 6401, 6402, 6404 or 6406 (select one)
4. Professional identity and ethics: CDFR 6411
5. Research: CDFR 7007, 7400
6. Additional learning: 6 s.h. of thesis or advisor-approved electives
7. Supervised clinical practice: CDFR 6415, 6416, 6417

The Department of Child Development and Family Relations administers a marriage and family therapy clinic, which serves as a clinical training and research site for the program.

Additional information about graduate programs and application information can be obtained from the Director of Graduate Studies, Department of Child Development and Family Relations, College of Human Ecology, East Carolina University, Greenville, NC 27858-4353.

GRADUATE TEACHING DEGREES

The department offers the master of arts in education (MAEd), specifically birth through kindergarten teacher education (BK) and family and consumer science education (FACS). This degree leads to advanced licensure. See the College of Education, Department of Curriculum and Instruction, for degree requirements for the master of arts in teaching. Both degrees are offered online.

MAEd IN BIRTH THROUGH KINDERGARTEN (BK)

This program is designed to prepare individuals beyond the entry level for professional roles as master teachers, consultants, program coordinators, supervisors, and staff development trainers. This program is based on the philosophy, rationale, and competencies established for the initial BK license. Thus, it is open to persons who hold a continuing license in BK or closely related area. Applicants lacking licensure or experience in the BK area must complete an internship and/or course work to make up deficiencies in required BK competencies. A flexible program of study is developed to meet the needs and allow for previously attained competencies of individual students. Upon acceptance into the BK program, the student is assigned an advisor.

SECTION 8: CURRICULA

The program requires 39 s.h. consisting of 12 s.h. of core courses, 18 s.h. of professional courses, and 9 s.h. from a specialty strand as follows:

- 1. Required core courses 12 s.h.
Research, Trends, and Issues Competency Area.....3 s.h.
EDUC 6482 or SCIE 6500
Diverse Learner Competency Area.....6 s.h.
EDUC 6001 and SPED 6002
Effective Communication and Leadership Competency Area.....3 s.h.
ADED 6550 or ELEM 6550 or LEED 6000
 - 2. Professional Area: Birth through Kindergarten Education..... 18 s.h.
CDFR 6402, 6501, 6503, 6990; 6991, 6995
Final product requirement: a research project with an oral presentation (CDFR 6991) or a thesis with an oral thesis defense (CDFR 7000)
 - 3. Specialty Area (Select one strand; choose three courses).....9 s.h.
Select three advisor-approved courses from one of the following strands:
Assistive Technology
SPED/OCCT 6701, 6702, 6703
- or
- Community College Teaching
ADED 6240, 6450, 6453

MAEd IN FAMILY AND CONSUMER SCIENCES

This program is designed for individuals who already hold a North Carolina teaching license. The curriculum is designed to help teachers achieve goals and develop advanced competencies in professional education, family and consumer sciences subject matter, and interpersonal relationships. The desired outcome is to help teachers develop the skills to become leaders in the field of family and consumer sciences. The program requires a minimum of 39 credit hours as specified below.

- Required core courses..... 12 s.h.
Research, Trends, and Issues Competency Area: EDUC 6482 or SCIE 6500.....3 s.h.
Diverse Learner Competency Area: EDUC 6001; SPED 6002.....6 s.h.
Effective Communication and Leadership Competency Area: ADED 6550 or ELEM 6550 or LEED 6000.....3 s.h.
- Family and consumer sciences education27 s.h.
CDFR 6990, 6991; FACS 6423, 6424, 6426, 6430, 6990; 6 s.h. major area electives
The final product is an action research project that is planned in CDFR 6990 and implemented in CDFR 6991 with an oral presentation to the graduate committee.

PhD IN MEDICAL FAMILY THERAPY

The objective of the PhD program in medical family therapy is to graduate individuals who will collaborate with health care providers and families to resolve biopsychosocial issues inherent with acute and chronic illness. Students must complete a standard curriculum for doctoral programs as stipulated by the Commission for the Accreditation of Marriage and Family Therapy Education (COAMFTE). The 59 s.h. program includes: research (14 s.h.), theory (12 s.h.), clinical practice (3 s.h.), clinical supervision (3 s.h.), cognates and electives (12 s.h.), dissertation (6 s.h.), and internship (9 s.h.). Full-time students are expected to complete the program in a minimum of three years. Students completing the program will be expected to fulfill educational and clinical requirements for marriage and family therapy licensure.

Admission

Applicants must have a master's degree in marriage and family therapy or a related discipline. Applicants from a related field should have completed a course of studies that demonstrates competencies in basic marriage and family therapy studies and clinical experience. Additional requirements for admission include: acceptable performance on the GRE and a cumulative GPA of 3.5 on a 4.0 scale in graduate work; a sample of scholarly writing which may be a thesis, a published or unpublished reprint, a research paper; a statement of purpose that summarizes the reasons for pursuing doctoral study in medical family therapy; a personal interview with the program faculty; and other requirements included in the Graduate School's application packet.

Transfer Credit

A maximum of 9 s.h. of course work taken beyond the master's degree may be applied toward the doctoral degree at the discretion of the medical family therapy faculty, the department chair, and the dean of the Graduate School.

Doctoral Candidacy Requirements

Admission to candidacy for the PhD requires students to pass a preliminary examination testing basic knowledge in medical family therapy. Subsequent to passing the preliminary examination, students will be permitted to complete a dissertation and a nine-month internship.

CDFR: CHILD DEVELOPMENT AND FAMILY RELATIONS

5004, 5005, 5006. Special Topics in Child Development and Family Relations (1,2,3) P: Admission to CDFR graduate program. Current topics and issues related to child development and family relations.

5403. Parent Education (3) P: Senior standing; CDFR 1103; 2000 or 2001; 3002, 3306; or admission to CDFR graduate program. Strategies, skills, and resources that can assist parents and professionals who work directly with them.

5411. Counseling Elders and Their Families (3) P: GERO 2400; or admission to CDFR graduate program. Interventions for age-related problem behaviors in social and family systems of elderly.

5412. Family Crises and Resources (3) P: CDFR 1103; senior standing; or admission to CDFR graduate program. Individual and family reactions to crises and special problems encountered in family living. Reviews individual and community resources pertinent to such problems.

5420. Family Intervention Models (3) P: CDFR major or admission to CDFR graduate program. Selected family intervention and skill development models with opportunity for in-depth study of individual theoretical approach.

5901, 5902, 5903. Readings in Aging Studies (1,2,or3) Same as GERO 5901, 5902, 5903; SOCW 5901, 5902, 5903 May count maximum of 3 s.h. toward the baccalaureate minor in gerontology or graduate certificate in gerontology. P: Junior standing; or admission to CDFR graduate program. Selected from monographs or journals. Focus on specialized areas in which student has taken one or more courses in either baccalaureate gerontology minor or graduate gerontology certificate.

5992, 5993. Advanced Preschool Internship (3,0) 1 conference and 8 lab hours per week. P: CDFR 4306, 4322; or admission to CDFR graduate program. Advanced internship experiences with preschool children and their parents.

6007. Advanced Public Policy and Legal Issues Affecting Families (3) Current public policy and legal issues facing professionals who work with children and families.

6022. Perspectives on Death and Dying (3) Same as GERO 6022 and SOCW 6022 Interdisciplinary exploration of issues related to death, dying, and bereavement.

6300. Critical Issues in Sexuality, Gender Roles, and Families (3) Examines biological, cognitive, social, emotional, and cultural influences on human sexuality and gender roles within the context of relationships.

6303. Critical Issues in Family and Cultural Diversity (3) Comprehensive study of family diversity that occurs because of different cultural environments including racial, ethnic, and economic differences.

6320. Family Treatment in Substance Abuse Rehabilitation (3) Same as REHB 6320 P: Major; REHB 6793. Rehabilitation and treatment strategies. Family intervention strategies, family counseling, and treatment of adult children of addicted parents. Emphasis on relationships of family, substance abuse, and major physical and mental disabilities.

6380. Interdisciplinary Practice: Services for Children with Serious Emotional Disturbances and Their Families (3) Same as PSYC 6380 and SOCW 6380 System of care model for use across disciplines in mental health services for children with serious emotional disturbances and their families. Prepares professionals to participate in participate in holistic, interdisciplinary team practice in variety of settings.

SECTION 8: CURRICULA

- 6401. Family Theories and Issues (3)** Emphasis on major theoretical frameworks used to explain and predict events related to families and family members. Applies these theories to current issues impacting families.
- 6402. Theories of Child Development (3)** Major theories and supportive research which contribute to understanding of child behavior and development.
- 6404. Human Development within the Family, Part I (3)** P: Admission to the CDFR graduate program. Growth and development from conception through adolescence within the context of the family.
- 6406. Human Development within the Family, Part II (3)** P: Admission to the CDFR graduate program. Growth and development from emerging adulthood through late adulthood.
- 6407. Family Systems Theories (3)** Intensive study of family systems theories. Emphasis on family development, interaction, and assessment.
- 6408. Family Therapy Theories (3)** P: Admission to marriage and family therapy or medical family therapy programs. Examines major marital and family therapy theories. Emphasis on systemic applications.
- 6409. Family Therapy Seminar I (3)** P: Admission to marriage and family therapy program; CDFR 6407, 6408, 6411. Prepracticum course addressing assessment, diagnosis, goal formulation, and treatment issues, including identification of individual therapeutic orientation.
- 6410. Family Therapy Seminar II (3)** Intensive examination of evidence-based practices in marriage and family therapy.
- 6411. Family Therapy Issues (3)** Historical, ethical, legal, and professional issues in practice of marital and family therapy.
- 6412. Family Therapy Seminar III (3)** P: Admission to marriage and family therapy program; CDFR 6409. Dynamics of couple interaction as basis for study of assessment and intervention models for use with premarital and married couples and other dyads within a family systems framework.
- 6413. Exceptional Families (3)** Attitudinal, interactional, and organizational impact of exceptional members on family. Emphasis on professional assistance.
- 6415, 6416, 6417. Family Therapy Practicum (3,3,3)** P: CDFR 6409, 6425. Practicum experience in marital and family therapy.
- 6418. Seminar in Child Development (3)** May be repeated for maximum of 9 s.h. P: Consent of instructor. Variable content and titles.
- 6419. Seminar in Family Relations (3)** May be repeated for maximum of 9 s.h. P: Consent of instructor. Variable content and titles.
- 6420. Program Planning and Evaluation for Child and Family Services (3)** Basic concepts related to program development and evaluation.
- 6425. Assessment and Treatment Planning in Family Therapy (3)** Psychodiagnostic categories, psychopharmacology, family assessment, and planning for major mental health issues.
- 6500. Independent Study (3)** May be repeated. May count maximum of 9 s.h. with change of topic. Advanced study of selected topics in child development and family relations.
- 6501. Trends and Issues in Birth Through Kindergarten Teacher Education (3)** Critical examination of current trends, issues, theories, philosophies, and developments in birth-kindergarten teacher education.
- 6503. Advanced Methods and Materials in Birth through Kindergarten Teacher Education (3)** Applies theory and research in designing, adapting, and evaluating environments and curricula for typically and atypically developing children under six years of age.

6985. Child Life Internship (6) P: CDFR 6402, 6406, 7400. Minimum of 480 hours of observation and clinical experience in approved program that provides health services to children and their families under supervision of certified child life specialist. Requires an approved project.

6990. Action Research I in Educational Settings (3) Quantitative and qualitative research methods including data collection and data analysis.

6991. Action Research II in Educational Settings (3) Development and implementation of an action research project in classrooms serving children birth through kindergarten.

6995. Leadership in Birth Through Kindergarten Education (3) Supervised internship under supervision of public school administration or other approved administrative structure.

7000. Thesis (I-6) May be repeated. May count a maximum of 6 s.h. toward the degree.

7001. Thesis Summer Research (I) May be repeated. No credit; may count toward degree. Students conducting thesis research may only register for this course during the summer.

7007. Statistics in Child/Family Studies (3) Introduces statistics, including analyses and applications.

7309. Contemporary Issues in Early Intervention and Children's Health (3) Critical analysis of issues related to typical and atypical development of children, health intervention strategies, preventive approaches and emerging trends in children's health and community resources.

7400. Research Methods in Child/Family Studies (3) Critical analysis of research methods and current research relevant to children and families throughout life cycle.

7401. Introduction to Medical Family Therapy (3) Theory and practice seminar in medical family therapy.

7409. Illness and Disability Across the Lifespan (3) Examines illness and disability interfaces across family lifespan.

7502. Family Therapy Supervision Methods and Practice (3) P: Admission to medical family therapy doctoral program or consent of instructor. Didactic and interactional supervision. Emphasis on philosophy, application, and interpretation of family therapy skills and supervision concepts.

7900. Advanced Special Topics in Child Development and Family Relations (3) P: CDFR 7007, 7400. May be repeated. May count maximum of 9 s.h. with change of topic. In-depth study of selected child and family issues. Emphasis on theory and research.

8000. Special Topics in Medical Family Therapy (3) May be repeated for a maximum of 6 s.h. with change of topic. P: Admission to medical family therapy doctoral program. In-depth study of selected biopsychosocial and spiritual issues affecting individuals and families. Variable content and titles permitted.

8400. Advanced Research Methods in Medical Family Therapy (3) P: CDFR 7400 or equivalent or consent of instructor. Examination of qualitative and quantitative methods used in clinical research.

8402. Advanced Family Therapy Theories (3) P: Admission to medical family therapy program. Advanced family therapy theories and application seminar in healthcare systems.

8403. Gender and Ethnicity in Medical Family Therapy (3) P: Admission to medical family therapy program. Gender and ethnicity issues seminar in medical family therapy.

8404, 8405, 8406, 8407. Medical Family Therapy Practicum (3,3,3,3) P: Admission to medical family therapy program. Practicum experience in medical family therapy.

8910, 8911, 8912. Family Therapy Internship (3,3,3) P: Completion of majority of course work in medical family therapy program. Internship in medical family therapy.

9000. Dissertation (3-12) May be repeated. Minimum of 6 s.h. required.

SECTION 8: CURRICULA

9001. Dissertation: Summer Research (1) May be repeated. No credit; may count toward degree. Students conducting dissertation research may only register for this course during the summer.

CDFR Banked Courses

6424. Family Therapy Seminar IV (3)

FACS: FAMILY AND CONSUMER SCIENCES

5007. Special Problems in Family and Consumer Sciences Education (3) May be repeated for credit with change of topic. P: Consent of instructor. Special topics in selected areas of family and consumer sciences. Variable titles and content.

6003. Advanced Apparel Construction for Secondary Education (2) C: FACS 6004. Advanced application and evaluation of technique in fabric selection and apparel construction.

6004. Advanced Apparel Construction for Secondary Education Laboratory (1) Three lab hours per week. C: FACS 6003. Application of advanced construction principles. Interrelationship of fabric selection, pattern selection, alteration, and garment fit.

6180. Advanced Housing and Interior Design. (3) Advanced study of housing, furnishings, and equipment as they influence family well-being.

6323. Methods of Teaching Family and Consumer Sciences Curricula (3) P: Admission to MAT program. Topics include group and individualized instructional techniques and strategies, instructional materials development and utilization, community resources utilization, FCCLA student organization and management, and evaluation of student progress.

6423. Advanced Methods and Curriculum (3) P: FACS 4317. Principles of curriculum development. Organization, method, materials, and evaluation in relation to program type.

6424. Evaluation in Family and Consumer Sciences Education (3) P: FACS 6423. Principles of evaluation, construction of evaluation instruments and analysis, and interpretation of evaluation data for programs and instruction.

6426. Supervision in Family and Consumer Sciences Education (3) P: Admission to FACS MAEd program. Application of conferencing techniques, observation skills, and performance evaluation for professional leadership positions in educational settings.

6430. Trends and Issues in Family and Consumer Sciences Education (3) P: Admission to FACS MAEd program. Current trends and issues affecting the family and consumer sciences profession.

6990. Review of Research in Family and Consumer Sciences Education (3) P: Admission to FACS MAEd program. Foundational approaches in the research process, including conceptualization of the problem, literature search, and review.

FACS Banked Courses

5300. Middle Grades Careers Exploration (3) **6900. Review of Current Literature (2)**

DEPARTMENT OF CRIMINAL JUSTICE

William P. Bloss, Chair, 247 Rivers Building

MS IN CRIMINAL JUSTICE

The master's program in criminal justice prepares students to become highly skilled and competent professionals who are equipped to seek advancements in the criminal justice profession, teach on the community college level, or pursue a terminal degree in criminal justice or a closely related field. Students must complete 21 s.h. of core courses, 15 s.h. of electives, and can choose to obtain certification in security studies. A comprehensive examination is required for completion of the master's degree in criminal justice and can be taken after the completion of 27 s.h. and all core courses. Students are allowed a maximum of two attempts to successfully pass the examination.

A minimum of **36 s.h.** of credit is required as follows:

1. Core: JUST 6000, 6001, 6006, 6012, 6201, 6300, 6500..... 21 s.h.
2. Electives: JUST courses 15 s.h.

ADMISSION REQUIREMENTS

Each applicant is reviewed individually by the admissions committee. One criterion does not determine acceptance or rejection. A bachelor's degree from an accredited academic institution with a minimum overall undergraduate grade point average of 2.7 on a 4.0 scale is required. Transfer credit **must** be established at the time of admittance.

Other requirements are as follows:

- Resident admissions - Applicants must submit 1) satisfactory entrance examination scores on the GRE or TOEFL as established by the Graduate School, 2) official transcripts of all undergraduate and graduate work since graduating high school, 3) three current letters of reference, 4) a statement of purpose that describes the applicant's relevant work experience, short- and long-term goals, and specific interests in the master's of criminal justice program (500-750 word, single spaced, typewritten), and 5) a personal interview may be requested.
- Distance education (DE) admissions - All requirements for resident admissions apply to DE admissions. DE applicants must also be employed as a criminal justice practitioner or practitioner in a closely related field and have a minimum of five years of full-time (paid) employment experience in such positions. Written employment verification is required on official agency letterhead and it must be signed by an agency administrator.

Students are not permitted to change admission classification (i.e., resident admission and DE admission) without prior departmental approval.

A student may elect to attend the program on a part-time basis. In order to qualify for part-time status a student must take a minimum of two courses per semester. It is recommended that at least one core course be taken each of the semesters that the student is enrolled in the program.

CERTIFICATE PROGRAMS

Security Studies

The department participates in the offering of a graduate certificate in security studies. Up to 15 s.h. of courses required for the graduate certificate in security studies can be transferred as electives for the master of science in criminal justice. See Thomas Harriot College of Arts and Sciences, Department of Political Science, for certificate requirements.

JUST: CRIMINAL JUSTICE

6000. Criminal Justice Principles (3) Systemic nature of current crime control efforts in criminal justice system.

6001. Seminar in Research Methods and Statistical Interpretation (3) Fundamental principles of research methodology, experimental and survey designs, scaling and sampling techniques, and interpreting statistical analyses.

6006. Seminar in Corrections (3) Analytical perspective of history, development, current practices, and future of corrections. Detention, institutional, and community-based correctional issues in local, state, and federal systems.

6012. Seminar in Law Enforcement (3) Police culture in American society. Emphasis on territorial control, solidarity vs. code of silence, issues of morality, and price of misconduct.

6201. Seminar in Criminology (3) P: Graduate standing in JUST. Theories and systems of criminological thought. Analysis of conceptual foundations of contemporary institutions and policies, formulation of crime prevention strategies, and development of responses to practical problems which arise in delivery of criminal justice.

6202. Advanced Criminology (3) P: JUST 6201. Criminological theory applied to crime in NC, US, and other countries.

6211. Statistics in Criminal Justice (3) P: Graduate standing in JUST or consent of instructor. Social science statistics for data analysis.

SECTION 8: CURRICULA

6300. Principles of Criminal Justice Administration and Management (3) Theoretical and practical analysis of management principles of criminal justice organizations. Organizational structure, leadership strategies, strategic planning, and performance evaluation.

6400. Contemporary Issues in Juvenile Justice (3) Violent juvenile and female offenders and juvenile system.

6500. Seminar in Criminal Justice Courts (3) P: Graduate standing in criminal justice or consent of instructor. Substantive and procedural law, judicial process, criminal law, constitutional criminal procedure, rights of prisoners, and juvenile law.

6501. Civil Liability in Criminal Justice (3) Liability issues of criminal justice personnel in US. Strategies to reduce risk of exposure to liability. Legal role and responsibilities as criminal justice practitioner.

6502. Criminal Justice and Terrorism (3) Issues of (who) the types of individuals and organizations involved in terrorism; (what) the types of activities conducted; (when) examinations of historical, socio-political, and economic forces that facilitate terrorism; (where) temporal and geographic aspects of terrorism; (how) structural, administrative and organizational issues related to terrorism, and official (governmental, law enforcement) responses to terrorism.

6601. Special Topics (2-4) P: Graduate standing in JUST or consent of instructor. Contemporary criminal justice issues.

6602. Directed Study in Criminal Justice (3) For advanced students. May be repeated for a maximum of 6 s.h. with consent of director. Independent Study under faculty supervision.

6700. Diversity Issues in Criminal Justice (3) Impact of America's changing demographics. Emphasis on women, elderly, and minorities. Criminal justice professionals and clients.

6800. Program Evaluation (Applied) (3) P: Graduate standing in JUST or consent of instructor. Evaluation methods that provide understanding of qualitative research.

6990. Field Practicum (3) P: Successful completion of minimum of 30 s.h. in JUST graduate program. Practical application of criminal justice knowledge in community settings.

6991. Professional Paper (3) May be repeated. P: Consent of instructor. Independent analyses of a pertinent criminal justice related problem with guidance of a faculty committee culminating in a written report.

JUST Banked Courses

5000. Comparative Criminal Justice (3)

DEPARTMENT OF HOSPITALITY MANAGEMENT

Robert O'Halloran, Chair, 152 Rivers Building

Post-baccalaureate programs offered in the Department of Hospitality Management include the opportunity to complete an MBA with a hospitality management concentration. More information is available for each program on the department homepage, www.ecu.edu/che/hmgt.

MBA WITH HOSPITALITY MANAGEMENT CERTIFICATE

MBA students interested in pursuing the MBA with the hospitality management certificate must take HMG 6310, 6400, 6410, 6420 as electives in the MBA program. A certificate of completion will be issued by the College of Human Ecology. Other graduate students interested in taking these electives must confer with the program director of the appropriate school.

HMG 6310: HOSPITALITY MANAGEMENT

6310. Strategic Management of Conventions and Special Events (3) P: MGMT 6102; MKTG 6162. Strategic management and operations of the convention, meeting and events market. Focus on regional, national and international trends in the convention, meeting and events industry.

6400. Critical Analysis of Food Service and Beverage Management Systems (3) P: DSCI 6213; MGMT 6102. Applies analytical models to evaluate food service and beverage management systems.

6410. Strategic Management of Lodging Operations (3) P: ACCT 6241; MKTG 6162; MGMT 6102. Focus on critical issues in rooms division, facilities engineering and maintenance, lodging security and safety, convention sales and marketing, lodging systems financial management, and lodging operations staffing.

6420. Current Issues and Strategies in Hospitality Management (3) P: NUTR 6400, 6410. In-depth review of empirical literature impacting issues related to hospitality management. Focus on regional, national, and international trends in food service, lodging, and tourism industries.

HMGT Banked Courses

5351. Food Service Production Systems (2)

6212. Food Service Systems Administration (3)

DEPARTMENT OF INTERIOR DESIGN AND MERCHANDISING

Katherine L. Swank, Chair, 249A Rivers Building

IDMR: INTERIOR DESIGN AND MERCHANDISING

IDSN Banked Courses

6481. Seminar in Interior Design (3)

6978, 6979. Internship: Interior Design (3,3)

6486. Advanced Interior Design (3)

MRCH Banked Courses

6301. Issues and Strategies in Apparel/Textile Merchandising (3)

6303. Apparel/Textile Quality Analysis Research (3)

6302. International Production and Trade of Apparel and Textiles (3)

6420. Seminar in Apparel and Textiles (3)

6982, 6983. Internship in Apparel and Textiles (3,3)

DEPARTMENT OF NUTRITION SCIENCE

William Forsythe, Chair, 148 Rivers Building

Post-baccalaureate programs offered in the Department of Nutrition Science include a dietetic internship program and a MS in nutrition. These programs can be combined and completed in two full years of study. More information is available for each program on the department homepage, www.ecu.edu/che/nutr.

DIETETIC INTERNSHIP PROGRAM

The dietetic internship is accredited by the Commission on Accreditation for Dietetics Education (CADE) of The American Dietetic Association. CADE is a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and the United States Department of Education. Enrollment is limited and admission is competitive. Admission requires verification of completion of a bachelor's degree that meets Didactic Program in Dietetics requirements of The American Dietetic Association; GRE test scores; the overall GPA or the GPA for the last 60 s.h. of course work; and The American Dietetic Association computer matching. The application deadline is mid-February. Once admitted to the dietetic internship program, students are required to apply for non-degree graduate student status before beginning the program. The dietetic internship program provides supervised dietetic practice in three required areas: clinical nutrition; foodservice management; and community nutrition, which includes a rural health component. The program requires **13 s.h.** of supervised dietetic practice including 3 graduate practicum courses (NUTR 6031, 6032, 6033). Additional information and an application are available from the dietetics program director.

MS IN NUTRITION

The MS in nutrition provides advanced study in the practice of nutrition science. Applicants must meet the admission requirements of the Graduate School. Decisions regarding admission to the nutrition science degree are based on the following criteria: courses required for the undergraduate nutrition minor; GRE test scores; and the overall or last 60 s.h. GPA. Applicants may be required to take additional courses as part of the MS degree in order to make up deficiencies. Students may choose a thesis or a non-thesis option, both of which require a minimum of **33 s.h.** credit as follows. The non-thesis option may be taken completely online.

1. Core courses.....9 s.h.
 BIOS 7021; NUTR 6105, 6200
2. Research courses (Choose one option.)6-10 s.h.
 Non-thesis option (6 s.h.):
 NUTR 6600, 6900, 6950
 Thesis option (10 s.h.):
 BIOS 7022; NUTR 6950, 7000 (6 s.h.)
3. Concentration courses.....14-18 s.h.
 Non-thesis option (18 s.h.)
 Thesis option (14 s.h.)

Graduate courses in nutrition sciences, with the exception of NUTR 6031, 6032, and 6033 (internship practicums) are offered online. Contact the Department of Nutrition Science for information regarding course availability, hardware, and software requirements.

NUTR: NUTRITION SCIENCE

5300. Nutrition for Wellness (3) P: One course in clinical nutrition and one in nutrition education. Planning, implementing, and evaluating nutrition services and education in wellness programs.

6000. Vegetarian Nutrition (3) Review of available scientific literature regarding the role of vegetarian diets in growth and development, and in aging, with special emphasis on the role vegetarian diets in the prevention and treatment of chronic health conditions.

6031. Practicum in Clinical Dietetics (3) P: Admission to the dietetic internship. Development and integration of knowledge and skills in clinical dietetics practice settings.

6032. Practicum in Community Dietetics (3) P: Admission to the dietetic internship. Development and integration of knowledge and skills in community dietetics practice settings.

6033. Practicum in Food Systems Management (3) P: Admission to the dietetic internship. Development and integration of knowledge and skills in food systems management practice settings.

6100. Independent Research (1,2,3) May be repeated for a maximum of 6 s.h. P: Consent of permanent graduate advisor. Conduct independent research study on topic related to program concentration.

6102. Current Issues in Clinical Nutrition (1) P: NUTR 4312, 4313; or consent of instructor. In-depth review and presentation of current topics and issues in clinical nutrition. Subjects and course subtitles vary. Course may be repeated for credit with different subtitles.

6105. Human Nutrition in Physiology and Metabolism (3) P: NUTR 3105, 3106; or equivalent. Integrates normal nutrition and metabolism at cellular level with physiologic functions of tissues, organs, and systems in humans.

6110. Nutrition Support (3) P: NUTR 6105. Nutrition support dietetics including enteral and parenteral nutrition. Stages of the life cycle and specific disease states as they modify nutrition support needs are considered.

6120. Advanced Clinical Nutrition (3) P: NUTR 4312, 4313, 6105. In-depth study of theory. Applies medical nutrition therapy to management of specific diseases.

6200. Methods in Nutrition Research (3) P: Graduate standing in Nutrition Sciences or consent of instructor; C: Graduate-level statistics course. Review research methodologies in nutrition and develop research proposal.

6250. Nutritional Epidemiology (3) P: BIOS 7021; NUTR 6200. Epidemiological principles and methodology to study nutritional determinants of disease.

6400. Food and Behavior (3) Behavior change theory and the influence of the environmental, economic, cultural, interpersonal and physiological factors on food behaviors.

6500. Pediatric Nutrition (3) P: NUTR 6105. Advanced study of nutritional requirements during infancy, childhood, and adolescence. Nutritional support of child with special problems.

6510. Maternal and Infant Nutrition (3) P: NUTR 6105. Advanced study of nutritional needs of infants and pregnant and lactating women.

6520. Geriatric Nutrition (3) P: NUTR 6105. Advanced study of role of nutrition in aging process. Nutrition-related health problems of the elderly and nutrition advocacy and education for elderly.

6530. Drug-Nutrient Interactions (3) P: NUTR 6105. Examination of pharmacological and nutrient interactions, including drug-nutrient metabolism, problem identification, interpretation of scientific data and health issues, public health policy, and emerging legislative issues.

6600. Management in Dietetics (3) P: NUTR 6200. Leadership and management principles for dietetics professionals and programs.

6610. Nutrition and Public Health Issues (3) Same as MPH 6610 P: Consent of instructor. Examines science base for community nutrition, including problem identification, interpretation of nutritional data and scientific issues, public health policy, societal and health trends, and emerging legislative issues related to nutrition and public health.

6640. Interdisciplinary Community Rural Health Practicum (3) P: Admission to dietetic internship or consent of instructor. Prepares health care professionals for community-based practice in rural setting. Provides service to underserved rural citizens.

6900. Review of Current Literature (2) P: Consent of permanent graduate advisor. Intensive review of current literature in selected topic. Enrollment during semester in which written and oral comprehensive exams for non-thesis program are completed.

6950. Seminar in Nutrition (1) P: Consent of permanent graduate advisor. Review, evaluation, and presentation of current research.

7000. Thesis (1-6) May be repeated. May count a maximum of 6 s.h.

NUTR Banked Courses

6211. Nutrition Policies and Communication (3)	6301. Advanced Studies in Vitamins and Minerals (3)
6215. International Food and Nutrition Issues (3)	6302. Advanced Studies in Protein and Amino Acids (3)
6300. Advanced Studies in Carbohydrates and Lipids (3)	6440. Seminar in Food and Nutrition (3)

SCHOOL OF SOCIAL WORK

Sheila Bunch, Director, 224-A Rivers Building

MASTER OF SOCIAL WORK (MSW)

The School of Social Work offers a program of classroom study and fieldwork that leads to the master of social work (MSW) degree. The program is based on a relational perspective for advanced professional practice, leadership, and innovation in service delivery. A single concentration, Clinical-Community Social Work, is offered which is augmented and focused through elective courses selected by the student in consultation with his or her faculty advisor. Paramount to this perspective is a commitment to economic and social justice. The curriculum leading to the MSW degree is built on a liberal arts perspective. The MSW program at East Carolina University has been developed in accordance with the policies and guidelines provided by the Council on Social Work Education (CSWE).

The School of Social Work offers two curriculum options: regular track and advanced standing. The regular track program is designed as a two year course of study that requires the completion of a minimum of 60 semester hours. The initial year, referred to as the foundation year, is comprised of 30 semester hours focusing on developing the knowledge, skills, and values necessary to become professional social workers. This foundation is applicable across different practice settings, problem areas, and population groups. The foundation curriculum includes material on populations-at-risk, human diversity, and social and economic justice, and is provided in courses addressing the areas of human behavior and the social environment, social welfare policy and services, social work practice, and social work research. In addition, a foundation practicum provides students with the opportunity to demonstrate knowledge, skills, and values taught in the first year in a supervised practice setting.

The second year of the regular track program, generally referred to as the advanced year, builds upon the foundation year and provides more thorough knowledge of complex policies, practice skills, evaluation skills, human behavior and the social environment, and field education. While the foundation curriculum introduces Clinical-Community Social Work, the advanced curriculum enhances the students' understanding of the perspective and further develops their skills for practice. In addition to 9 semester hours of electives, regular track students will complete the following courses: SOCW 5001, 5900, 5910, 6110, 6111, 6140, 6141, 6550, 6701, 6702, 6711, 6940, 6950, 6960.

Students who have graduated from a CSWE accredited bachelor of social work (BSW) program may apply for admission to the advanced standing MSW program of study. Those accepted into this program attain the MSW degree after the completion of a minimum of forty-two semester hours over the course of one calendar year. Full time advanced students enroll in the summer, completing 12 semester hours (SOCW 6110, 6111, 6701, 6711). The remaining 30 semester hours are completed within the context of the advanced year curriculum. A field practicum is required for both semesters of the advanced year. In addition to 9 semester hours of electives, the advanced standing students will complete the following courses: SOCW 6110, 6111, 6140, 6141, 6550, 6701, 6711, 6950, 6960.

Students are expected to demonstrate proficiency in foundation and advanced content through the successful completion of a comprehensive assessment. For the MSW degree, the successful completion of SOCW 6550 serves as the comprehensive assessment.

ACADEMIC CERTIFICATIONS AND LICENSURES

Students pursuing the MSW may complete a certificate program in one of the following areas: child welfare studies, gerontology, or substance abuse. Certification may be secured by a combination of required and elective courses. Students may also complete a licensure in school social work. In addition, the school participates in the North Carolina Child Welfare Collaborative, a grant program.

Child Welfare Studies Certificate Program

The certificate in child welfare studies provides special skills and knowledge of child welfare practice. Goals of the certificate include enhancing the knowledge, skills, and understanding of child welfare practice for persons involved in the prevention, assessment, or treatment of children and families experiencing, or at-risk of, child abuse, neglect, or dependency. The certificate is housed in the College of Human Ecology, School of Social Work. Courses taken to fulfill the 15 s.h. certificate requirements may be taken as electives in the MSW curriculum.

Graduate students or professionals working in the fields of social work and other child-family focused areas may apply to the certificate program.

Required courses (15 s.h.): SOCW 6006, 6007; CDFR 6406. SOCW 6422 and 6426 may substitute for the required social work courses for this certification. 6 s.h. of related electives must be approved by the program coordinator.

Substance Abuse Certificate Program

The certificate in substance abuse will equip select criminal justice and social work graduate students with specific skills and knowledge in the area of alcohol, tobacco, and other drugs. The goal of the certificate program is to increase the number of criminal justice and social work graduate students with the required knowledge and skills to work with clients who are drug users and/or abusers or who are charged with drug-related offenses. In addition, this certificate will allow graduate students an opportunity to become more sensitive to the laws governing drug abuse and drug-related offenses. Students will also learn efficient methods to design and implement effective substance abuse intervention strategies for this population.

Applicants seeking admission can be graduate students or professionals holding a masters degree working in the fields of criminal justice or social work. Admission is based on completion of the certification application and approval by the program coordinator. Students enrolled in the certificate program must adhere to the program standards of the School of Social Work and the Department of Criminal Justice. Certificate recipients will receive 180 contact hours (12 s.h.) of substance abuse specific credit approved by the North Carolina Substance Abuse Professional Certification Board.

Required courses (12 s.h.): Choose from JUST 6008; SOCW 6804, 6808, 6950, 6960.

ADMISSION

Applicants for admission as degree candidates in social work must fulfill the general admission requirements of the Graduate School of the university and of the School of Social Work.

Admission Requirements

Admission to the MSW program is selective, and is determined by academic preparation and individual qualifications of the applicant. Persons seeking admission must have a bachelor's degree from an accredited undergraduate institution, a minimum GPA of 2.75 (4.0 scale) on all undergraduate work with a minimum GPA of 3.0 for their senior year.

All applicants to the MSW program must have completed the following liberal arts courses (or their equivalents) with a minimum grade of "C" as preparation for graduate study in social work:

1. two courses in the humanities;
2. an introductory course in psychology;
3. an introductory course in sociology;
4. an introductory course in political science;
5. one course in human biology;
6. two courses in English composition or an equivalent;
7. one course in statistics; and
8. one course in economics (micro or macro).

The capacity to work with people is essential to successful social work practice. Strengths or weaknesses in this capacity are relevant for admission to the program. Prior work experience in social work settings is highly valued.

In addition to the ECU Graduate School application, all applications must contain the following:

1. School of Social Work MSW Application;
2. three completed references in sealed envelopes;
3. official copies of transcripts from all undergraduate institutions attended;
4. official copy of transcript from institution noting the conferral of undergraduate degree;
5. personal response to essay question presented on the MSW application;
6. a complete resume; and
7. GRE or MAT test scores.

Transfer Students

It is possible to be accepted as a transfer student from another graduate social work program under the following conditions: social work transfer credit must be graduate-level course work taken after earning a baccalaureate degree; course work must

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have been completed at a graduate school of social work accredited by the CSWE within five years prior to the application; and the student must have received a minimum grade of B on transferred course work. Transfer students must meet any foundation requirements they have not already completed by taking the required courses or by passing proficiency examinations. They must also complete the required practice courses. Courses applied toward another degree cannot be used for credit toward the MSW; likewise, previous experience working in the field of social work or a related field or life experience cannot be used as course credit toward the MSW. Transfer students must take a minimum of 80 percent of the required semester hours in residence at East Carolina University.

PROGRAM STANDARDS

Students enrolled in the MSW program are expected to adhere to the following program standards.

Nonacademic

The School of Social Work fully subscribes to and is guided by the NASW Code of Ethics (<http://www.socialworkers.org/pubs/code/code.asp>). Social work program applicants and students are expected to demonstrate professional behavior which reflects a commitment to the ethics of the social work profession as exemplified in the Code of Ethics. Behavior and statements contrary to these ethics may be cause for denial of the student's admission to or continuance in the School of Social Work's programs. Examples of behavior which would warrant a review include, but are not limited to, derogatory oral and written statements towards students, staff, faculty, agency representatives or clients. Derogatory statements concerning racial, ethnic or cultural background, handicap status, religion, socio-economic background, gender, sexual orientation or other status may also warrant review.

The role of social worker involves working with people from a variety of backgrounds and with a wide range of issues and concerns. It is important that the social work student not permit personal issues and/or conditions to interfere with this role.

All students are expected to complete their degree requirements within a four-year period from the date of first admission. When a student withdraws from the School of Social Work, they must reapply to the Graduate School and to the School of Social Work. As long as a student maintains continuous enrollment, regulations applicable during his or her term of admission apply. When degree requirements change during a student's enrollment, the student may be extended the opportunity to choose the new requirements. A student who interrupts enrollment for one year or longer and is readmitted is subject to regulations in effect at the time of readmission. Even if readmitted, all required coursework should be completed within the four-year matriculation period.

Prior Felony Convictions

The School does not require that applicants submit to a background check for possible criminal offenses. Applicants should realize, however, that practicum agencies may require such a check. Applicants should be aware that having a prior felony conviction or prior sanctions for unprofessional conduct may impact future potential for obtaining field placements, and social work employment and licensure. In addition, the School, as part of its process of practicum assignments, asks students whether they have a felony conviction (or non-contested felony) in their background. Students may be automatically denied admission, or if enrolled, terminated from the program, if they have not been truthful or have provided inaccurate information in the application concerning felony convictions.

Academic

A student whose grade point average falls below 3.0 will be placed on academic probation, and will be allowed to continue his/her enrollment only with the written recommendation of the academic advisor and approval from the graduate program coordinator. Removal from academic probation is granted when the grade point average is raised to 3.0 or above. Students who receive a grade of C in six semester hours of graduate credit, are ineligible to continue in the MSW program.

SOCW: SOCIAL WORK

5001. Human Behavior and Social Environment for the Human Service Professions (3) May receive credit for one of SOCW 4800, 5001. P: Consent of dean and graduate standing. Development of social systems concept of bio-psycho-social elements of man's being. Emphasis on deeper self-awareness of one's own behavior, attitudes, beliefs, and values as related to professional practice.

5400. Seminar in Aging Studies (3) Same as CDFR 5400; GERO 5400 Entry point for graduate certificate in gerontology; exit course for undergraduate minor in gerontology. P: Consent of instructor. Topics include historical perspective on aging issues, normal aging and pathology, aging program administration, aging policy development, research in gerontology, rural aging, and aging and ethnicity.

5900. Foundations of Social Work and Social Welfare (3) P: Graduate standing in SOCW. Introduces social work profession and social welfare, policy, and services.

5901, 5902, 5903. Readings in Aging Studies (1,2,or3) Same as CDFR 5901, 5902, 5903; GERO 5901, 5902, 5903 May count maximum of 3 s.h. toward baccalaureate minor in gerontology or graduate certificate in gerontology. P: Consent of instructor and chair of instructor's home unit. Selected from monographs or journals. Focus on specialized areas in which student has taken one or more courses in either baccalaureate gerontology minor or graduate gerontology certificate.

5910. Foundation Skills in Social Work Practice (3) P: Graduate standing in SOCW. Basic practice skills. Foundation for internship preparation.

6000. Advanced Social Work Methods with Individuals (3) P: Graduate standing in SOCW. Advanced knowledge and skill-building in clinical social work practice with individuals. Emphasis on generative theoretical approaches.

6001. Advanced Social Work Methods with Small Groups (3) Theory and practice interventions used with groups.

6002. Advanced Social Work Methods with Families (3) Clinical social work practice with distressed and dysfunctional family systems.

6003. Social Work Intervention with Dyadic Systems (3) Contemporary theories of dyadic functioning and social work practice with intimate dyadic relationships, such as marriages and intimate, affectively bonded associations.

6004. Social Work Services in Schools (3) P: Graduate standing in SOCW. Introduction and orientation to practice in school settings.

6006. Child Welfare: History and Policy (3) Explores history of child welfare policy and rights, roles, and responsibilities of children, parents, communities, and government within American social policy for protection of children.

6007. Child Welfare Practice (3) Examines family-centered practice as used in investigating and managing cases of child abuse, neglect, and dependency.

6022. Perspectives on Death and Dying (3) Same as CDFR 6022 and GERO 6022 Interdisciplinary exploration of issues related to death, dying and bereavement.

6050. Ethics in Social Work Practice (2) P: Graduate standing in SOCW. Values and ethics. Emphasis on ethical decision-making and resolution of ethical dilemmas.

6051. Qualitative Evaluation and Research in Social Work (2) P: Graduate standing in SOCW. Methods used in social work evaluation and research.

6053. Specialized Social Work Services for Families and Children (2) P: Graduate standing in SOCW. Conceptual and practice perspective regarding intensive and specialized services for families and children.

6054. Play Therapy with Children: A Social Work Perspective (2) P: SOCW 6422; graduate standing in SOCW. Play therapy in social work with children. Approaches, techniques, and materials used for assessment and intervention. Case studies.

6100. Introduction to Social Work Practice (3) P: Graduate standing in SOCW. Preparation for generalist practice from a relational perspective.

6101. Social Work Practice with Groups (2) P: Graduate standing in SOCW. Integration of theory and practice in small group treatment from social work perspective. Advanced knowledge and skills in group development, approaches to intervention, and leadership.

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- 6102. Social Work Practice with Families (2)** P: Graduate standing in SOCW. Contemporary theories of clinical practice with families in social environment.
- 6110. Social Work Practice: Interpersonal Foundations (3)** Concepts, theories and methods of clinical-community social work practice with an emphasis upon the relational nature of individual and family development and functioning.
- 6111. Social Work Practice: Community Foundations (3)** Concepts, theories and methods of clinical-community social work practice.
- 6140. Advanced Practice: Individuals and Families (3)** P: SOCW 6110, SOCW 6111 or equivalent. Advanced concepts, theories and methods of clinical-community social work practice with an emphasis on individuals and families within the context of their development and functioning.
- 6141. Advanced Practice: Community Partnerships (3)** P: SOCW 6110, SOCW 6111 or equivalent. Advanced concepts, theories and methods of clinical-community social work practice emphasizing social justice.
- 6200. Social Work Practice with Organizations and Communities (3)** P: Graduate standing in SOCW. Concepts, methods, and theories related to practice with communities or organizations.
- 6201. Program Management in Social Work (2)** P: Graduate standing in SOCW. Concepts, methods, and theories related to management of social work programs.
- 6202. Program Development in Social Work (2)** P: Graduate standing in SOCW. Concept, tools, and methods for development of social work programs.
- 6222. Group Work with the Aged (3) Same as GERO 6222** P: Graduate School admission. Case management, group work, and other techniques and approaches in working with older people.
- 6322. Practice in Health and Aging (3)** Social work intervention skills and application of theoretical concepts to practice in health settings.
- 6324. Social Work Practice with Developmental Disabilities (3)** Practice from social work perspective.
- 6326. Advanced Policy in Health and Aging Settings (3)** P: Graduate standing in SOCW. Health care and aging systems policies and organizational structures. Problems and issues of social work service delivery in health and aging.
- 6380. Interdisciplinary Practice: Services for Children with Serious Emotional Disturbances and Their Families (3) Same as CDFR 6380 and PSYC 6380.** Overview of a system of care model to be used across disciplines in mental health services for children with serious emotional disturbances and their families. Prepares professionals to participate in holistic, interdisciplinary team practice in a variety of settings.
- 6392. Social Work Practice in Mental Health (3)** Knowledge and skills needed to practice social work in range of mental health settings.
- 6394. Advanced Policy in Mental Health: A Social Work Perspective (3)** P: Graduate standing in SOCW. Advanced understanding of federal, state, and local policies related to social work practice in mental health settings. Emphasis on professional's role as client advocate in policy decision making and program development.
- 6422. Social Work Practice in Family and Children Services (3)** Theory and modalities of intervention with children and families in various child welfare settings.
- 6426. Advanced Policy in Family and Children's Services (3)** P: Graduate standing in SOCW. Current status of families in American society, social welfare policies, and practices. Family needs and means of advocating for needed changes.
- 6550. Integrative Seminar (3)** P/C: SOCW 6960. Integrates and synthesizes knowledge from all components of the MSW curriculum.
- 6701. Psychopathology: A Social Work Perspective (3)** Bio-psycho-social theoretical and social work perspective on psychopathology.

6702. Social Work's Response to Human Differences (3) P: Graduate standing in SOCW. Incorporates knowledge of human difference and variation into strategies for social work practice. Integrates knowledge of cultures, race, gender, class, rural living, ethnicity, disabilities, human variation, and sexual orientation.

6711. Introduction to Evaluation Research (3) Introduces scientific, analytic approach to building knowledge for social work practice with specific reference to principles and methods of evaluative research as applied to critical examination of evaluative research studies.

6730. Conducting Evaluation Research (3) Evaluation of social work practice, including development of a research question, study design, analysis of both quantitative and qualitative data, and interpretation of results.

6732, 6734. Professional Paper (3,3) Formulation of social work case study. Historic or field work-related research project of professional importance to social work.

6802. Law and Social Work (3) Prelegislative and legislative development and major provisions of laws. Interpretation of laws examined from perspective of significant court opinion related to constitutional rights.

6803. Selected Topics in Human Behavior: A Social Work Perspective (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics in human difference.

6804. Selected Topics in Direct Practice in Social Work (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics.

6805. Selected Topics in Indirect Practice in Social Work (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics.

6806. Selected Topics in Social Work with Families and Children (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics.

6807. Selected Topics in Health and Aging (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics.

6808. Selected Topics in Mental Health: A Social Work Perspective (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics.

6809. Selected Topics in Social Work Research (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics.

6810. Selected Topics in Social Welfare Policy (3) May be repeated. May count a maximum of 12 s.h. toward degree. P: Graduate standing in SOCW. New or advanced topics.

6824. Social Service Policy and Delivery Strategies for Rural and Small Communities (3) Social problems and processes and manner in which social services are delivered in rural setting.

6901, 6902, 6903. Independent Study (1,2,3) Faculty conferences arranged. Student-faculty contract must be approved by MSW program chair. Selected readings, research, or studies related to professional practice.

6940. Field Instruction I (6) Apply social work knowledge and skills to foundation social work practice for three days per week under social work supervision.

6950. Field Instruction II (6) Apply social work knowledge and skills to advanced social work practice for three days per week under social work supervision.

6960. Field Instruction III (6) Apply social work knowledge and skills to advanced social work practice for three days per week under social work supervision.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

BRODY SCHOOL OF MEDICINE

Paul Cunningham, Dean and Senior Associate Vice Chancellor for Medical Affairs

George J. Kasperek, Assistant Dean for Graduate Studies

The Departments of Anatomy and Cell Biology, Biochemistry and Molecular Biology, Microbiology and Immunology, Pharmacology and Toxicology, and Physiology offer graduate programs for the degree of doctor of philosophy. The Brody School of Medicine and the departments of Biology and Chemistry offer the degree of doctor of philosophy in interdisciplinary biological sciences. An interdisciplinary master of science degree in biomedical sciences is also offered. The educational objectives of these programs are to foster scholarship, critical analysis, and creative research activity in a particular field of study. In selecting candidates for admission, the departments give careful attention to individual aptitudes and career goals and design their curricula to complement the students' baccalaureate experiences. Each candidate is encouraged to acquire a broad understanding of human biology in both health and disease and to gain authoritative knowledge in a specific area.

Doctoral studies in the Brody School of Medicine provide opportunities for students to have frequent contact with a wide variety of health science professionals who are concerned with problems relating to human biology.

All of the departments are excellently equipped with state-of-the-art instrumentation necessary for preparative and analytical procedures. Specialized facilities are also available for cell and tissue culture, virological studies, and for the handling of pathogenic and recombinant agents.

Each department considers the laboratory as the major setting for the education of its doctoral candidates. Students are encouraged to begin research activity immediately upon entering the program and are assigned to staff members who supervise them in aspects of a research problem compatible with part-time laboratory work. Students are provided the opportunity to rotate among several faculty, within and outside of a department, before selecting a dissertation preceptor.

PROGRAM REQUIREMENTS AND CURRICULUM

A minimum of 76 s.h. of course work is required for the doctoral program, of which 15-18 s.h. may be in a cognate minor area. If fewer than 76 s.h. of course work and cognates to the major field are required in a plan, a specific statement to justify this plan should be submitted to and approved by the departmental chairperson and the dean of the Graduate School.

A doctoral student may minor in an area acceptable to the graduate faculty of the major department. When a minor is declared, the minor department(s) will be represented on the student's advisory committee. A formal minor consists of a minimum of 15 s.h. earned in course work or 24 s.h. of combined course work and research approved by the graduate faculty of the department(s) of the minor field.

If the candidate meets all admission requirements, most courses required of him or her will be available in the areas of anatomy and cell biology, biochemistry and molecular biology, microbiology and immunology, pathology, pharmacology and toxicology, and physiology in the Brody School of Medicine. Upon approval of the departments concerned, individual needs of students may be met by appropriate graduate courses offered by East Carolina University and by other doctoral programs in the state of North Carolina. All doctoral students must complete HUMS 7004, Ethics and Research: Humanities and Basic Medical Sciences.

Graduate work completed prior to admission to doctoral candidacy will be evaluated by the advisory committee when the individual program of study is developed. Transfer of credit from another university is subject to further approval by the chairperson of the major department and the dean of the Graduate School.

A student whose undergraduate transcript indicates a deficiency in departmental prerequisites may be required to undergo examination to verify competency before admission to graduate study. If a student is admitted deficient in analytical and communicative skills necessary for his or her anticipated program, specific remediation will be prescribed in the student's individual program plan. All such deficiencies must be removed before the doctoral candidacy examination is administered.

INDIVIDUAL PROGRAM PLANS

Student Advisory Committee. The departmental graduate committee will be responsible for designing tentative program plans for all entering students and for evaluating their performance until the individual advisory committee is established.

At the appropriate time, a four-member advisory committee for each student will be appointed by the chairperson of the department. The committee will be chaired by the student's dissertation director. The individual advisory committee will

SECTION 8: CURRICULA

formulate the student's program of study and submit it for review through the departmental chairperson to the dean of the Graduate School. In addition to formulating, administering, and evaluating the doctoral candidacy examination, the committee will have advisory responsibilities in the subsequent development of the dissertation. This advisory committee will administer and evaluate the final dissertation examination. The committee's evaluations and certification that the degree requirements have been fulfilled will be forwarded through the departmental chair to the dean of the Graduate School and the associate dean for research and graduate studies at the Brody School of Medicine.

Doctoral Candidacy Examination. This examination is normally taken after the major course requirements have been completed. Upon passing this examination, the student is admitted to candidacy for the degree, doctor of philosophy. Each candidate is examined for his or her understanding and mastery of a broad field of knowledge, not merely the formal course work completed. The student must demonstrate abilities for critical analysis and synthesis as well as a familiarity with scholarly methods of research. The examination of scientific material shall consist of written and oral components. At the option of the departmental graduate studies committee, a major part of the examination format may be the defense of one or more original propositions developed by the student.

The student's advisory committee, following the administration and evaluation of the candidacy examination, will forward to the Brody School of Medicine Office of Research and Graduate Studies, through the chairperson of the department, one of the following recommendations.

The responses are satisfactory and the student is recommended to candidacy for the doctoral degree.

Some responses are unsatisfactory and the student is to be re-examined at a specific time. Subjects and time are to be set by the advisory committee.

The responses are unsatisfactory, but a full re-examination will be administered during the subsequent semester.

The responses are unsatisfactory and termination of the program is recommended.

Doctoral Dissertation. The dissertation must reflect independent, self-motivated research which contributes significant new knowledge to the candidate's major field. The dissertation should demonstrate the candidate's skills in experimental design and technique. It must be effectively written and demonstrate understanding of the historical foundations of the work as well as a thorough analysis of the strengths, weaknesses, and significance of the results.

Before the candidate begins dissertation research, the candidate's advisory committee must approve a proposal containing the following:

1. A brief review of the pertinent literature.
2. A short statement on the nature of the problem and the objectives of the proposed study.
3. An outline of a feasible research program.

It is the responsibility of the advisory committee to counsel the student in his or her research program, criticize the dissertation, and conduct the final examination. Upon the satisfactory completion of all requirements, the committee and departmental chairperson will recommend to the dean of the Graduate School through the associate dean for research and graduate studies at the Brody School of Medicine, the award of the doctoral degree.

Enrichment. In addition to course requirements, students are encouraged to participate in scholarly activities, such as experience as teaching assistants and involvement in university-wide seminars. Such activities should be considered as components of the overall program of study.

As part of their predissertation course requirements, students are assigned various periods of rotation in research laboratories of individual faculty members to gain perspectives and laboratory experience in areas outside their fields of major interest. As appropriate, assistance will also be sought from other departments of the university to meet special needs of students. Assignment of students to individual faculty members for pre-dissertation rotations may be made by the chairperson or by the student's advisory committee.

TIME LIMITS FOR COMPLETION OF DEGREE REQUIREMENTS

A doctoral degree program must be completed before the end of the twelfth semester, excluding summers, following initial enrollment. With endorsement of the student's advisory committee and the departmental chairperson, a student may request one extension of not more than two semesters, summers included.

PROGRAM COURSES

The courses indicated by an asterisk are required of all candidates. Some courses carry variable hours of credit.

DEPARTMENT OF ANATOMY AND CELL BIOLOGY

Cheryl B. Knudson, Chair, 7N-100A Brody Medical Sciences Building

The Department of Anatomy and Cell Biology is dedicated to the discovery, development, and promotion of biomedical knowledge involving cell biology and the anatomical sciences of Gross Anatomy, Developmental Anatomy, Histology, and Neuroanatomy. Though this mission, we aim to improve human health through innovative educational programs and excellence in research and scholarly activities in a dynamic and diverse learning community.

The Department of Anatomy and Cell Biology is located in the Brody Medical Sciences Building on the west campus of East Carolina University and has thirteen faculty, eight staff, five research fellows, three office support staff, and six to ten doctoral students. Our faculty are actively involved with research areas that include signal transduction; stem cells; educational models and distance learning; cellular senescence and determinants of radiosensitivity in cancer; rearrangements of the cytoskeleton that occur during spermatogenesis; role of delta-catenin, presenilin and cadherins in synaptic remodeling and in cancer; function of tight junctions and claudins in ionic and tissue homeostasis; hyaluronan-CD44 interactions and their influence on BMP-initiated Smad signaling and other signaling pathways; and CD44-initiated signaling pathways that result in enhanced MMP production and extracellular degradation.

Throughout the brief history of the Brody School of Medicine at East Carolina University, the Department of Anatomy and Cell Biology has had an active role in training graduate students. Our former students now hold prestigious postdoctoral, faculty, and professional positions throughout the United States. In addition to our graduate program, we provide instruction to medical, nursing, physical therapy, and physician assistant students.

ANAT: ANATOMY AND CELL BIOLOGY

6290, 6291, 6292. Current Topics in Anatomy and Cell Biology (1,2,3) May be repeated more than once. P: Admission to a BSOM graduate program or consent of chair; Read and discuss literature in selected fields relevant to anatomy. Format and subject matter may be tailored to needs of individual student or small group of students at discretion of chair, student's advisory committee, and faculty member willing to direct readings.

7200. Gross Anatomy and Embryology (8) P: Admission to the Anatomy and Cell Biology graduate program or consent of chair. Human anatomy based on systematic dissection of human body with emphasis on structure-function relationships. Pertinent human embryology and radiologic anatomy integrated topically with area of body being dissected. Relevance of different areas of anatomy and embryology to clinical procedures and/or disease processes presented by practicing clinicians.

7202. Molecular Cell Biology (4) Same as MCB1 7410 P: Admission to a BSOM graduate program or consent of course director. Foundation cornerstone course for students interested in contemporary research career. Principles of modern molecular biology as applied to study of cell structure and function. Fundamentals of molecular and cellular biology of both prokaryotes and eukaryotes, and techniques used to study these problems included. Emphasis on critical analysis of experimental data and the experimental basis of current knowledge of cellular processes.

7210. Histology and Cell Biology (4) P: Admission to a BSOM graduate program or consent of chair; Emphasis on light microscopic features of cells, tissue, and organs. Electron microscopic features of cell organelles studied to highlight functions basic to all cells. Both histological and cell biological features integrated with physiological function, pathological abnormalities, and pharmacological treatment.

7215. Medical Neuroscience (5) Same as PHL 7730 P: Admission to a BSOM graduate program or consent of chair. Comprehensive survey and function of human nervous system, including introduction to clinical neuroscience. Lab sessions include dissection of human brain and study of prospecting specimens.

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7230. Developmental Biology (2-4) Not offered every year. P: Admission to a BSOM graduate program or consent of chair. Discuss contemporary concepts in developmental biology. Human embryological formation clearly traced to various cell and molecular biological mechanisms for clear understanding of their role, which is crucial in understanding normal, abnormal, and oncogenic development in humans.

7240. Research Problems in Cell Biology* (1-3) P: Admission to the Anatomy and Cell Biology graduate program or consent of chair. Register for course for 3 semesters. Allow student to begin research activity and explore thesis research topics under guidance of scientist with ongoing research project. Student carefully guided to formulate hypothesis, design experiments, collect data, analyze data, and make conclusions so that research efforts will have high likelihood for seminar presentation, abstract/poster presentation at a national meeting, or journal publication.

7250. Seminar in Cell Biology* (1) P: Admission to the Anatomy and Cell Biology graduate program or consent of chair. Register for course for 4 semesters. Student will attend dept seminar series comprised of well-respect scientists describing their recent methodology and research results in current and exciting cell biological problems as related to clinical issues. Students present formal seminar in chosen cell biological area under guidance of faculty. Faculty will instruct students in scientific content, proper slide preparation, organization, basic public-speaking skills, handling of audience questions, audience awareness, and stage presence.

7345. Cell Motility (2) Same as BIOC 7345; BIOL 7345 P: General chemistry, organic chemistry, general biology, and general physics; or consent of instructor. Multidisciplinary exploration of mechanism, structure, and function of motile systems essential for eukaryotic life.

9000. Dissertation Research* (3-12) May be repeated. May count maximum of 36 s.h. This course is graded S or U and is not included in meeting the cumulative "B" average required for graduation.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

Phillip H. Pekala, Chair, 5E-124B Brody Medical Sciences Building

Biochemistry is the study of the molecular basis of cellular function. It has evolved into the common language for translating the advances of molecular biology into cellular and chemical terms. In the Department of Biochemistry and Molecular Biology, we study a broad range of cellular activities, from gene transcription to the structure and function of proteins, DNA, RNA, and lipid membranes. Like all biologists, we attempt to correlate structure with function, but at a molecular level of detail, defining not only the structures that govern function, but also the chemical reactions involved.

The field of biochemistry brings together the areas of molecular genetics, cell biology, and each of these headings can be further subdivided into the classical areas of enzymology; structure and function of nucleic acid proteins, carbohydrates, and lipids; metabolism; and biogenetics.

Faculty provide students and postdoctoral fellows with a research experience aimed at understanding fundamental mechanisms and the structural basis of cellular processes. The advances of the next decade will rely on a blend of structural biology, molecular biology, and molecular genetics. We integrate these fields on topics that span from regulation of gene expression and chromatin structure, to cell signaling, cell cycle control, RNA, and protein structure and function, and receptor-ligand or enzyme-substrate interactions. We utilize prokaryotic, nematode, and mammalian model systems and incorporate advanced genomics and proteomics approaches and instrumentation.

We encourage you to contact us and visit our Web site and state of the art facilities, and learn more about research programs and graduate education.

BIOC: BIOCHEMISTRY

7300. Medical Biochemistry (6) P: General chemistry; organic chemistry; general biology; calculus; consent of chair. Emphasis on human biochemistry in chemistry and function of enzymes and other proteins; mechanisms of energy transduction; metabolism of carbohydrates, lipids, amino acids, and proteins; biochemistry of gene and gene expression; tissues and organ metabolism; regulation of metabolism; biochemical aspects of nutrition; and metabolism of abnormal cells.

7301. Biochemistry I* (4) P: General chemistry; organic chemistry; Admission to a BSOM graduate program or consent of chair. Explores relationship of structure, chemical, and physical properties of biomolecules to their biological function. Includes introduction to intermediary metabolism and role of thermodynamics and kinetics in biological systems.

7310. Molecular Biochemistry* (3) P: Admission to a BSOM graduate program or consent of chair. Replication, translation, and expression of genetic information and its regulation.

7330. Introduction to Research (1-6) May be repeated. May count a maximum of 12 s.h. P: Admission to a BSOM graduate program or consent of instructor. Assignment to faculty preceptor. May work with more than one preceptor. Design experimental protocols and collaborate in some aspect of the preceptor's research program.

7335. Seminar in Biochemistry* (1) Registration for fall and spring semesters required. P: Admission to a BSOM graduate program or consent of chair. Formal seminars and student critiques of current literature in biochemistry, concentrating on one topic each semester.

7345. Cell Motility (2) P: General chemistry, organic chemistry, general biology, and general physics; or consent of instructor. Multidisciplinary exploration of mechanism, structure, and function of motile systems essential for eukaryotic life.

7355. Current Topics (1-3) May be repeated with change of topic. P: Admission to a BSOM graduate program or consent of chair. Topics of current importance not covered thoroughly in other courses. Lectures, special reports, or lab work.

8305. Physical Biochemistry (2) P: BIOC 7301; calculus; Admission to a BSOM graduate program or consent of chair. Applies thermodynamics and kinetics to biochemical systems.

8320. Biochemistry II: Regulation of Metabolism (4) Same as EXSS 8320 P: BIOC 7301 or EXSS 7211 or consent of chair. Regulation and integration of metabolism of carbohydrates, lipids, nucleic acids, and amino acids in humans, with an emphasis on primary research literature.

8333, 8336. Research (3,6) May be repeated. P: Admission to the PhD graduate program in Biochemistry & Molecular Biology or consent of chair. Design of experimental protocols and participation in preceptor's research program.

9000. Dissertation Research* (3-12) May be repeated. May count for a maximum of 36 s.h. This course is graded S or U and is not included in meeting the cumulative "B" average required for graduation.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

DEPARTMENT OF BIOETHICS AND INTERDISCIPLINARY STUDIES

Maria Clay, Chair, 2S-17 Brody Medical Sciences Building

The Department of Bioethics and Interdisciplinary Studies carries out a three-fold mission of professional education, research, and service. The department teaches required courses in all four years of medical school, including courses on the ethical and social aspects of medicine in the first and second years, case-based ethics seminars with third-year students during their various clinical clerkship rotations, and "selective" in ethics, law, philosophy, history, literature, and social policy for fourth-year students. In addition, the faculty teach a graduate course for the basic science students.

Department faculty are actively involved in research programs and publish widely in peer reviewed philosophy, bioethics, law, history, and medical journals.

The department contributes to the intellectual life of the university, the medical center, and the community through its Perspectives Lecture Series, its Readers Theater Company, and participation in a variety of continuing education programs. Faculty members also serve on school of medicine, university, and hospital committees, including those which address ethical issues.

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HUMS: MEDICAL HUMANITIES

7004. Ethics and Research: Humanities and Basic Medical Sciences (2) Same as GRAD 7004 and NURS 7004 May not receive credit for both GRAD 7004 and HUMS 7004. Identifies some philosophical, moral, political, legal, and social issues associated with scientific research. Explores relationship between moral, legal, professional, social, and institutional responsibilities of working scientist. Develops critical skills for understanding and evaluating arguments, claims, and policies pertaining to moral, political, legal, and social aspects of research.

DEPARTMENT OF COMPARATIVE MEDICINE

Dorcas O'Rourke, Chair, 208 Ed Warren Life Sciences Building

The Department of Comparative Medicine (DCM) is a basic science department in the Brody School of Medicine dedicated to supporting high quality science through excellent animal care.

Comparative Medicine personnel provide husbandry, technical and diagnostic services, veterinary care, surgical support, and assistance in protocol design. Faculty and staff also support the Institutional Animal Care and Use Committee's activities.

There are two primary facilities operated by DCM, located on the Health Sciences Campus. Additional housing space is located on the East Campus and West Research Campus. Total square footage of facilities exceeds 75,000 SF. DCM facilities are capable of housing a wide variety of species. Quarantine, barrier and containment housing are also available. A fully staffed and equipped surgical suite and diagnostic laboratory are available for research support. The animal care and use program at East Carolina University is USDA registered, maintains a PHS Assurance, and is fully accredited by AAALAC, International.

For more information about The Department of Comparative Medicine, please e-mail (dcm@ecu.edu) or call 252-744-2420.

CMED: COMPARATIVE MEDICINE

8100. Animal Research Methods (2) Formerly CMED 6100 P: Consent of instructor. Use of mammalian subjects in biomedical research. Emphasis on rationale for species and strain selection, ethics of animal use, regulation of animal experimentation, diseases affecting research results, surgical technique, and experimental procedures.

DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

C. Jeffrey Smith, Chair, 5E-106 Brody Medical Sciences Building

The primary missions of the Department of Microbiology and Immunology are research and teaching revolving around the education of students in pursuit of the PhD and MD degrees. Our program is multi-disciplinary by nature and we offer students research opportunities in a broad range of disciplines, including bacterial and viral pathogenesis, cancer biology and cellular immunology. Students will find the program intellectually challenging yet comfortable with easy access to faculty and a favorable faculty to student ratio that fosters daily interactions. We provide a unique research environment for students where they learn the basic tools needed to succeed in biomedical research and which encourages the development of independent thought as they pursue more advanced training during the completion of their dissertation research projects.

The study of infectious diseases and our immune defenses is vital to society as we continue to fight new threats arising from emerging infectious diseases and cancer; resistance to antimicrobial agents, and bioterrorism. Our outstanding faculty and faculty affiliates use a wide array of molecular and genetic approaches to probe the underlying mechanisms of microbial pathogenesis, antibiotic resistance, cancer cell signaling, autoimmunity and macrophage biology. These experienced researchers are housed in two locations, with eight faculty located in the Brody Medical Sciences building and six faculty in the adjacent Biotechnology Building. The faculty have a history of hosting nationally funded research programs which provide the students with relevant training in important problems in biomedical sciences.

Students entering our program will gain research experience in their first semester as they rotate through laboratories and begin to establish relationships with prospective mentors who will guide them through an independent research project. This research experience builds on the knowledge gained from advanced course work in genetics, medical microbiology, and immunology. Upon completion of their degree they will have the broad background necessary to evaluate complex research problems that are the center of today's interdisciplinary research projects. The graduates from our program are well prepared to enter a job market that is rapidly expanding in its need for qualified research scientists.

MCBI: MICROBIOLOGY AND IMMUNOLOGY

7400. Medical Microbiology and Immunology I (4) P: BIOC 730I or equivalent; Admission to a BSOM graduate program or consent of chair. Basic concepts and principles of immunology, genetics, and virology as they pertain to medical microbiology and medicine. Introduction to cellular and humoral aspects of the immune system and to mechanisms of host resistance to infectious disease. Survey of medically important viruses. Emphasis on biochemical anatomy, mechanisms of pathogenesis, lab diagnosis, and methods of control and prevention of infection.

7401. Medical Microbiology and Immunology II (4) P: MCBI 7400; Admission to a BSOM graduate program or consent of chair. Basic principles of medical bacteriology, mycology, and parasitology. Emphasis on mechanisms of pathogenesis, methods of laboratory diagnosis, and methods of control and prevention of diseases caused by these organisms. Content includes anatomy, physiology and genetics of medically important species of bacteria, fungi, animal parasites, and lab exercises.

7410. Molecular Cell Biology (4) Same as ANAT 7202 P: Admission to a BSOM graduate program or consent of course director. Foundational cornerstone for students interested in a contemporary research career. Principles of modern molecular biology as applied to study of cell structure and function. Includes fundamentals of molecular and cellular biology of both prokaryotes and eukaryotes, and techniques used to study these problems. Emphasis on critical analysis of experimental data and experimental basis of current knowledge of cellular processes.

7420. Physiology and Ultrastructure of Microorganisms I (4) P: MCBI 7400 or consent of instructor. Advanced topics in molecular genetics and biochemical and physical organization of prokaryotic organism. Focuses on relationships of structure to function, growth, and metabolism and genetic mechanisms that regulate these activities in environment. Offered in spring semester of odd-numbered years.

7430. Cytometric Technologies (3) Same as PATH 7430 The principles, instrumentation and methodologies of cytometry, with emphasis on flow cytometry and confocal microscopy.

7440. Advanced Molecular Genetics (4) P: MCBI 7410 or consent of course director. Detailed, critical presentation of molecular structure-function relationship in stability, dynamics, and expression of genetic information of both prokaryotic and eukaryotic cells. State-of-the-art analytical and synthetic approaches to molecular genetic problems.

7450. Immunology (4) P: MCBI 7400 or consent of course director. Concise presentation of immunology, immunity, and immunopathology. Immunology includes principles of induction and expression of specific immune responses. Immunochemical and cellular principles of immune responses. Immunity includes role of immune reactions in infections and cancer. Immunopathology emphasizes roles of immune system in tissue damage and disease.

7460. Advanced Virology (3) P: MCBI 7401 or consent of course director. Topics covered include basic viral structure and classification, replication, genetics, pathogenesis, viral vectors, emerging viruses, and antiviral strategies and vaccines. Current and emerging issues in virology covered by reading and discussing most recent scientific literature.

7480. Seminars in Microbiology and Immunology* (I) May be repeated. May count maximum of 5 s.h. Microbiology and immunology students required to register each fall and spring semester while pre-candidates. P: Admission to a BSOM graduate program or consent of course director. Program of formal seminars and student journal club presentations focused on current topics in microbiology and immunology.

7490. Topics in Microbiology and Immunology (I-4) May be repeated. May count maximum of 5 s.h. P: MCBI 7400 or equivalent; Admission to the Microbiology and Immunology graduate program or consent of chair. Critical presentation of topics of current importance in microbiology and immunology and focusing on a particular subdiscipline, problem, or group of organisms.

7498. Problems in Microbiology and Immunology* (I-8) May be repeated. May count maximum of 12 s.h. P: Admission to the Microbiology and Immunology graduate program or consent of chair. Supervised nondissertation research in microbiology or immunology. For the first two semesters registered, the student ordinarily is assigned to a different faculty preceptor. Two preceptorships will ordinarily be required of each doctoral student.

9000. Dissertation Research* (3-12) May be repeated. May count maximum of 36 s.h. This course is graded S or U and is not included in meeting the cumulative "B" average required for graduation.

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9001. Dissertation: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

DEPARTMENT OF PATHOLOGY AND LABORATORY MEDICINE

Peter Kragel, Chair, 2S-10 Brody Medical Sciences Building

The Department of Pathology and Laboratory Medicine accepts PhD students through the Interdisciplinary Program in the Biological Sciences.

PATH: PATHOLOGY

6840. Clinical Practicum in Pathology Assistant Studies I (2) Introduction to pathology assistant duties, including observation and supervised prosection of surgical and autopsy specimens, clinical anatomy, dictation, and specimen photography.

6841. Clinical Practicum in Pathology Assistant Studies II (2) P: PATH 6840. Supervised prosection of basic and intermediate complexity surgical and autopsy specimens, dictation, specimen photography, and clinical anatomy.

6842. Clinical Practicum in Pathology Assistant Studies III (2) P: PATH 6841. Supervised prosection of basic and intermediate complexity surgical and autopsy specimens, dictation, specimen photography, and clinical anatomy, and introduction to examination of highly complex specimens.

6843. Clinical Practicum in Pathology Assistant Studies IV (2) P: PATH 6842. Supervised prosection of basic, intermediate, and highly complex surgical and autopsy specimens, dictation, specimen photography, and clinical anatomy.

7430. Cytometric Technologies (3) Same as MCBI 7430 The principles, instrumentation and methodologies of cytometry, with emphasis on flow cytometry and confocal microscopy.

8800. Principles of Pathology (4) P: Consent of course director. Cell injury, cell death, acute inflammation, chronic inflammation, regeneration and repair, pigments and mineralization, thrombosis and infarction, teratogenesis and oncogenesis, etiogenesis of cancer, genetic disease, auto-immune disease, bacterial disease, and nutritional disease.

8801. Systemic Pathology (8) P: PATH 8800; consent of course director. Cardiovascular system, hematopathology, respiratory system, gastrointestinal system, including liver and pancreas, kidney, reproductive pathology, endocrinology, nervous system, skin and musculoskeletal system.

8805. Contemporary Pathobiology (2) May be repeated. P/C: PATH 8800; consent of instructor. Disease processes from ultrastructural, developmental, immunological, cellular, and molecular points of view. Illustrative examples of experimental models and molecular aspects of disease processes.

8815. Seminar in Pathology (1) May be repeated. May count a maximum of 6 s.h. P: Admission to a BSOM graduate program or consent of course director. Critique of current literature in pathology, concentrating on one topic each semester. Seminar presentation.

9000. Dissertation Research (3-12) May be repeated. May count for a maximum of 36 s.h. This course is graded S or U and is not included in meeting the cumulative "B" average required for graduation.

9001. Dissertation: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

David A. Taylor, Chair, 6S-12 Brody Medical Sciences Building

The Department of Pharmacology and Toxicology in the Brody School of Medicine prepares students to begin a career related to studying the biological actions of chemicals. Our goal in this process is to provide students the necessary skills and background to become independent research scientists. Recognizing that many alternative careers also exist for graduates, we strive to provide a breadth of exposure and direction that permits students to contribute effectively and successfully in many other types of employment opportunities.

Modern research in the pharmacological sciences involves the application of experimental technologies brought from a variety of different disciplines including biophysics, biochemistry, molecular and cellular biology and clinical medicine to develop a better understanding of drug action and physiological function. The faculty of the department has diverse backgrounds and is actively involved in research in the broad areas of: cardiovascular pharmacology, neuropharmacology, pulmonary pharmacology and behavioral pharmacology. We believe that the training opportunities that exist in the department provide an integrative exposure to the disciplines of pharmacology and toxicology that enable graduates to be successful.

PHAR: PHARMACOLOGY

7601. Medical Pharmacology for Health Sciences I (3) Lectures only. P: Bachelor's or master's degree in science or health profession; or consent of chair. Survey of pharmacodynamics, pharmacokinetics, adverse effects, and pharmacotherapeutic principles of drugs affecting autonomic, cardiovascular, respiratory, renal, and central nervous systems.

7602. Medical Pharmacology for Health Sciences II (3) Lectures only. P: Bachelor's or master's degree in science or health profession; or consent of chair. Survey of pharmacodynamics, pharmacokinetics, adverse effects, and pharmacotherapeutic principles of anesthetic, antimicrobial, antineoplastic, endocrine, and other therapeutic agents. Includes toxicology and treatment of poisonings.

7603. Pharmacology for Health Sciences (4) P: Bachelor's or master's degree in science or health professions or consent of chair. Survey of pharmacodynamics, pharmacokinetics and adverse effects of drugs in various categories.

7604. Pharmacology for Health-Related Sciences (5) P: Bachelor's or master's degree in science or health professions or consent of chair. Survey of pharmacodynamics, pharmacokinetics and clinical aspects of drugs including clinical case conferences.

7605. Seminar (1) Formerly PHAR 6605 May be repeated. P: Admission to a BSOM graduate program or consent of chair. Formal presentation and exchange of research ideas and scientific journal articles by faculty, distinguished guest speakers, and students will also be periodically critiqued.

7609. Introduction to Pharmacology (3) Formerly PHAR 6609 P: PHLY 7702 or BIOC 7301 or consent of chair. History and scope of pharmacology; pharmacokinetics including the quantitative principles of uptake, distribution, biotransformation and elimination of drugs; and pharmacodynamics including dose-response relationships, and cellular mechanisms of drug actions.

7610. Basic Mechanisms of Drug Action (3) Formerly PHAR 6610 P: PHAR 7609; BIOL 5800 or equivalent; PHLY 7702; or equivalent; or consent of chair. Fundamental mechanisms by which drugs affect physiology and biochemistry of living systems at macromolecular, cellular, organ, systemic, and multisystemic levels related to the pharmacotherapeutic actions of drugs.

7614. Research Procedures I (2) P: Admission to graduate program in the Department of Pharmacology and Toxicology or consent of chair. Scheduled, fixed time assignment of new graduate students to the research laboratories of various department faculty members. Introduces new students to research programs of each department faculty member, prepares them for selection of an appropriate dissertation advisor and also develops and assesses basic research skills.

7615. Research Procedures II (2) Formerly PHAR 6615 May be repeated. P: PHAR 7614; Admission to the graduate program in the Department of Pharmacology and Toxicology. Directed research in the laboratory of the faculty member assigned for direction of preliminary studies for dissertation research.

SECTION 8: CURRICULA

7640. Pharmacology of the Central Nervous System (3) Formerly PHAR 6640 P: BIOC 7301; PHLY 7702; or consent of chair. Basic neuropharmacological principles. Theories dealing with mechanisms of action of CNS drugs. Causes and treatment of major psychiatric and neurological disorders and basis of drug abuse taught through directed literature readings and class presentations and discussions.

7660. Cardiovascular Pharmacology (3) Formerly PHAR 6660 P: PHLY 7702 or BIOC 7301 or consent of chair. Pathophysiology and pharmacotherapeutics of cardiovascular diseases through directed literature readings, class presentations and discussions.

7665. Pedagogy in Pharmacology (2) P: Successful completion of doctoral candidacy exam in the Department of Pharmacology and Toxicology; consent of chair. Instruction, mentoring, and supervision in teaching of topics in pharmacology to health science, doctoral, and/or medical students.

7670. Advanced Research Techniques (3) Formerly PHAR 6670 P: PHAR 7609 or equivalent; or consent of chair. Advanced lab techniques in biomedical research. Molecular cloning, protein methods, equilibrium binding analysis, enzyme assays, microscopy, isolated tissue preparations, anesthesia, stereotaxic surgery, and behavioral paradigms.

7680. Toxicology (3) P: PHLY 7702 or BIOC 7301 or consent of chair. Principles of toxicology and the mechanisms that underlie toxic effects from the subcellular to the organism level will be discovered. In addition, patterns of toxicity of specific chemicals will be discussed, as well as how those results can be employed in risk assessment.

7777. Practical Problems in Biometry (3) P: College algebra; Admission to a BSOM graduate program or consent of chair. Provides working knowledge of experimental design, analysis of variance, and other techniques.

8601. Medical Pharmacology I* (5) Lectures, small-group conferences, and computer-assisted labs. P: BIOC 7301; PHLY 7702; or consent of chair. Survey of pharmacodynamics, pharmacokinetics, adverse effects, and pharmacotherapeutic principles of drugs affecting autonomic, cardiovascular, respiratory, renal, and central nervous systems.

8602. Medical Pharmacology II (5) Lectures, small-group conferences, and clinical practicum. P: PHAR 8601. Survey of pharmacodynamics, pharmacokinetics, adverse effects, and pharmacotherapeutic principles of anesthetic, antimicrobial, antineoplastic, endocrine, and other therapeutic agents. Includes toxicology and treatment of poisonings.

9000. Dissertation Research (3-12) May be repeated. May count maximum of 36 s.h. This course is graded S or U and is not included in meeting the cumulative "B" average required for graduation.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

DEPARTMENT OF PHYSIOLOGY

Robert M. Lust, Chair, 6N-98 Brody Medical Sciences Building

Physiology is an integrative science that studies organism function. The discipline integrates concepts from the physical and biological sciences to better understand how organs and organ systems support life, and as such, is foundational to the practice of medicine and biomedical research. The Graduate Program in Physiology in the Brody School of Medicine at East Carolina University provides students with a solid foundation in fundamental principles of physiology and prepares them to appreciate, explore and discover the world of biomedical research.

The Department provides a collaborative environment where faculty and students pursue questions of joint interest in Cardiovascular and Pulmonary Physiology, Bioenergetics, and Neuroscience. Our research programs represent a unique integration of molecular and cell biology with organ level, whole animal and clinical studies; and projects are routinely conducted in concert with investigators from other departments both inside and outside of East Carolina University.

We emphasize an integrative approach to biomedical science, with expertise in research methods for investigating the mysteries of heart function, pulmonary and vascular regulation, metabolism and bioenergetics, stem cell differentiation, nerve regeneration and circadian rhythms.

PHLY: PHYSIOLOGY

6330. Human Physiology (5) P: BIOL 1050, 1051; CHEM 1120. Physiological principles fundamental to living tissue. All body systems studied as they relate to normal and pathological conditions in humans.

6700. Medical Physiology (8) P: Consent of chair. Foundation in principles of normal function of human body. Emphasis on human physiology. Basic physiological processes in health covered through lectures, conferences, demonstrations, and experimental lab sessions, with special emphasis to integrated nature of organ system function.

6725. Membrane Transport Processes (2) P: Admission to a BSOM graduate program or consent of chair. Current theories of electrolyte and non-electrolyte transport processes at cellular and organ levels.

6730. Cellular Neurophysiology* (3) P: Admission to a BSOM graduate program or consent of chair. Development of theoretical and experimental evidence underlying modern concepts of bioelectric phenomena. Current concepts of membrane structure, metabolism, resting and action potentials, ionic fluxes, and techniques used in electrophysiological research. Seminars with emphasis on critical evaluation of pertinent original research papers.

6735. Renal, Acid-Base Physiology (2) P: Admission to a BSOM graduate program or consent of chair. Selected topics.

6738. Special Topics in Endocrinology (2) May be repeated. P: Admission to a BSOM graduate program or consent of chair. Selected topics may include adrenal, reproductive, pituitary or thyroid physiology. Lectures and formal seminar presentation.

7701. Graduate Cellular Physiology (3) P: BIOC 7301 or equivalent; PHLY 7702 or equivalent. Advanced study of eukaryotic cell function. Emphasis on membrane biophysics, signal transduction, and control of proliferation and differentiation.

7702. Graduate Organ Systems Physiology* (5) P: BIOC 7301 or consent of chair. Advanced survey of physiological principles underlying cardiovascular, respiratory, renal, and endocrine systems.

7703. Graduate Neuroscience* (4) P: BIOC 7301, ANAT 7202/MCBI 7410; or consent of chair. Principles of neuroscience including current research at the system, cellular, molecular, and genetic levels.

7704. Physiological Proteogenomics (4) P: ANAT 7202 or MCBI 7410; BIOC 7301; PHLY 7702; or equivalent level course; or consent of course director. Advanced study of Proteogenomics as tool for elucidating functional mechanisms in whole organism. Bioinformatics as an approach to understanding genome/proteome data, and animal models for testing hypotheses on functions of specific gene products. State-of-the-art analytical and synthetic approaches to biomedical problems presented.

7705. Translational Physiology* (3) P: PHLY 6700; or 7701, 7702; or consent of chair. Translational research bridges gap from research laboratory to clinic. Physiological basis of diseases of cardiovascular, respiratory, and renal systems. Examines integrated function of organ systems and how current research hopes to delay or completely prevent the progression of disease.

7710. Advanced Topics in Physiology (3) May be repeated. P: PHLY 7702; or consent of chair. Selected research topics.

7715. Seminar in Physiology* (1) May be repeated. P: Admission to a BSOM graduate program or consent of chair. Selected topics of current interest.

7730. Medical Neuroscience (5) Same as ANAT 7215 P: Admission to a BSOM graduate program or consent of chair. Comprehensive survey of structure and function of human nervous system, including introduction to clinical neuroscience. Lab includes dissection of human brain and study of prosected specimens.

7733. Sensory Systems Neurophysiology (3) P: PHLY 6700; or 7702; or consent of chair. Basic principles of functional organization of somatic and special sensory systems. Emphasis on synaptic processing of sensory information.

SECTION 8: CURRICULA

- 7740. Introduction to Research* (3)** May be repeated. P: Admission to a BSOM graduate program or consent of chair. Collaborative or independent research in variety of physiology specialty areas, including research in preparation for doctoral dissertation.
- 8710. Advanced Topics in Physiology (2)** May be repeated. P: PHL 7702; or consent of chair: Selected research topics.
- 8720. Respiratory Physiology (2)** P: PHL 7702, 7704, 7705; or consent of chair: Selected topics in lung mechanics, pulmonary function testing, pathophysiology, and pathogenesis.
- 9000. Dissertation Research* (3-12)** May be repeated. May count maximum of 36 s.h. This course is graded S or U and is not included in meeting the cumulative "B" average required for graduation.
- 9001. Dissertation: Summer Research (1)** May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

THE DEPARTMENT OF PUBLIC HEALTH

Lloyd F. Novick, Director, 1709 W. 6th St., Hardy Building

The master of public health (MPH) requires 45 s.h., comprising 39 s.h. of course work, a major professional paper, and an internship for students without sufficient previous professional experience in public health. The program is delivered through the Department of Public Health, Brody School of Medicine. Admissions is through the ECU Graduate School.

The curriculum is divided among the following components: 24 s.h. in core required courses: interdisciplinary rural health diagnosis and planning, fundamentals of environmental health, public health practice, advanced public health practice, behavioral science and health education, research methods, epidemiology, and biostatistics; 6 s.h. in applications (field placement, professional paper); and 15 s.h. in required courses and electives in one of two specific concentrations: health education and promotion; or analysis and management. In addition to attaining basic public health competencies, MPH graduates must also attain concentration specific competencies. The field placement experience consists of 240 hours of service. The professional paper serves as a capstone, applied-learning experience. It will typically describe a public health action, intervention, or an increase in knowledge useful to public health practice that has resulted from the student's internship experience, professional employment or research. For detailed information, see the Program Manual (www.ecu.edu/dph).

MPH REQUIREMENTS

The master of public health requires a minimum of 45 s.h. as follows:

- 1. Core required courses24 s.h.
MPH 6000, MPH 6002, MPH/EHST 6010, MPH 6011, MPH/HLTH 6013, MPH 6020, MPH/NURS 6035, BIOS 7021
- 2. Applications 6 s.h.
MPH 6903; MPH 6991 and 6992; or MPH 6904; MPH 6905; and MPH 6991 and 6992
- 3. Concentrations/Electives15 s.h.
Chosen in consultation with advisor for concentrations, areas of emphasis, or joint degree programs.

Concentration in Health Behavior

MPH 6027, 6600, and 6605 are required.
6 s.h. of electives are selected by the student in consultation with his or her concentration advisor.

Concentration in Public Health Analysis and Management

Any three may serve as concentration courses; any two may be electives.
COHE 6100, 6300, 6310, 6600; HIMA 5060; MPH 6022, 6023, 6025, 6040, 6100, 6200; PADM 6160, 6161, 6162, 6400.
6 s.h. of electives are selected by the student in consultation with his or her concentration advisor.

Dual MD – MPH degree

The MPH degree requires 45 s.h. and can be completed by medical students by taking MPH course work during a leave of absence between the second and third year of medical school as well as during summer vacations. A leave of absence to

pursue the MPH degree may be granted to students in the Brody School of Medicine who have been accepted into the MPH program, have completed Step I of the USMLE, and are in good standing in the medical school.

Certificate in Community Health Center Administration

In cooperation with the Department of Health Services and Information Management, students seeking the MPH and nondegree students may take **15 s.h.** for completion of a certificate in community health center administration. Required courses are: COHE 6100, 6310, 6600; HIMA 5060; MPH 6200.

Admission priority is given to individuals enrolled in the MPH degree or another graduate degree related to community health center administration or who are employed in community health centers. Individuals outside these three groups and without significant work experience in a community health center are required to take COHE 6000, MPH 6000, or equivalent.

Admission and other requirements are available from the director of the certificate program in community health center administration in the Department of Public Health.

Certificate in Ethnic and Rural Health Disparities

The certificate in ethnic and rural health disparities prepares professionals to identify, analyze and develop culturally competent projects for specific ethnic and rural communities in the United States and global communities around the world. The certificate program requires **12 s.h.** and is entirely online. MPH 6005, 6007, 6008, 6009 are required. A student may earn only 3 s.h. of credit per semester. Credit hours may transfer to MPH degree if accepted.

MPH: PUBLIC HEALTH

6000. Public Health Practice (3) Foundation for public health administration. Introduces MPH degree program. Applied focus on public health problems, issues, and resources of eastern North Carolina. Describes how empirical assessment of population health status informs managerial decision-making and describes the organization of the public health infrastructure. Overview range of practice in public health and of tools and resources for health improvement.

6002. Advanced Public Health Practice (3) P: MPH 6000 or consent of instructor. Core issues and skills for public health administration and practice. Focuses on public health law, ethics, legislation, information systems, media relations, marketing, human services management, and emergency preparedness.

6003. Occupational Health (3) Assessment of occupational health problems and risk factors focusing on analyzing and reducing health hazards in the workplace.

6005. African-American Health (3) Comprehensive, holistic, and sociocultural perspective focusing on national, regional, state, county and local African-American health and health disparity issues leading toward developing public health interventions.

6006. Making Sense of Data (3) Interpretation and use of public health data. Overview of public health data management and decision making skills by the use of real life examples.

6007. Global Public Health (3) Explores the issues related to the fields of medical anthropology and public health leading toward developing global health interventions.

6008. Ethnic Health and Health Disparities (3) Explores the issues related to ethnic health and health disparities, leading toward developing new public health intervention programs.

6009. Capstone Experience in Ethnic Health and Health Disparities (3) P: MPH 6005, 6007, 6008; or consent of instructor. Integrates critical thinking concepts, research strategies, public health skills, and culturally competent training culminating in a final project.

6010. Fundamentals of Environmental Health (3) Same as EHST 6010 Effects of environment on human health with focus on rural environment. Considers water supply and wastewater disposal, water quality, solid and hazardous wastes, air quality, occupational health and safety, food protection, and vector control.

SECTION 8: CURRICULA

- 6011. Introduction to Epidemiology (3) Same as HLTH 6011** Introduces methods and concepts of epidemiologic methodology and application of epidemiology in public health.
- 6013. Behavioral Sciences and Health Education (3) Same as HLTH 6013** Introduces concepts of role of social factors in health and illness as well as health education/promotion. Overview of relationships between various social factors, with health outcomes. Includes theories and approaches of health education/promotion programs.
- 6020. Research Methods (3)** Synthesize material from social and behavioral sciences, biostatistics, and epidemiology to better understand health problems.
- 6021. Epidemiology of Chronic Disease (3)** P: MPH 6000, 6011; or consent of instructor. Epidemiologic measures, statistical methods, and quantitative models specific to chronic disease epidemiology.
- 6022. Epidemiology of Infectious Disease (3)** P: MPH 6000, 6011; or consent of instructor. Provides concepts involved in understanding causes, transmission, and control of infectious disease as well as policies, methods, and tools employed in surveillance, detection, investigation, control, and prevention of disease outbreaks.
- 6023. Epidemiology of Cancer (3)** P: MPH 6000, 6011; or consent of instructor. Study design and epidemiologic methods used in cancer epidemiology research.
- 6025. Delivery of Healthcare Services (3)** P: MPH 6000; or consent of instructor. Overview of delivery and effective leadership of healthcare services.
- 6027. Applied Mixed-Methods Research (3)** P: MPH 6020; BIOS 7021 or consent of instructor. Mixed-methods data collection and analysis, with focus on use of qualitative and quantitative software.
- 6035. Interdisciplinary Rural Health (3) Same as NURS 6035** Theoretical base and skills for interdisciplinary rural health practice.
- 6036. Fundamentals in Agromedicine (3)** Occupational and environmental illnesses, injuries, and prevention in agriculture (farming, fishing, and forestry).
- 6040. Long Term Care Administration (3)** P: MPH 6000 or consent of instructor. Overview of delivery of long term care services with an emphasis on the knowledge and skills needed for effective leadership.
- 6050, 6051, 6052. Independent Study (1,2,3)** May be repeated. May count a maximum of 6 s.h. toward degree. P: Consent of advisor. Study of topic not otherwise offered in public health curriculum or in greater depth than is possible within context of regular course.
- 6100. Aging and Health (3) Same as GERO 6100; SOCI 6100** P: Consent of instructor or Center on Aging associate director for educational programs. Analysis of behavioral, social, and cultural influences upon health status of older adults and intervention strategies.
- 6200. Community Health Organization and Leadership (3)** P: COHE 6000 or MPH 6000 or consent of instructor. Leadership, community organization, planning, advocacy and communication skills for administration of community health centers and integrated health care systems.
- 6600. Planning Public Health Programs (3)** P: MPH 6013. Development and delivery of public health programs.
- 6605. Evaluating Public Health Programs (3)** P: MPH 6013, 6600. Evaluation of public health programs, including formative, process, impact, and outcome evaluation.
- 6610. Nutrition and Public Health Issues (3) Same as NUTR 6610** P: Consent of instructor. Examines science base for community nutrition, including problem identification, interpretation of nutritional data and scientific issues, public health policy, societal and health trends, and emerging legislative issues related to nutrition and public health.
- 6670. Public Health Perspectives on Maternal and Child Health (3)** P: Enrollment in Master of Public Health degree program or permission of instructor. Introduces students to maternal and child health (MCH), with primarily a domestic focus. Emphasis on understanding the role policies and programmatic issues play in MCH. Students will gain an understanding of key issues for MCH populations.

6903. Comprehensive Field Placement (3) 240 hour field placement. P: Consent of instructor. Students must have substantial previous experience in public health at the professional level to be eligible for this course. Project development and demonstration of academic knowledge with learned public health core competencies in professional public health practice settings.

6904. Introduction to Field Placement (1) P: MPH 6000, MPH 6002, MPH/EHST 6010, MPH 6011, MPH/HLTH 6013, MPH 6020, MPH/NURS 6035, BIOS 7021; or consent of instructor. Introduces the student to leaders from different healthcare entities; providing information and discussion on both field placement and career ladder opportunities in their specific healthcare domains.

6905. Applied Field Placement (2) 240 hour field placement. P: MPH 6904. Demonstration of academic knowledge with learned public health core competencies in professional public health practice settings.

6991, 6992. MPH Professional Paper (2,1) May be repeated. Only 3 s.h. may count towards the degree. P for 6991: MPH 6000, 6002, 6011, and 6020 or consent of instructor. P for 6992: All core courses or consent of instructor. Includes applied learning exercise on the implementation of public health and epidemiologic research methodology. Students develop a research proposal (6991); implement their proposal, analyze their results, and write a public health research article (6992) that is ready for submission to a peer-reviewed scientific journal.

DEPARTMENT OF RADIATION ONCOLOGY

Julian Roseman, Interim Chair, 166 Leo W. Jenkins Cancer Center

Radiation oncology at East Carolina University's (ECU) Brody School of Medicine combines big-city services with small-town friendliness. ECU boasts the most advanced radiotherapy technology in the state of North Carolina, and is the only academic center in the state with both a Gamma Knife and a CyberKnife for optimal radiosurgery from head to toe.

We are located at the Leo W. Jenkins Cancer Center in Greenville, North Carolina, which is the most comprehensive cancer treatment, academic, and research center in our region. Cancer patients who meet the eligibility criteria may stay free of charge at the American Cancer Society's McConnell-Raab Hope Lodge during radiation treatments. The Hope Lodge is conveniently located just one mile away from the Leo W. Jenkins Cancer Center.

Our ECU Radiation Oncology team is the largest, most experienced, and diverse team ever assembled in Eastern North Carolina. Our expert team has been able to bring the latest radiation technologies to our region. Our radiation oncology facility is fully accredited by the American College of Radiology, which sets us apart from all the radiation oncology practices in the region. Our services include a wide array of cutting-edge treatment options, such as CyberKnife radiosurgery, Image Guided Radiation Therapy (IGRT), Hypofractionated IGRT for early stage lung cancer, Intensity Modulated Radiation Therapy (IMRT), prostate seed implants, Photodynamic Therapy (PDT), MammoSite for breast cancer, TheraSphere for liver cancer, Zevalin for lymphoma, and Gamma Knife radiosurgery that promise to raise the quality of life of our patients by maximizing results and minimizing side-effects.

These innovative technologies require a team of dedicated physicists and other supporting staff that constantly work behind the scenes. Our team performs rigorous quality assurance checks so that you get the full benefits of our advanced technology. We are very proud of our high quality assurance standards that help us deliver the safest and most reproducible treatments possible.

RONC: RADIATION ONCOLOGY

6718. Therapeutic Radiological Physics (3) Same as PHYS 6718 P: Consent of chair. Production, application, and measurement of electromagnetic radiation and high energy particle beams in therapeutic practice. Emphasis on conceptual, instrumental, and methodological aspects of therapeutic radiology.

6992. Radiation Therapy Physics (3) Same as PHYS 6992 P: PHYS 6718 or RONC 6718. Radiation dose calculation and measurement of high energy photon and electron beams, high and low dose rate brachytherapy sources in clinical radiation therapy, cavity theory in ion chamber calibrations of photon and electron beams. Quality assurance, acceptance testing and commissioning of equipment for clinical radiation therapy (linear accelerators, HDR, TLD, simulator, CT scanner).

SECTION 8: CURRICULA

6993. Clinical and Medical Dosimetry (2) Same as PHYS 6993 P: PHYS 6992 or RONG 6992. Practical patient dosimetry problems in radiation oncology. Irregular field calculations, two-and three-dimensional treatment planning, isodose distribution, high and low dose rate brachytherapy planning for intracavitary, and interstitial radioactive sources.

7370. Biological Effects of Radiation (4) Formerly RONG 5370 P: BIOL 1100, 1101, 1200, 1201; or consent of instructor. Biological effects resulting from interactions of radiation and matter for scientifically, technically, and medically oriented students.

INTERDEPARTMENTAL

INTE: INTERDEPARTMENTAL

6200. Statistics and Computing for Biomedical Research (3,3) 2 1-hour lectures and 1 3-hour lab per week. P: BS in a science discipline or consent of instructor. Key statistical methods. Hands-on experience utilizing computer-based tools. Topics such as lab data acquisition, data summarization, graphical display, computer interfacing, and use of SAS, SPSS, BMDP, and STATPAK for data management and statistical analysis.

INTERDISCIPLINARY PROGRAMS

INTERDISCIPLINARY PROGRAM IN BIOLOGICAL SCIENCES

Terry L. West, Director, BN-108 Howell Science Complex

The interdisciplinary program in biological sciences brings together students and faculty from multiple disciplines to study a broad variety of interesting biological phenomena. The interdisciplinary program is 77-84 s.h., including 11-12 s.h. from the general and molecular/cellular core curricula, at least **48 s.h.** from the research core and at least 18 s.h. from a specific concentration. The concentrations are: biology; biomedical science; and chemistry. Other appropriate graduate-level courses may be added by agreement of the research advisor, graduate program director, and the IDPBS advisory committee.

Core Curriculum

General Core	8 s.h.
BISC/BIOL/CHEM 8815 (1 s.h., taken 3 times)	3 s.h.
HUMS 7004	2 s.h.
BIOS 7022 or PSYC 6430 or PHAR 7777	3 s.h.
Molecular/Cellular Core.....	3-4 s.h.
Choose 3-4 s.h. from the following;	
ANAT 7202; BIOC 7301, 7310; BIOL 7480, 7481, 7870; CHEM 6535; MCBI 7410	
Research Core	48-54 s.h.
Must complete the minimum hours specified in each of the three courses below:	
BISC/BIOL/CHEM 8810	3-6 s.h.
BISC/BIOL/CHEM 8830	10-15 s.h.
BIOL/BISC/CHEM/PATH 9000	30-36 s.h.
Concentration: See program director for concentration requirements.....	18 s.h.

BISC: BIOLOGICAL SCIENCES

8810. Methods and Techniques in Experimental Biological Sciences (3) May be repeated. P: Admission to IDPBS graduate program or consent of course director. One semester rotation through research laboratories supervised by program faculty members.

8815. Seminar in Biological Sciences (1) May be repeated for credit. P: Admission to IDPBS graduate program or consent of course director. Presentations on research or critical review of current literature topics by students in IDPBS program. Seminar presentation.

8820. Current Topics in Biomedical Research (2) May be repeated. P: Admission to IDPBS graduate program or consent of course director. Topics reflect new scientific developments.

8830. Introduction to Research (5) May be repeated. P: Admission to IDPBS graduate program or consent of course director. Assignment to faculty preceptor during second year of graduate school. Design of experimental protocols and participation in preceptor's research program.

9000. Dissertation Research (3-12) May be repeated. May count for a maximum of 36 s.h. This course is graded S or U and is not included in meeting the cumulative "B" average required for graduation.

MS in Biomedical Science

Richard Franklin, Program Director, 5E-106, Brody Medical Sciences Building

The master of science degree in biomedical science is an interdisciplinary degree program administered by the Office of Research and Graduate Studies of the Brody School of Medicine. This research oriented program prepares students for employment in the biomedical industry or provides research training and experience for students interested in more advanced study leading to PhD or MD degrees.

Each applicant must meet the admission requirements of the university, and make satisfactory scores on the Graduate Record Examination. The requirement for the Graduate Record Examination is not required for applicants enrolled in medical school or with an MD degree. Each entering student should consult the program director prior to beginning course work. Medical students require the permission of the dean of the Brody School of Medicine to enroll in this MS degree program.

In addition to the course work (see below) each student must complete a research-based thesis, a comprehensive defense of thesis proposal, a seminar based on thesis research, and a thesis defense.

The curriculum for students entering with a bachelor's degree consists of a minimum of 38 s.h. as follows: Core Courses: BMSC 6113 (3 s.h.), 6121 (4 s.h.), 6133 (3 s.h.), 7000 (6 s.h.); BIOC 7301 (4 s.h.); ANAT 7202 or MCBI 7410 (4 s.h.); PHAR 7777 or BIOS 7021 (3 s.h.); HUMS 7004 (2 s.h.)

Electives: Select a minimum of 9 s.h. of electives approved by the program director at the 6000 or 7000 level.

The curriculum of students enrolled in medical school or with MD degrees consists of 24 s.h. as follows: BMSC 6113 (3 s.h.), 6121 (2 s.h.), 6133 (3 s.h.), 6136 (6 s.h.), 7000 (6 s.h.); ANAT 7202 or MCBI 7410 (4 s.h.)

BMSC: BIOMEDICAL SCIENCES

6113. Introduction to Biomedical Research (3) P: Consent of program director. Research rotations in several different laboratories.

6121. Seminar in Biomedical Science (1) Registration for fall and spring required. P: Consent of program director. Formal seminars and student critiques of current literature in biomedical science.

6133, 6136. Biomedical Research (3,6) May be repeated. P: Consent of program director. Design of experimental protocols and participation in preceptor's research program.

6141, 6142, 6143. Directed Study (1,2,3) May be repeated for a maximum of 3 s.h. P: Consent of program director. Investigates current research and methodology in biomedical science.

7000. Thesis (3) May be repeated. May count a maximum of 6 s.h.

INTERDISCIPLINARY HEALTH SCIENCES EDUCATION

IRHE: INTERDISCIPLINARY RURAL HEALTH EDUCATION

6000. Introduction to Interdisciplinary Virtual Team Work (3) Provides foundation for acquisition of knowledge and skills in interdisciplinary virtual health care team communications and functions within clinical and community environments.

6100. The Clinical Consulting Team (3) Employs health care professionals knowledge and skills of health care team function. Prepares health care professionals to examine models for clinical consultation, formulate, and serve as clinical consultant team within rural environments.

SECTION 8: CURRICULA

6300. Interdisciplinary Health Sciences Theory (3) Concepts and models that inform interdisciplinary/interprofessional health care theory and practice.

NEUROSCIENCE

NEUR: NEUROSCIENCE

6900. Cellular and Molecular Neuroscience (3) Formerly NEUR 5000 P: Consent of instructor. Introduces cellular mechanisms and molecular basis of neuron and glial function and interaction. Topics include membrane trafficking, action potentials, receptors, and signal transduction, gene transcription factors, neuroimmunology, and developmental neuroscience.

6901. Behavioral and Integrative Neuroscience (3) Formerly NEUR 5001 P: Consent of instructor. Introduces neural systems and neural basis of behavior. Topics include basic neuroanatomy; computational neuroscience, learning and memory; sensory and motor systems, neural basis of affective behavior, consciousness and cognitive neuroscience, neural plasticity, and brain lateralization and language.

COLLEGE OF NURSING

Sylvia Brown, Dean, 4205L Health Sciences Building

Martha Engelke, Associate Dean for Research and Scholarship, 4210C Health Sciences Building

Alta Andrews, Director for Community Partnerships and Practice, 4205H Health Sciences Building

Marie E. Pokorny, PhD Director, 4165S Health Sciences Building

Mary Ann Rose, Interim Associate Dean, Undergraduate Studies, 3166F Health Sciences Building

Carol Winters-Moorhead, Acting Chair, Department of Graduate Nursing Science, 3164 Health Sciences Building

MASTER OF SCIENCE IN NURSING

The master of science in nursing program prepares graduates for advanced practice nursing and for leadership roles in a variety of community based or acute care provider agencies. The MSN program offers eight concentrations:

Adult Nursing Practitioner (online)

Clinical Nurse Specialist in Adult Health (online)

Family Nurse Practitioner (online)

Neonatal Nurse Practitioner (online)

Nurse Anesthesia

Nursing Education (online)

Nursing Leadership (online)

Nurse Midwifery (online)

Part-time study is available. Certificate programs are available for post-master's study in selected areas. The program is accredited by the National League for Nursing Accrediting Commission, 61 Broadway, New York, NY 10006; telephone 212-363-5555.

The nurse midwifery concentration is also accredited by the Accreditation Commission for Midwifery Education (ACME) formerly called the American College of Nurse-Midwives, Division of Accreditation, 8403 Colesville Road, Suite 1550, Silver Spring, MD 20910; telephone 240-485-1802, fax 240-485-1818.

The nurse anesthesia program is accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs, 222 South Prospect Avenue, Park Ridge, IL 60068; telephone 847-692-7050.

A RN/MSN option is available for registered nurses who do not have a baccalaureate degree in nursing.

The Alternate Entry (AE) MSN option is a plan of study leading to the MSN degree for individuals who have earned a baccalaureate degree in another field. The program is divided into 2 phases: Phase I (Pre-licensure) includes graduate courses that include content and experiences that are required to take the Registered Nurse Licensure examination (NCLEX-RN) and preparation for advanced study in nursing. Phase I only begins in fall semesters and full-time enrollment is required. Successful completion of the NCLEX-RN and licensure as a Registered Nurse is required prior to entering Phase II clinical concentration courses. Students may enroll in core classes during the first semester of Phase II, while obtaining credentials. Phase II will include courses in a selected clinical concentration.

ADMISSION

Admission to the master of science in nursing degree program requires the student to meet the minimum admission requirements for graduate study as established by the university and the following requirements established by the College of Nursing.

- a baccalaureate degree in nursing from an accredited program
- a minimum GPA of 2.7 in undergraduate studies and a minimum GPA of 3.0 in nursing major
- acceptable score on the Graduate Record Examinations (GRE) or Miller Analogies Test (MAT) within the past five years (GRE score required for applicants of nurse anesthesia and nurse midwifery concentrations)
- currently hold a nonrestricted license to practice as a registered nurse (RN) in North Carolina or a NCSBN compact state (The out-of-state student must procure a North Carolina RN license before enrolling in clinical courses.)
- a statement describing the applicant's interest in graduate study, career goals, and the MSN degree's relationship to those goals
- three professional references
- a personal interview with a member of the graduate faculty

Due to the high demand of courses by our enrolled MSN students, the College of Nursing will not enroll nondegree graduate students at this time. Prospective students are encouraged to apply for full admission as soon as possible in order to be eligible for the College of Nursing course offerings.

SECTION 8: CURRICULA

Applicants for the nurse midwifery concentration, in addition to the general admission criteria, must have one year RN experience (labor and delivery preferred), demonstrate a commitment to practice with under served populations, and one of the references should be from a health care provider knowledgeable about the applicant's nursing practice.

Applicants for the family nurse practitioner and adult nurse practitioner concentrations, in addition to the general admission criteria, must have one year RN experience and provide a third reference from a health care provider knowledgeable about the applicant's nursing practice. Application deadline for both concentrations is January 2.

Applicants for the nurse anesthesia concentration, in addition to the general admission criteria, must have one-year adult critical care experience, completion of a supplemental nurse anesthesia admissions packet, a total of five professional references (two on forms provided in nurse anesthesia admissions packet), and an interview with the Nurse Anesthesia Admissions Committee. The application deadline for the nurse anesthesia concentration is May 31.

Applicants for the clinical nurse specialist concentration, in addition to the general admission criteria, must have one year of current practice experience and provide a third reference from a health care provider knowledgeable about the applicant's nursing practice.

Completed applications for the clinical nurse specialist concentration will be considered for fall and spring admission. Applications must be received by October 1 for spring, June 1 for fall.

Applicants for the neonatal nurse practitioner concentration, in addition to the general admission criteria, must have two years of current practice experience in a critical-care environment for high risk neonatal care RN experience and provide a third reference from a health care provider knowledgeable about the applicant's nursing practice.

Applicants may take core courses while gaining the required RN experience for admission into selected concentrations.

Applicants for admission to the (AE) MSN option must meet general admission requirements with the exception of a valid RN license and baccalaureate degree in nursing. Applicants must have a baccalaureate degree in another field. Additional requirements include:

- Completion of prerequisite courses – chemistry, human anatomy and physiology, microbiology, human growth and development, nutrition, ethics, and statistics.
- A minimum 3.0 GPA in undergraduate major
- Current nonrestricted license to practice as a RN in NC or a NCSBN compact state prior to entering Phase II clinical concentration courses.

Application deadline for the (AE) MSN option is December 1.

Completed applications will be considered as they are received, with the exception of nurse anesthesia, family nurse practitioner, adult nurse practitioner, clinical nurse specialist, and the alternate entry master of science in nursing option.

Applicants for the nursing education, nursing leadership, and clinical nurse specialist concentrations must have a minimum of one year RN experience prior to enrolling in specialty courses.

Applicants for the nursing leadership concentration, in addition to the general admission criteria, must provide a third reference from a health care provider knowledgeable about the applicant's nursing practice.

Applicants for admission to the RN/MSN option will be evaluated using the following criteria.

- a minimum 3.0 GPA in undergraduate studies and a minimum 3.0 GPA in the nursing major in the previous nursing program
- one year RN experience
- an acceptable score on the GRE or the MAT within the past five years
- current nonrestricted license to practice as a RN in North Carolina or a NCSBN compact state
- a statement describing the applicant's interest in graduate study, career goals, and the MSN degree's relationship to those goals
- three professional references
- a personal interview with the director of RN/BSN studies and a member of the College of Nursing graduate faculty

PROGRAM PREREQUISITES

A course in statistics with a grade of C or higher and basic computer skills with both applications software and the Internet are prerequisites for all concentrations. A course in basic accounting is a prerequisite for the nursing leadership concentration.

Students in the (AE) MSN option must complete all cognate requirements prior to beginning the program. Admission to the (AE) MSN option does not guarantee entry into a specific graduate concentration.

Students in the RN/MSN option must complete all foundations curriculum and cognate requirements prior to beginning under-graduate nursing courses. Separate application is made to the graduate program in the first or second semester of study in the RN/MSN option. Students enrolled in the RN/MSN option must maintain a 3.0 GPA in the 15 s.h. of undergraduate nursing courses to be eligible to continue in this option. Admission to the RN/MSN option does not guarantee entry into a specific graduate concentration.

DEGREE REQUIREMENTS

Depending upon the concentration area chosen within the degree program, the master of science in nursing requires 36-68 s.h. credit as follows. Concentrations are clustered as administrative, clinical, and education.

Administrative:

Nursing Leadership – Acute Care Health Systems.....	41 s.h.
Nursing Leadership – Community Based Health Systems	41 s.h.
Nursing Leadership – Educational Systems.....	41 s.h.

Clinical:

Adult Nurse Practitioner.....	46 s.h.
Clinical Nurse Specialist in Adult Health	42 s.h.
Family Nurse Practitioner	50 s.h.
Neonatal Nurse Practitioner	41 s.h.
Nurse Anesthesia	68 s.h.
Nurse Midwifery.....	50 s.h.

Education:

Nursing Education.....	36 s.h.
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Requirements:

1. Common core: NURS 6001, 6002, 6991, 6992, 6993 12 s.h.
2. Cluster core (Choose appropriate cluster for concentration.).....9-20 s.h.
 - Adult Nurse Practitioner (9 s.h.): NURS 6050, 6610, 6611
 - Clinical Nurse Specialist in Adult Health (12 s.h.): NURS 6050, 6208, 6610, 6611
 - Family Nurse Practitioner (9 s.h.): NURS 6050, 6610, 6611
 - Neonatal Nurse Practitioner (9 s.h.): NURS 6417, 6418, 6419
 - Nurse Anesthesia (20 s.h.): NURS 6610, 6810, 6811, 6813; PTHE 8008
 - Nurse Midwifery (9 s.h.): NURS 6050, 6610, 6611
 - Nursing Education (9 s.h.): Select 9 s.h. of course work in consultation with advisor from such courses as: NURS 6050, 6110, 6611, 6035, 6208, 6214, 6224, 6984, 7271
 - Nursing Leadership: NURS (10 s.h.) NURS 6971, 6973, 6974, 6986
3. Concentration area (Choose one area.)..... 15-36 s.h.
 - Administrative (19 s.h.):*
 - Nursing Leadership – Acute Care Health Systems (19 s.h.): NURS 6977, 6978, 6983, 6984, 6985, 3 s.h. electives
 - Nursing Leadership – Community Based Health Systems (19 s.h.): NURS 6310, 6311, 6977, 6978, 6983, 6984
 - Nursing Leadership – Educational Health Systems (19 s.h.): NURS 6903, 6904, 6909, 6977, 6978, 6983
 - Clinical (18-36 s.h.):*
 - Adult Nurse Practitioner (25 s.h.) 6612, 6613, 6614, 6615, 6618, 6621, 6622, 6623
 - Clinical Nurse Specialist in Adult Health (18s.h.): NURS 6959, 6960, 6961, 6962; 6 s.h. clinical specialty courses
 - Family Nurse Practitioner (29 s.h.): NURS 6612, 6613, 6614, 6615, 6616, 6617, 6618, 6619, 6620
 - Neonatal Nurse Practitioner (20 s.h.): NURS 6420, 6421, 6422, 6423, 6424, 6425

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Nurse Anesthesia (36 s.h.): NURS 6805, 6806, 6812, 6814, 6815, 6816, 6817, 6818, 6819, 6820, 6821, 6822, 6823, 6824

Nurse Midwifery (29 s.h.): NURS 6109, 6110, 6112, 6113, 6115, 6116, 6117, 6118, 6119

Education (15 s.h.):

Nursing Education (15 s.h.): NURS 6903, 6904, 6905; 6909; 3 s.h. elective or cognate

4. Students in the Nursing Education concentration who have limited teaching experience may be required to take NURS 6908.
5. Students in the Nursing Leadership concentration who have limited finance experience may be required to take NURS 6987.

Enrollment is necessary for continued research advisement. A comprehensive assessment is required for graduation for all MSN degree-seeking students.

Students in the RN/MSN option must complete the following undergraduate courses prior to enrolling in any graduate nursing courses—NURS 3020, 3021, 3510, 3900, 4210, 4211.

POST MSN CERTIFICATE PROGRAMS

Eight post-MSN certificate options (adult nurse practitioner, clinical nurse specialist, family nurse practitioner, neonatal nurse practitioner, nurse-anesthesia, nurse midwifery, nursing leadership, and nursing education) offer advanced practice education, qualifying those who complete the clinical options to take national certification exams. In addition, the nursing education post-master's certificate prepares nurses for beginning teaching roles in nursing education.

ADMISSION REQUIREMENTS

- A master's degree in nursing from an accredited program
- A current non-restricted license to practice as a registered nurse (RN) in North Carolina or an NCSBN-compact state. Individual advisement will be necessary for licensure regulations for online out-of-state students.
- A personal statement describing the applicant's interest in graduate study, career goals, and the certificate's relationship to those goals.
- Three professional references with one reference from an individual who is knowledgeable of the applicant's nursing practice
- One year clinical experience as an RN
- A personal interview with a member of the graduate faculty

Applicants for the nurse midwifery post-master's certificate, in addition to the general admission criteria, must have one year RN experience (labor and delivery preferred).

Applicants for the nurse anesthesia post-master's certificate, in addition to the general admission criteria, must have one year adult critical care experience as a RN, completion of a supplemental nurse anesthesia admission packet, a total of five professional references (two on forms provided in the nurse anesthesia admissions packet) and an interview with Nurse Anesthesia Admissions Committee. Courses in physiology and chemistry/biochemistry within five years are highly recommended. Acceptable score on GRE within past 5 years (GRE required).

Applicants for the neonatal post-master's certificate, in addition to the general admission criteria, must have two years of current practice experience as a RN in a critical care environment for high-risk neonatal care.

Applicants for the clinical nurse specialist post master's certificate, in addition to the general admission criteria, must have one year RN experience.

Applicants for the post-master's certificate options in adult nurse practitioner, clinical nurse specialist, family nurse practitioner, neonatal nurse practitioner, and nurse midwifery must have had graduate level courses in pathophysiology (reproductive physiology is an additional requirement for nurse midwifery), health assessment and pharmacology within the past five years or approval by the concentration director; otherwise, students will be required to take these courses as part of the post-master's certificate requirement.

Adult Nurse Practitioner: NURS 6621,6622,6623 10-33 s.h.
Depending on student's needs and past education, additional course work from the following may be required: NURS 6050,6610,6611,6612,6613,6614,6615,6618, or equivalent clinical courses .

Clinical Nurse Specialist: NURS 6959, 6960, 6961, 6962 12-30 s.h.
Depending on student's needs and past education, additional course work from the following may be required: NURS 6208, 6050, 6610, 6611, 6214, 6224 or equivalent clinical courses.

Family Nurse Practitioner: NURS 6616, 6617, 6619, 6620 15-38 s.h.
Depending on student's needs and past education, additional course work from the following may be required: NURS 6050, 6610, 6611, 6612, 6613, 6614, 6615, 6618

Neonatal Nurse Practitioner: NURS 6420, 6421, 6422, 6423, 6424, 6425 20-29 s.h.
Depending on student's needs and past education, additional course work from the following may be required: NURS 6417,6418,6419

Nurse Anesthesia: NURS 6610, 6805, 6806, 6810, 6811, 6812, 6813, 6814, 6815, 6816, 6817, 6818, 6819, 6820, 6821, 6822, 6823, 6824; PTHE 700256 s.h.

Nurse Leadership:

Acute Care Health Systems: NURS 6971, 6973, 6974, 6977*, 6983, 6984, 6985, 6986, 6987** 19-25 s.h.
Community Based Health Systems: NURS 6310,6311, 6971, 6973, 6974*, 6977**, 6983, 6986, 6987** 19-25 s.h.
Educational Health Systems: NURS 6903, 6904, 6909, 6973, 6974*, 6977**, 6983, 6986, 6987** 19-25 s.h.
*If less than two years leadership experience in the focus area, NURS 6977 will be required.
**If less than 2 years of financial experience, NURS 6987 will be required.

Nurse Midwifery: NURS 6109, 6113, 6115, 6116, 6117, 6118 22-38 s.h.
Depending on student's needs and past education, additional course work from the following may be required: NURS 6050, 6110, 6112, 6119, 6610, 6611

Nursing Education: NURS 6903, 6904, 6905, 6909 12-15 s.h.
Depending on student's needs, past education, and teaching experience, additional course work from the following may be required: NURS 6908.

DOCTOR OF PHILOSOPHY IN NURSING

The doctor of philosophy in nursing prepares nurse researchers and scholars to explore, develop, and move forward the scientific bases of nursing practice and education. Students are prepared to conduct research in the domains of nursing science. The curriculum is enriched through cognate study in the social, behavioral, and biological sciences; interdisciplinary research; and the integration of technology in program delivery. Dissertation research prepares graduates to contribute discoveries to the body of nursing and health care knowledge. The location and mission of the school as well as the expertise of the faculty provide a unique opportunity for the discovery of knowledge related to nursing and health issues in rural underserved areas. Upon graduation, students are prepared to assume leadership positions as researchers, administrators in public and private health care organizations, policy makers and analysts, and university faculty.

The BSN to PhD option is a plan of study leading to the PhD degree. This graduate level option blends the doctoral curriculum with two different MSN concentrations – the nursing education concentration or the nursing leadership concentration. It reduces the number of master's level courses required in the traditional MSN program and facilitates completion of the PhD in Nursing.

ADMISSION REQUIREMENTS

- Satisfactory performance on the Graduate Record Exam (GRE) within five years prior to admission.
- Written statement of personal career, educational, and scholarship goals.
- Three written professional references from individuals with expertise to comment on the applicant's capability for research and scholarship (for example, university professors, employers). At least one of the references must be from a doctorally-prepared nurse.

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- A master's degree in nursing from an accredited school. (Applicants without a MSN must have a BSN from an accredited program.) See below for details on the BSN to PhD admission requirements.
- Grade-point average of 3.2 on a 4.0 scale on all graduate work.
- Evidence of current unrestricted license to practice as a nurse in North Carolina or a NCSBN compact state. Students on foreign student visas must present evidence of professional standing in their respective countries.
- Satisfactory performance on Test of English as a Foreign Language (TOEFL) where English is not the first language.
- Computer competency, with proficiency in basic software. The school requires that all students use e-mail and World Wide Web access for communication and course work.
- A graduate statistics course which included inferential statistics.
- A current curriculum vita.
- A representative example of scholarly work done by the applicant.
- A personal interview with two members of the Graduate Faculty to include a discussion of congruence between the students research interests/career goals and the expertise and research of faculty.

Applicants for admission to the BSN to PhD option must meet general admission requirements for the PhD program. Additional requirements include:

- Minimum GPA of 3.3 and no grade below B on all previous coursework.
- BSN from an accredited nursing program.
- Recommendation of the Director for the MSN concentration selected and the PhD Program Director.
- Completion of at least two calendar years of full time employment experience or the equivalent in clinical nursing practice as a registered nurse prior to entering the doctoral program of study.
- A graduate statistics course which includes inferential statistics prior to enrolling in doctoral courses.

APPLICATION

The PhD in nursing program admits 6-8 students each year.Applications for study to begin in the fall semester will be accepted until March 1 or until seats are filled.BSN to PhD applications for spring semester are due September 1 or until seats are filled. Applicants are expected to ensure that the Graduate School and the College of Nursing receive all supporting credentials by the final filing date. Applicants are evaluated in five areas: GPA, GRE, references, essay, and interview. Completed applications are considered as they are received.All completed applications received by the final filing date will be given careful consideration. Interviews are conducted as completed applications are received. Each applicant will be notified in writing of the admission decision after the admission process is completed.

Preference is given to those who demonstrate a capacity for creative inquiry, critical thinking, scholarship, and leadership. In the case of equally qualified applicants, preference will be given to individuals who intend to pursue doctoral study on a full-time basis. Students will be assigned an academic advisor at the time of admission. All admitted PhD students are required to attend a College of Nursing orientation session in August.

DEGREE REQUIREMENTS

Students are required to complete a minimum of 54 semester hours beyond the master's degree (includes a minimum of 6 s.h. for dissertation) with the exception of BSN to PhD students who are required to complete between 74 and 80 semester hours. As in other research-focused programs of doctoral study, students in this program may expect to enroll in more than the minimum required credit hours and to be aware that study opportunities that focus on particular areas of study are in addition to the basic program requirements. Additional study is individualized and depends on the student's background and graduate preparation as well as the employment role identified as a career focus. This program of study enrolls both full- and part-time students. Since enrollments in doctoral programs tend to be small, students need to closely adhere to the plan of study, as courses are offered once a year.To deviate from the plan of study will mean a delay of one or more semesters before course enrollment is again possible.

BSN to PhD Nursing Education Course Requirements:

- Nursing Education Concentration Courses – NURS 6001, 6002, 6903, 6904, 6905, 6909, 6991, 6992, 6993, Graduate Statistics, Cognate Courses (6 s.h. minimum) 33 s.h.
- PhD in Nursing Core – NURS 7004, 8001 (Candidacy Exam), 8220, 8225, 8226, 8227, 8235, 8240, 8241, 8255 (7 s.h. minimum), 8260, 8265, 9000 (6 s.h. minimum)..... 42 s.h.
- TOTAL..... 75 s.h.**

BSN to PhD Nursing Leadership Course Requirements:

Nursing Leadership Concentration Courses – NURS 6001, 6002, 6610, 6620, 6991, 6992 or COHE 6000, 6971, Graduate Statistics	34 s.h.
PhD in Nursing Core – NURS 7004, 8001 (Candidacy Exam), 8220, 8225, 8226, 8227, 8235, 8240, 8241, 8255 (7 s.h. minimum), 8260, 8265, 9000 (6 s.h. minimum).....	42 s.h.
TOTAL.....	76 s.h.

PhD in Nursing Requirements:

Core Courses: NURS 7004, 8220, 8225, 8226, 8227, 8235, 8240, 8241, 8255 (7 s.h. minimum), 8260, 8265, 9000 (6 s.h. minimum).....	42 s.h.
Elective Courses.....	6 s.h.
Cognate Courses.....	6 s.h.
TOTAL.....	54 s.h.

Graduate credits earned at other institutions may be accepted in partial fulfillment of the requirements for the doctoral program. Courses offered for transfer credit will be evaluated individually relative to Graduate School requirements, program requirements, and the student's plan of study. Transfer of more than 9 s.h. credit from another institution must be approved prior to admission. After admission, twenty percent of the courses may be completed at an approved university.

PhD students must complete at least five semesters in residence. Residency requirement must be completed prior to admission to candidacy.

Students must maintain a grade point average of 3.0 (on a 4.0 scale) throughout the program. Academic progress will be evaluated at the end of each semester by the academic advisor, who is responsible for notifying the associate dean for graduate programs if a student's academic status is in jeopardy.

PhD students apply to take a candidacy examination upon completion of all required nursing courses with the exception of the dissertation. This examination must be successfully completed within five years of matriculation.

Students are required to conduct an original research project, which adds to the body of knowledge in nursing, and to communicate the research in a written dissertation and an oral defense of the dissertation within six years of admission. With endorsement of the dissertation committee and the associate dean for graduate programs, students may request one extension of not more than two semesters, summers included.

NURS: NURSING

5620. International Health Care (3) P: Graduate status or senior by consent of instructor. Issues, philosophy, and cultural differences in health care from international perspective. Compares US health care to that in other nations.

6001. Philosophical Perspectives and Theoretical Bases of Advanced Nursing Practice (3) P: Graduate student status or consent of instructor. Examines philosophical perspectives, theories, and concepts from nursing and related fields that relate to advanced nursing practice.

6002. Advanced Nursing Practice in Complex Health Care Organizations (3) P: Graduate status or consent of instructor. Examines political, legal, and economic influences on health care organizations, advanced nursing practice, and quality of care.

6006. Selected Topics (1,2,3) May be repeated for a maximum of 6 s.h. P: Consent of instructor. Current issues and trends in nursing and health care.

6007. Health Appraisal of Individuals, Families, and Communities (6) P: Admission to alternate entry MSN: Phase I pre-licensure. Provides knowledge and skills to conduct a comprehensive, holistic, and theory-based health appraisal of individuals within context of families and communities.

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6008. Professional Nursing Foundations (6) P: Admission to alternate entry MSN: Phase I pre-licensure program in nursing. Provides knowledge and skills related to physiological challenges, including principles of pharmacological and nursing interventions.

6013. Dimensions of Professional Nursing Practice (3) P: Admission to alternate entry MSN: Phase I, or consent of instructor. Considers historical and contemporary issues affecting theoretical, philosophical, and scientific basis of professional nursing practice.

6016. Comprehensive Care of Individuals Experiencing Alterations In Health I (7) P: NURS 6007, 6008, 6013 or consent of instructor. Provides theoretical foundations and clinical experiences in providing nursing care to individuals experiencing selected alterations in health throughout life span.

6017. Comprehensive Care of Individuals Experiencing Alteration In Health II (7) P: NURS 6016 or consent of instructor. Provides theoretical foundations and clinical experiences in providing nursing care to individuals experiencing selected alterations in health throughout life span.

6018. Clinical Capstone (5) P: NURS 6017. Directed nursing practice in identified area of interest based on application of previous learning.

6019. Leadership and Community Service Learning (5) P: NURS 6018 or consent of instructor. Integrates principles of nursing leadership/management and population focused community health nursing, including service learning experience.

6024. Simulation in Nursing Education (3) P: NURS 6904 or consent of instructor. Introduces the use of human and virtual patient simulation as an instructional strategy in nursing education.

6035. Interdisciplinary Rural Health (3) Theoretical base and skills for interdisciplinary rural health practice.

6050. Human Physiology and Pathophysiology for Advanced Nursing Practice (3) P: Admission to NURS graduate program or consent of instructor. In-depth analysis of normal physiological processes across life span. Focus on pathophysiology and critical analysis for student's area of study. Emphasis on correlation of concepts with clinical manifestations.

6070. Globalization and Health Care (3) Exploration of interdisciplinary issues, activities and impact of globalization on world health.

6109. Introductory Nurse Midwifery Professional Roles and Issues (2) Historical, theoretical, and scientific foundations of nurse midwifery.

6110. Reproductive Physiology (2) P: NURS 6050 or consent of instructor. Underlying biologic principles and concepts related to human reproductive cycle, genetics, maternal-fetal-placental unit, and neonate.

6112. Nurse-Midwifery Management: Well Women Care (3) P: NURS 6110; admission to nurse-midwifery concentration. Focuses on American College of Nurse-Midwives (ACNM) core competencies for promoting health in essentially healthy women. Supervised on-site practicum by clinical preceptor.

6113. Nurse-Midwifery Management: Antepartal Care (4) P: NURS 6110, 6112. Focuses on ACNM core competencies for promoting health in essentially healthy women and their families during the antepartal period including management of antepartal complications. Supervised on-site practicum by clinical preceptor.

6115. Nurse-Midwifery Management: Intrapartal Care (4) C: NURS 6116. Focuses on ACNM core competencies for promoting health in essentially healthy women during labor and birth including management of intrapartal complications. Supervised on-site practicum by clinical preceptor.

6116. Nurse-Midwifery Management: Postpartal Care and Neonatal Care (3) C: NURS 6115. Focuses on ACNM core competencies for promoting health in essentially healthy neonates and women during the puerperium including management of postpartum and neonatal complications. Supervised on-site practicum by clinical preceptor.

6117. Nurse-Midwifery Management: Integration Practicum (7) P: NURS 6115, 6116. Comprehensive nurse-midwifery management of neonates and healthy women throughout their lifespan.

6118. Integration of Nurse-Midwifery Professional Roles and Issues (2) P: NURS 6115, 6116. Roles and responsibilities of professional nurse midwifery.

6119. Nurse-Midwifery Management: Introduction to Primary Care for Well Women (2) P or C: NURS 6610; admission to nurse midwifery concentration. Focuses on American College of Nurse Midwives (ACNM) core competencies for primary care in essentially healthy women. Supervised on-site practicum by clinical preceptor.

6208. Concepts of Health Promotion and Disease Prevention for Advanced Nursing Practice (3) P: Admission to nursing graduate program or consent of instructor. Role of advanced practice nurse in health promotion and primary prevention.

6214. Chronic Health Problems: Concepts and Theories for Advanced Nursing Practice (3) P: NURS 6001 and 6208 or consent of instructor. Focuses on knowledge, theory, and research relevant to chronically ill clients in acute care settings..

6224. Acute Health Problems: Concepts and Theories for Advanced Nursing Practice (3) Focuses on knowledge, theory, and research relevant to adult clients experiencing acute health problems.

6310. Advanced Community Health Nursing I (3) P: NURS 6001, 6002, 6991; or consent of instructor. Examines the role of the community health nurse leader in the application of program planning models to assess the health status of communities or populations and develop health care programs.

6311. Advanced Community Health Nursing II (3) Examines the leadership role of the community health nurse in planning and directing the implementation and evaluation of interdisciplinary, community-based health care programs.

6417. Development Physiology for Advanced Neonatal and Pediatric (3) P: Admission to NURS graduate program or consent of instructor. Developmental changes in morphological processes and normal and abnormal physiology in humans from conception through adolescence.

6418. Health Assessment for Advanced Nursing Practice of Neonatal and Pediatric Patients (3) For advanced practice nurse. P: Admission to NURS graduate program or consent of instructor. Comprehensive assessment of neonatal and pediatric clients using diagnostic reasoning process.

6419. Clinical Pharmacology for Advanced Neonatal and Pediatric Nursing Practice (3) P: Admission to NURS graduate program or consent of instructor. Pharmacological knowledge basic to assessment and management skills for advanced clinical nursing practice related to newborns and pediatric patients with common acute and chronic health problems.

6420. Advanced Neonatal Nursing: Research and Theory I (3) P: NURS 6417, 6418. Focuses on management of the prenatal and postnatal environments, anticipated health problems experienced by infants and implications for the infants and their families.

6421. Advanced Neonatal Nursing Practicum I (2) P/C: NURS 6420. Provides intensive neonatal clinical experiences for neonatal nurse practitioner students.

6422. Advanced Neonatal Nursing: Research and Theory II (3) P: NURS 6420. Focuses on neonatal nurse practitioner management of disorders of organ systems.

6423. Advanced Neonatal Nursing Practicum II (4) P/C: NURS 6422. Provides intensive clinical experiences for neonatal nurse practitioner students.

6424. Advanced Neonatal Nursing: Research and Theory III (3) P: NURS 6422. Focuses on the integration of advanced knowledge to care for the infant and the family.

6425. Advanced Neonatal Nursing Practicum III (5) P/C: NURS 6424. Provides intensive clinical experiences for neonatal nurse practitioner students.

6500. Independent Study in Nursing (1,2,3) May be repeated for a maximum of 9 s.h. P: Consent of advisor. Nontraditional, faculty-approved projects relating to clinical and functional areas of study.

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6610. Health Assessment for Advanced Nursing Practice (3) P: Admission to NURS graduate program or consent of instructor. Advanced assessment, critical thinking, and decision-making skills essential to evaluation of health status, health risks, illnesses, and functional/dysfunctional health patterns of individuals and family members throughout life span.

6611. Clinical Pharmacology for Advanced Nursing Practice (3) P: Admission to NURS graduate program or consent of instructor. In-depth presentation of pharmacologic principles to manage pharmacologic agents safely and effectively. Specialty labs address specific applications.

6612. Advanced Nursing Practice with Families in Primary Health Care (3) P: Admission to FNP concentration or consent of concentration director. Advanced practice psychosocial/cultural context for interpretation of family patterns and processes by using family systems theory.

6613. Advanced Nurse Practitioner Role Development (2) P: Admission to FNP concentration; NURS 6614, 6615, 6616, 6617, 6618, or consent of instructor. Leadership role within health care delivery system, nursing profession, and society.

6614. Advanced Practice Nursing with Families: Primary Care of Adults (4) P: Admission to FNP concentration; NURS 6610, 6611, or consent of concentration director. Theoretical, scientific, and contemporary knowledge base to provide a framework for assessment and management of primary health care needs of culturally diverse families with adults.

6615. Advanced Practice Nursing with Families: Reproductive Health Care (2) P: Admission to FNP concentration; NURS 6610, 6611, C: NURS 6614 or consent of concentration director. Theoretical, scientific, and contemporary knowledge base to provide a framework for assessment and management of primary health care needs of culturally diverse families with reproductive health care needs.

6616. Advanced Practice Nursing with Families: Childbearing Clients (1) P: Admission to FNP concentration; NURS 6614, 6615, or consent of concentration director. Theoretical, scientific, and contemporary knowledge base to provide a framework for assessment and management of primary health care needs of culturally diverse families with childbearing members.

6617. Advanced Practice Nursing with Families: Primary Care of Infants, Children, and Adolescents (4) P: Admission to FNP concentration; NURS 6614, 6615, or consent of concentration director. Theoretical, scientific, and contemporary knowledge base to provide a framework for assessment and management of primary health care needs of culturally diverse families with infants, children and adolescents.

6618. Advanced Practice Nursing Practicum: Primary Care of Adults (4) P: Admission to FNP concentration; P or C: NURS 6614, 6615, or consent of concentration director. Demonstrate competencies in provision health care to adult clients in culturally diverse families. The student practices under the direct supervision of on-site clinical preceptors.

6619. Advanced Practice Nursing Practicum: Primary Care of Childbearing and Childrearing Families (4) P: Admission to FNP concentration; NURS 6614, 6615; P or C: NURS 6616, 6617 or consent of concentration director. Demonstrate competencies in provision of primary health care to culturally diverse childbearing and childrearing families. The student practices under the direct supervision of on-site clinical preceptors.

6620. Advanced Practice Nursing Practicum: Synthesis in Primary Care of Families (5) P: Admission to FNP concentration; NURS 6619 or consent of concentration director. Clinical synthesis experience across the lifespan for family nurse practitioner students. The student practices under the direct supervision of on-site clinical preceptors.

6621. Advanced Practice Nursing: Care of Adults With Acute and Chronic Illness (3) P: NURS 6610, 6611, 6614, 6615 or consent of concentration director. Theoretical, scientific, and contemporary knowledge base to provide a framework for assessment and management of health care needs of culturally diverse adults with acute and/or chronic illness.

6622. Advanced Practice Nursing Practicum: Care of Adults with Acute with Acute and Chronic Illness (3) P: Consent of concentration director. Demonstrates competencies in providing health care to culturally diverse adult clients with acute and chronic illnesses. The student practices under the direct supervision of on-site clinical preceptors.

6623. Advanced Practice Nursing Practicum: Specialty Care of Adults (4) P: NURS 6622 or consent of concentration director. Demonstrates competencies in providing health care to culturally diverse adult clients with complex illnesses in a selected population. The student practices under the direct supervision of on-site clinical preceptors.

6805. Advanced Pharmacology for Nurse Anesthesia I (3) P: Admission to nurse anesthesia concentration; C: NURS 6813. Survey of pharmacodynamics, pharmacokinetics, adverse effects and pharmacotherapeutic principles of anesthesia, antimicrobial, antieoplastic, endocrine, and other therapeutic agents.

6806. Advanced Pharmacology for Nurse Anesthetists II (4) P: NURS 6814, 6817; PTHE 7002; C: NURS 6811, 6819. Surveys pharmacodynamics, pharmacokinetics, adverse effects, and pharmacotherapeutic principles of drugs affecting the autonomic, cardiovascular, respiratory, renal, and central nervous systems.

6810. Human Physiology for Nurse Anesthetists (5) P: Admission to nurse anesthesia concentration; C: NURS 6805, 6813. In-depth analysis of normal processes across the lifespan. Provides physiological basis for practice with emphasis on correlation of these concepts with clinical manifestations.

6811. Anesthesia Pharmacology (3) P: NURS 6814, 6817; PTHE 7002; C: NURS 6806. Chemical and physical principles involved in administration of anesthesia, including uptake and distribution, and toxicology of anesthetic drugs and agents.

6812. Professional Aspects of Nurse Anesthesia (2) P: NURS 6822, 6824; C: NURS 6823. Historic, legal, ethical, and international issues important to contemporary nurse anesthesia practice.

6813. Chemistry and Physics of Anesthesia (4) P: Admission to nurse anesthesia concentration; C: NURS 6805. Aspects of chemistry, biochemistry, and physics applicable to human and mechanical systems involved in delivering safe anesthesia care.

6814. Basic Principles of Nurse Anesthesia (3) P: Admission to nurse anesthesia concentration; NURS 6805, 6810; C: NURS 6717; PTHE 7002. Fundamentals of anesthesia practice, including basic techniques, procedures for administering anesthesia, assessment of patient status, and case management.

6815. Advanced Principles of Nurse Anesthesia I (2) P: Admission to nurse anesthesia concentration; NURS 6806, 6811, 6819; C: NURS 6820. Anesthesia concepts for increasingly complex patients with alterations in one or more organ system. Includes principles of increasingly advanced surgical and radiological procedures.

6816. Advanced Principles of Nurse Anesthesia II (2) P: Admission to nurse anesthesia concentration; NURS 6815, 6820; C: NURS 6818, 6821. Advanced principles of cardiothoracic and vascular anesthesia, infection control, trauma anesthesia, and management of the patient with acute and chronic endocrine disease.

6817. Clinical Correlations I (1) P: Admission to nurse anesthesia concentration; NURS 6805, 6810, 6813; C: NURS 6814; PTHE 7002. Links anesthesia-related information with specific topics in anatomy. Explores regional anesthesia.

6818. Clinical Correlations II (1) P: Admission to the nurse anesthesia concentration, NURS 6815, 6820. Links research and advanced principles courses examining research in obstetrics, pediatrics, cardiothoracic and neurosurgical anesthesia.

6819. Clinical Practicum in Nurse Anesthesia I (1) P: Admission to nurse anesthesia concentration; NURS 6814, 6817; C: NURS 6806, 6811. Introduces clinical practice in operating room environment, including basic skills such as monitoring, preoperative assessment, positioning, induction agents, and sequence and airway management.

6820. Clinical Practicum in Nurse Anesthesia II (3) P: Admission to nurse anesthesia concentration; NURS 6806, 6811, 6819; C: NURS 6815. Defines physiological, pharmacological, and biochemical concepts in beginning application of anesthesia principles.

6821. Clinical Practicum in Nurse Anesthesia III (4) P: Admission to nurse anesthesia concentration; NURS 6820; C: NURS 6816, 6818. Explores physiological, pharmacological, and biochemical concepts in complex clinical application of anesthesia principles.

6822. Clinical Practicum in Nurse Anesthesia IV (4) P: Admission to nurse anesthesia concentration; NURS 6818, 6821; C: NURS 6824. Advanced clinical applications regarding anesthetic preparation, anesthesia equipment setup, airway management, anesthetic management, patient monitoring, and regional anesthesia.

SECTION 8: CURRICULA

- 6823. Clinical Practicum in Nurse Anesthesia V (4)** P: Admission to nurse anesthesia concentration; NURS 6822; C: NURS 6812. Advanced clinical practice utilizing all anesthesia principles to provide independent responsibility for patient care.
- 6824. Advanced Principles of Nurse Anesthesia III (2)** P: Admission to nurse anesthesia concentration; NURS 6816, 6818, 6821; C: NURS 6822. Advanced concepts of anesthetic management. Emphasis on renal, endocrine, pediatric, and obstetric cases, regional anesthesia, and chronic pain management.
- 6903. Curriculum Development in Nursing (3) Formerly NURS 6400** Foundations, principles, and contemporary issues related to curriculum development in nursing education.
- 6904. Educational Concepts, Theories, and Strategies in Nursing (3)** P/C: NURS 6903 or consent of instructor. Explores learning theories and educational strategies used by nurse educators.
- 6905. Nursing Education Role Practicum I (3)** P: NURS 6904 or consent of instructor; P/C: NURS 6909 or consent of instructor. Guided practicum with nurse educators in academic and health care settings.
- 6908. Nursing Education Role Practicum II (3)** P: NURS 6905 or consent of instructor. Collaborative implementation and evaluation of comprehensive educational project.
- 6909. Evaluation in Nursing Education (3)** P: NURS 6903 or consent of instructor. P/C: NURS 6904 or consent of instructor. Focuses on evaluation of students, faculty, curricula, and programs in nursing education.
- 6959. Clinical Nurse Specialist Theory and Role Development (3)** P: NURS 6001, 6002 and at least one of the following: NURS 6050, 6610, 6611, or 6208; or consent of Director of Clinical Nurse Specialist Concentration. Focuses on the core competencies, essential characteristics, and the conceptual model guiding CNS practice.
- 6960. Clinical Nurse Specialist Practicum I (3)** P: NURS 6959 or consent of Director of Clinical Nurse Specialist Concentration. Applies CNS knowledge and skills to specialty clinical practice. Students under direct supervision of on-site clinical preceptors.
- 6961. Clinical Nurse Specialist Practicum II (3)** P: NURS 6959, 6960; by consent of faculty. Applies CNS knowledge and skills to specialty clinical practice. Students practice with increasing independence under supervision of on-site clinical preceptors.
- 6962. Clinical Nurse Specialist Practicum III (3)** P: NURS 6959, 6960, 6961; by consent of faculty. Applies CNS knowledge and skills to specialty clinical practice. Students practice with increasing independence and with minimal consultation and collaboration with preceptor.
- 6971. Health Policy, Law, and Regulation (3) Same as COHE 6971 and PADM 6400** P/C: NURS 6001, 6002, 6983. Overview of health policy, law and regulation which relate to the delivery of health care in the United States.
- 6973. Management of Human Resources and Professional Relationships in Health Systems (3)** P/C: NURS 6001, 6002; or consent of instructor. Focuses on the theoretical, legal/ethical, and practical dimensions of human resources management in health systems.
- 6974. Financial Management and Decision Making in Nursing Leadership (3)** P/C: NURS 6992 or consent of instructor. Focuses on practical applications of financial concepts in making nursing decisions and accomplishing service delivery goals in the current health system.
- 6977. Nursing Leadership Practicum I (3)** P/C: NURS 6983, 6992 or consent of instructor. Application of organizational and administrative theory, ethics, and clinical service and outcome management concepts within nursing and health systems.
- 6978. Nursing Leadership Practicum II (4)** P/C: NURS 6977 or consent of instructor. Application of organizational and administrative theory within nursing and health systems in a selected focus area.
- 6983. Administrative and Organizational Theory and Ethics: Applications in Nursing and Health Systems (3)** P/C: NURS 6001, 6002, 6986, or consent of instructor. Examines organizational, administrative, and ethical theory that relate to the leadership of nursing and health systems.

- 6984. Informatics for Advanced Nursing Practice (3)** Application of informatics systems to practice, research, education, and administration of nursing.
- 6985. Management of Clinical Services Delivery and Outcomes (3)** P/C: NURS 6001, 6002, 6992; or consent of the instructor. Explores the elements of nursing leadership in health systems essential to planning, organizing, staffing, directing, and evaluating patient care delivery outcomes.
- 6986. Analytical Foundations of Nursing Leadership (1)** P: Admission to the MSN or consent of instructor. Examines the process, theories and principles of leadership; analyzes student leadership strengths and challenges through self-evaluation and team reflection.
- 6987. Budgeting and Decision Making in Healthcare (3)** P: Admission to the MSN or consent of instructor. Practical skills in budgeting.
- 6991. Research Methods for Advanced Nursing (3) Formerly NURS 6994** P: Graduate student status or consent of instructor. Research methods and design as basis for clinical and organizational decision making and scientific inquiry. Quantitative and qualitative research methodology and development of biopsychosocial approaches to study of phenomena.
- 6992. Research Utilization Seminar (2) Formerly NURS 6003** P: NURS 6001, 6002, 6991. Focuses on knowledge and skill competencies basic to use of research findings in advanced nursing practice.
- 6993. Advanced Nursing Synthesis (1)** P: Consent of graduate advisor. Seminar for synthesis of graduate nursing concepts.
- 7000. Thesis (1-6)** May be repeated. May count maximum of 3 s.h.
- 7001. Thesis: Summer Research (1)** May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.
- 7003. Health Disparities/Inequities Research (3)** P: Admission to the PhD in nursing program or consent of instructor. Exploration and design of strategies to address health disparities/inequities.
- 7004. Research Ethics for a Complex World (2) Same as HUMS 7004 and GRAD 7004** Concerned with issues associated with scientific research, institutional responsibilities of scientists and critical skills for evaluation of ethical aspects of research.
- 7100. Qualitative Research: Analysis and Interpretation (3) Same as HLTH 7100, OCCT 7100** P: NURS 8235 or consent of instructor. Application and evaluation of qualitative research design and methods, including data collection, management, and analysis approaches, and the art and science of interpretation.
- 7270. Introduction to Historical Nursing Research (3)** Uses historical analysis to understand development of nursing.
- 7271. Complementary and Alternative Therapies in Nursing Practice (3)** P: Consent of chair. Evaluates the integration of complementary and alternative therapies into nursing care.
- 7272. American Nursing Traditions of the Eighteenth and Nineteenth Centuries (3)** Nursing history and traditions, with a focus on the art of constructing caring communities, and the science of creating healing environments.
- 7440. Current Issues in Nursing Leadership (3)** P: Graduate admission. Integration of leadership principles through in-depth exploration of current issues in community health.
- 8006. Selected Topics (1,2,3)** May be repeated for a maximum of 6 s.h. P: Consent of program director. Current issues in nursing science and nurse scientist roles.
- 8220. Philosophy of Science (3)** P: Admission to the PhD in nursing program or consent of program director. Examines nature and evolution of philosophic bases of nursing science and practice.
- 8225. Development of Nursing Knowledge (3)** P: NURS 8220 or consent of program director. Considers inductive and deductive approaches to theory development. Integrates relationships among research, theory, and knowledge development.

SECTION 8: CURRICULA

8226. Statistical Methods for Nursing Research I (3) P: Admission to the PhD in nursing program or consent of program director; Examines use of statistics for descriptive purpose, testing proposed relationships, predictions, and determining causality.

8227. Statistical Methods for Nursing Research II (3) P: NURS 8226 or consent of program director; Examines multivariate statistical methods including multivariate analysis of variance, exploratory and confirmatory factor analysis, path analysis, and structural equation modeling.

8235. Qualitative Methods (3) P: NURS 8225 or consent of program director; Considers assumptions, principles, methods, and outcomes through analysis of variety of qualitative approaches to research.

8240. Quantitative Methods (3) P: NURS 8227 or consent of program director; Considers assumptions, principles, methods, and outcomes through analysis of a variety of quantitative approaches to research.

8241. Instrumentation and Measurement (3) P: NURS 8240 or consent of program director; Examines processes involved in designing, testing, and selecting instruments and other devices for measurement of nursing phenomena.

8255. Directed Research (1,2,3) May be repeated. Minimum 7 s.h. is required; maximum 12 s.h. may count. P: NURS 8235 and/or NURS 8240 or consent of program director; Mentorship and interdisciplinary research experience under guidance of nursing faculty member.

8260. State of Clinical Nursing Science (3) P: NURS 8235 and 8240 or consent of program director; Focuses on selected domains of knowledge relevant to clinical nursing science.

8265. Evolving Clinical Nursing Science (3) P: NURS 8260 or consent of program director; Formulate approaches to implement identified directions for knowledge development in clinical nursing science.

8500. Independent Study (1-3) May be repeated. May count a maximum of 6 s.h. P: Consent of instructor; Independent exploration of area(s) of interest in nursing science.

9000. Dissertation Research (3-12) May be repeated. Minimum of 6 s.h. required; maximum of 12 s.h. may count. P: Successful completion of candidacy examination. Original research investigation on a significant aspect of nursing science.

9001. Dissertation: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

COLLEGE OF TECHNOLOGY AND COMPUTER SCIENCE

David White, Dean, Suite 100, Science and Technology Building

Leslie R. Pagliari, Associate Professor and Associate Dean for Academic Affairs

Evelyn C. Brown, Associate Professor and Associate Dean for Research and Graduate Studies

The College of Technology and Computer Science (TECS) is unlike any other within the University of North Carolina system. Faculty members are not content to stand behind a lectern and talk; students are not content to sit behind desks and take notes. Both groups have come to ECU with a desire to solve real-world problems. We strive to create graduates in high demand in business and industry as well as drastically impact the economic development of eastern North Carolina.

The College of Technology and Computer Science is comprised of the Departments of Computer Science, Construction Management, Engineering, and Technology Systems. The Department of Computer Science offers master's degrees in computer science and in software engineering. The Department of Construction Management offers a master's degree in construction management. The Department of Technology Systems offers a master of science degree, with specialties including: computer networking management, digital communications, industrial distribution and logistics, information security, manufacturing systems, and quality systems. They also offer a master of science degree in occupational safety, as well as a PhD in technology management.

DEPARTMENT OF COMPUTER SCIENCE

Karl Abrahamson, Interim Chair, Suite 113-C, Science and Technology Building

MS IN COMPUTER SCIENCE

Applicants to the master of science degree in computer science must meet the admission requirements of the Graduate School, have an undergraduate degree in computer science or a related field, be able to demonstrate significant study in computer science, including a study of computer architecture and software design, be proficient programmers in at least one high-level programming language, submit three letters of recommendation, and have satisfactory scores on the general portion of the Graduate Record Examinations. Applicants whose native language is not English must additionally submit a satisfactory score on the Test of English as a Second Language (TOEFL).

Each applicant's credentials will be reviewed by the director of graduate studies, who will determine if undergraduate deficiencies are present and, if so, will prescribe a method for their removal and determine a precondition for admission.

Minimum degree requirement is **30 s.h.** of credit as follows:

1. Core courses (12 s.h.): CSCI 6120, 6230, 6420, and one of 5210 or 5220; an additional 18 s.h. selected from CSCI courses numbered 5000 or above, including 3-6 s.h. of thesis or research project. At least 15 s.h. must be in courses numbered 6000 or above. Up to 6 s.h. of the following courses can count toward the 18 hours of CSCI elective courses:
 - SENG 6240. Software Architecture and Design (3) (P/C: SENG 6230 or consent of instructor)
 - SENG 6250. Software Systems Modeling and Analysis (3) (P/C: SENG 6230 or consent of instructor)
 - SENG 6270. Software Verification and Validation (3) (P/C: SENG 6230 or consent of instructor)
2. A minimum cumulative GPA of 3.0 must be submitted for all graduate courses. No more than 6 s.h. of course work evaluated as C may be counted toward the degree.
3. Satisfactory score on a comprehensive examination covering 12 s.h. of course work.
4. Following successful completion of the comprehensive examination, the student must design and complete CSCI 6995 or 7000 under the direction of an advisor. The project or thesis must be successfully defended before the student's examination committee.
5. Students must attend at least five research seminars and present at least one research seminar during the course of study.
6. A minimum cumulative GPA of 3.0 must be submitted for all graduate courses. No more than 6 s.h. of course work evaluated as C may be counted toward the degree.

SECTION 8: CURRICULA

CSCI: COMPUTER SCIENCE

5002. Logic for Mathematics and Computer Science (3) Same as MATH 5002 P: CSCI 3310 or CSCI 3510 or MATE 3223 or 2775 or MATH 2427 or 2775 or 3256 or PHIL 3580 or equivalent. Methods of mathematical logic important in mathematics and computer science applications.

5210. Operating Systems II (3) P: CSCI 4630 or consent of instructor. Theory and practice of concurrent processes in computer operating systems. Process scheduling. Memory and auxiliary storage management.

5220. Program Translation (3) P: CSCI 4627 or consent of instructor. Formal language specification for programming languages. Advanced parsing techniques. Code generation and optimization.

5501, 5502, 5503. Independent Study (1,2,3) Minimum of 3-6 hours per week depending on nature of work assigned. P: CSCI 3601 or equivalent or consent of instructor. Advanced computer science students study topics that supplement regular curriculum.

5774. Programming for Research (3) Same as MATH 5774 For graduate student who wishes to use computer science to meet required research skills in his or her dept. May not count toward MATH major or minor. P: General statistics course or consent of instructor. Emphasis on minimum-level programming skill and use of statistical packages.

5800. Artificial Intelligence (3) P: CSCI 3310 or CSCI 3510 or consent of instructor. Fundamental problems and techniques of artificial intelligence. Heuristic search. Concepts of expert systems.

6100. Cryptography and Information Security (3) P: Consent of instructor. Cryptographic techniques to provide secrecy and authenticity of information communicated over an insecure channel; private-key cryptography, public-key cryptography and deployed cryptography.

6120. Computer Systems Architecture (3) P: CSCI 4520 or consent of instructor. Sequential architectures, instruction sets, addressing modes, and control structures. Introduces parallel architectures.

6130. Networking and Telecommunication (3) P: CSCI 6120 or consent of instructor. Theory and case studies of modern networking protocols and telecommunication methods. Local area and long-haul networks.

6140. Mobile Communications and Wireless Security (3) P: CSCI 6130; or consent of instructor. Signals, access protocols, application requirements, and security issues with a focus on digital data transfer.

6220. Topics in Language Design (3) P: CSCI 3675 or consent of instructor. Semantics and implementation characteristics of languages supporting modern computing paradigms such as functional programming, logic programming, constraint programming, and object-oriented programming.

6230. Software Engineering Foundations (3) Same as SENG 6230 P: Consent of instructor. Software project development using software engineering principles and current software development techniques.

6300. Cryptographic Protocols (3) P: CSCI 6100; or consent of instructor. Design and analysis of cryptographic protocols for various tasks; emphasis on applications beyond providing secrecy and authenticity of messages.

6410. Design and Analysis of Algorithms (3) P: CSCI 3650 or consent of instructor. Methods of designing efficient algorithms, case studies. Analysis of complexity of algorithm.

6420. Computability and Complexity (3) P: CSCI 4602 or consent of instructor. Computability, Church's thesis, formal models of computation. Introduces complexity theory.

6600. Data Base Management Systems (3) P: CSCI 3700 or consent of instructor. Theory and techniques of data base management systems. Examines implementations of DBMS.

6710. Developing e-Commerce Systems (3) P: CSCI 6230; or consent of instructor. Introduces use of concepts, technologies, and building blocks from computer science, practical software engineering, and business development in building e-Commerce systems. Systematic life-cycle approach to developing successful e-Commerce systems essential to wide range of organization and software developers.

6810. Topics in Artificial Intelligence (3) P: CSCI 5800 or consent of instructor. Study of state of the art in selected topic on artificial intelligence.

6820. Computer Graphics (3) P: CSCI 3800 or consent of instructor. Principles and techniques of image rendering. Use of image rendering software.

6840. Data Mining (3) P: Consent of instructor. Data mining concepts and techniques and state of the art in data mining, including association rule mining, classification, clustering, data mining on complex type of data, and other data mining algorithms and applications.

6905. Topics in Computer Science (3) May be repeated once with change of topic. P: Consent of instructor. Current topic in computer science.

6995. Research Project (3) P: Approval of director of graduate studies. Student selects, investigates, and reports to faculty on challenging research project.

7000. Thesis (1-6) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

MS IN SOFTWARE ENGINEERING

The College of Technology and Computer Science offers a master's of science in software engineering that is available online and on campus. The program prepares students to be able to specify, implement, and manage large software system projects from initial concept to the end of product life that are on time, on budget, and meet functional requirements.

ADMISSION REQUIREMENTS

Applicants must meet the admission requirements of the Graduate School. Acceptance to the master of science degree in software engineering is based on satisfactory undergraduate grades, scores on either the Miller Analogies Test or the Graduate Record Examinations, and letters of reference. Applicants whose native language is not English must additionally submit a satisfactory score on the Test of English as a Foreign Language. Completion of an undergraduate degree in computer science, software engineering, computer engineering, electrical engineering, information systems or a related discipline is recommended for admission. Students from other disciplines or applicants with limited technical expertise are evaluated on a case-by-case basis by the program admissions committee. In some cases, remedial undergraduate courses or additional graduate courses are required as a precondition for admission. Online students in the program are required to have fully functional computer hardware and full Internet connectivity. Requirements for completing the master of science in software engineering are described below.

Minimum degree requirement is **30 s.h.** of credit as follows:

1. Core.....9-12 s.h.
SENG 6230, 6235 and SENG 6290 (3 s.h.) or 7000 (6 s.h.)
2. Concentration area (choose one).....12 s.h.
 - Software Design and Development*
 - SENG 6240. Software Architecture and Design
 - SENG 6245. Software Construction
 - SENG 6250. Software Systems Modeling and Analysis
 - SENG 6270. Software Verification and Validation
 - Software Project Management and Quality Assurance*
 - SENG 6255. Software Requirement Analysis and Management
 - SENG 6260. Software Metrics and Quality Management
 - SENG 6265. Foundations of Software Testing
 - SENG 6280. Process Management and Life Cycle Modelling
 - Software Testing*
 - SENG 6250. Software Systems Modeling and Analysis
 - SENG 6265. Foundations of Software Testing

SECTION 8: CURRICULA

- SENG 6270. Software Verification and Validation
- SENG 6275. Dependable Systems and Software Reliability
- 3. Electives (Choose any two).....6-9 s.h.
Electives must come from outside concentrations
CSCI 5220, 6130, 6140, 6600, 6710, SENG 6240, 6245, 6250, 6255, 6260, 6265, 6270, 6275, 6280
Three s.h. from the following list:
CSCI 5210, 5800, 6100, 6120, 6410, 6420, 6840

A minimum cumulative GPA of 3.0 must be submitted for all graduate courses. No more than 6 s.h. of course work evaluated as C may be counted toward the degree.

SENG: SOFTWARE ENGINEERING

- 6230. Software Engineering Foundations (3) Same as CSCI 6230** P: CSCI 4200 or consent of instructor: Software project development using software engineering principles and current software development techniques.
- 6235. Software Project Management (3)** P/C: SENG 6230 or consent of instructor: Advanced methods and techniques to initiate, plan, and control large and complex software development projects.
- 6240. Software Architecture and Design (3)** P/C: SENG 6230 or consent of instructor: Software development issues related to software architecture and design. Examines software development and implementation.
- 6245. Software Construction (3)** P: Consent of instructor: Software development environments, data structures and algorithms, object-oriented techniques, and object-oriented programming.
- 6250. Software Systems Modeling and Analysis (3)** P/C: SENG 6230 or consent of instructor: Methods for the construction of software including formal notation language and its application to the analysis and specification of software system requirements.
- 6255. Software Requirements Analysis and Management (3)** P: Consent of instructor: Methods and processes for managing, analyzing and specifying requirements; use-case modeling; systems for requirements analysis and management.
- 6260. Software Metrics and Quality Management (3)** P/C: SENG 6230 or consent of instructor: Software quality metrics associated with process and product metrics. Examines development of software using various types of metrics and models employed in the field of software quality engineering.
- 6265. Foundations of Software Testing (3)** P: Consent of instructor: Fundamentals of software testing, test management, testing tools, test planning approaches, and basic static and dynamic testing methods.
- 6270. Software Verification and Validation (3)** P/C: SENG 6230 or consent of instructor: Verification and validation strategies and techniques throughout the software life-cycle, including processes that assure the desired software and documentation are developed and maintained.
- 6275. Dependable Systems and Software Reliability (3)** P: Consent of instructor: Analysis, modeling, and development of dependable systems. Foundations of software reliability.
- 6280. Process Management and Lifecycle Modeling (3)** P/C: SENG 6230 or consent of instructor: Foundations of software management and support over the complete life cycle including maturity models, change management, and optimization.
- 6290. Software Engineering Project (3)** P/C: SENG 6230 or consent of instructor: Practical process-based and industry-oriented view of software engineering practices. Exposure to research, software development, and implementation of professional level software.
- 7000. Thesis (1-6)** P: SENG 6230 and consent of instructor. May be repeated. May count maximum of 6 s.h.

DEPARTMENT OF CONSTRUCTION MANAGEMENT

Syed M.Ahmed, Chair, 346 Rawl Building

The Department of Construction Management offers graduate courses leading to the master's degree in Construction Management (MCM). The department is equipped with a high-bay laboratory, which provides an environment for large scale testing. The faculty is actively engaged in applied research and encourages graduate student involvement in different dimensions of research and professional development. The MCM program is offered via two delivery mechanisms, i.e., face-to-face (on-campus) and online. Graduates from this program are prepared to take on managerial and leadership positions in the construction management professional arena.

MASTER OF CONSTRUCTION MANAGEMENT (MCM)

Admission Requirements

- BS/BA in Construction Management, Construction Engineering, Construction Technology, Civil Engineering, Architecture, Real Estate, Industrial Engineering, Mechanical Engineering, Business, Finance, Accounting, Management, Marketing, etc.
- Cumulative GPA (CGPA) of at least 2.7 on a 4.0 scale
- Acceptable GRE/GMAT Score (typically around 1000 for GRE and 500 for GMAT)
- Two letters of recommendation
- Statement of purpose/intent
- Detailed curriculum vitae (CV)/resume

Prerequisites

Students with a BS degree in construction management, construction engineering or construction technology have to complete 30 graduate credits to get their MCM degrees. **No prerequisite courses are required for above mentioned students.**

Students who have a BS degree in civil engineering, architecture, industrial engineering, mechanical engineering, business, finance, accounting, management, etc., have to take **undergraduate remedial/prerequisite courses** to demonstrate proficiency in **one or more** of the following courses. These courses (or equivalent) can be taken at ECU or at a Community college or university near you. A few of these prerequisite courses may also be available online in locations such as <http://constructionclasses.com>. **All students complete 30 graduate credits.**

- Construction documents and analysis
- Construction materials and methods
- Construction safety
- Construction estimating
- Construction scheduling
- Construction equipment management

Exemptions from prerequisites can be granted by the graduate program director and/or the chair of the CMGT department.

Should the applicants' CGPA be less than 2.7, they may be admitted on the **condition** that they maintain a 3.0 CGPA in the first 9 graduate credits taken at ECU.

Please visit the CMGT department web site at <http://www.ecu.edu/cs-tecs/cmgt/index.cfm> or email us at cmgtinfo@ecu.edu for additional information about the MCM program. To apply to the MCM program please visit <http://www.ecu.edu/gradschool/>.

The master of construction management requires **30 s.h.**: CMGT 6600, 6610, 6620, 6630, 6640, 6650, 6660, 6662, 6664, 6700.

CMGT: CONSTRUCTION MANAGEMENT

5503. Independent Study: Construction (3) May be repeated for credit with consent of chair. Research-oriented. Problem solving with tools, materials, and processes of construction industry.

SECTION 8: CURRICULA

6600. Critical Analysis and Evaluation of Construction Documentation (3) P: Acceptance into the MCM program. Methods of critically analyzing project data associated with construction design, process application, and project control problems and formulating logical solutions through a variety of documentation sources.

6610. Advanced Computer Applications in Construction (3) P/C: CMGT 6600. Understanding emerging computing and information technologies in construction management and engineering.

6620. Human Resources and Training (3) P: CMGT 6600. Study of human resources in construction business environments; the theories of human behavior and how it is influenced by leadership, organization, environment, motivation, and culture.

6630. Advanced Applications in Construction Scheduling (3) P: CMGT 6600. Managing construction scheduling, project control, and strategic planning and analysis of single and multiple projects.

6640. Land Use Management and Development (3) P: CMGT 6600. Principles and practice of site planning and infrastructure design for large urban developments, with relevant aspects of land use theory and implications for site planning.

6650. Global Management of Construction (3) P: CMGT 6600. Special problems and procedures related to international construction projects; impact of social, cultural, legal, and financial aspects of international contracting; logistics of labor, materials, and equipment in a foreign environment.

6660. Quality Control Systems (3) P: CMGT 6600. Developing and implementing methods of controlling and evaluating quality control in all processes of construction.

6662. Legal Implications of Design and Construction (3) P: CMGT 6600. Risk liability in construction industry, contract case law, tort law, negligence, products liability, and role of liability insurance and professional liability of designers and building contractors.

6664. Advanced Cost Estimating/Cost Analysis (3) Incorporates emerging estimating and cost control measures in construction industry. Conceptual and definitive estimating, cost developing, cost analysis methods, project delivery implications, international work implications, and computer applications and modeling.

6670. Special Topics in Construction (3) P: Consent of chair. Exploration and research in personal areas of interest.

6700. Research Capstone Seminar (3) P: CMGT 6610; consent of instructor. Provides graduate students in construction management an opportunity to conduct independent study and research for the non-thesis master's degree program.

DEPARTMENT OF TECHNOLOGY SYSTEMS

Tijjani Mohammed, Interim Chair, Suite 202, Science and Technology Building

The Department of Technology Systems offers graduate programs leading to the graduate certificate, the master of science, and a consortium-based doctor of philosophy (PhD). The department is a leading proponent of collaborative network-based learning and offers many of its graduate programs online. Students are expected to be proficient in use of a personal computer and have access to high speed internet service.

Graduate certificates offered through the department include: computer network professional, information assurance, lean six-sigma black-belt (LSSBB), performance improvement, and website developer. The department also offers a master of science (MS) in technology systems and a master of science in occupational safety. The MS in technology systems degree program includes study in the areas of computer networking management, digital communications technology, environmental planning and development, industrial distribution and logistics, information security, manufacturing systems, performance improvement, and quality systems. The MS in occupational safety builds upon expertise in foundational regulatory and technical aspects of occupational safety and is a stand alone degree program. The doctor of philosophy (PhD) in technology management is designed to prepare scholars for leadership positions in education, industry, government, and business. The PhD is offered through a five-university consortium with the degree being awarded through Indiana State University. Graduates from all of these graduate programs are prepared to manage rapidly changing technologies and technical systems.

GENERAL ADMISSION REQUIREMENTS

Applicants must meet the admission requirements of the Graduate School. Acceptance into any master's degree program in the Department of Technology Systems is based on satisfactory undergraduate grades, scores on a graduate test such as Graduate Management Admission Test (GMAT) or the Graduate Record Examinations (GRE), and letters of reference. Completion of an undergraduate degree in a field related to the desired concentration or significant related technical experience are required for admission. Students with limited technical expertise or a non related baccalaureate degree are evaluated on a case-by-case basis by the Department Graduate Admissions Committee. In some cases, remedial undergraduate courses or additional graduate courses are required to complement the graduate program.

MS IN OCCUPATIONAL SAFETY

The master of science in occupational safety requires **30 s.h.** credit and is comprised of courses that build upon expertise in foundational regulatory and technical aspects of occupational safety. Required courses include: SAFT 6040, 6250, 6290, 6310, 6402, 6288; and EHST 6700 and 6701 or SAFT 6805. Electives from EHST, ITEC, SAFT or other areas are selected as approved by the Graduate Program Coordinator. Students who are deficient in the foundational regulatory and technical aspects of occupational safety may be required to take additional courses. Program pre-requisites include chemistry with lab and statistics.

Non-thesis option: SAFT 6995; 6 s.h. of approved electives.

Thesis option: BIOS 702 I; SAFT 7000; 3 s.h. of approved electives.

MS IN TECHNOLOGY SYSTEMS

Minimum degree requirement is **30 s.h.** of credit as follows:

1. Common core: ITEC 6000, 6050, 6200, 6406..... 12 s. h.
2. Concentration area (Choose one)..... 18 s.h.
 - Computer networking management:*
ICTN 6823, 6850, 6865, 6875, 6880, 6885
 - Digital communications technology:*
ICTN 6810, 6820, 6823, 6830, 6840, 6850
 - Environmental planning and development:*
PLAN 5025, 5065, 6020, 6029, 6301, 6305
 - Industrial Distribution and Logistics:*
IDIS 6500, 6535, 6545; ITEC 6001, 6600; approved elective from ICTN, ITEC, SAFT
 - Information Security:*
ICTN 6823, 6865, 6870, 6873, 6878, 6883
 - Manufacturing Systems:*
ITEC 6002, 6003, 6407, 6600; 2 approved electives from ICTN, IDIS 6535, ITEC 6001, 6005, 6110, 6112, 6903, SAFT 6250, 6402
 - Performance Improvement:*
EDTC 6010, 6020, 6045, 7125; ITEC 6001; approved elective from EDTC, IDIS, ITEC, MGMT, PSYC
 - Quality Systems:*
ITEC 6005, 6110, 6112, 6600; 2 approved electives from ICTN, IDIS 6535, ITEC 6001, 6002, 6003, 6407, 6903, SAFT 6250, 6402

The master of science degree program is designed to serve the needs of students who possess a baccalaureate degree in technology systems and related technology oriented disciplines. The program of study includes course work composed of four core courses, and six in the area of specialization. All students are required to apply theory to practice through analytical projects and research papers involving industry problems and applications. Concentrations are currently available in computer networking management, digital communications technology, industrial distribution and logistics, information security, performance improvement, environmental planning, manufacturing systems, and quality systems. The emphasis of the master of science degree program is on technology management, application to practice, and creative problem solving in technology driven industry and business.

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The core consists of courses which emphasize the fundamental skills and knowledge deemed important by industrial employers and technology managers. Graduates must be able to use information processing systems to more effectively communicate, process information, access data, and solve problems in industry; evaluate the performance of technical systems and interpret the significance of data pertaining to product quality and reliability; be familiar with contemporary issues relating to people and technology in competitive, world-class markets; identify and apply techniques for organizing resources to enhance productivity and accomplish objectives in a cost-efficient and timely manner; and serve as effective leaders and managers.

Students with limited technical expertise are evaluated on a case-by-case basis. In some instances, remedial undergraduate courses or additional graduate courses are required to complement the graduate program. All courses are offered in an online format for all concentrations. Students must have access to current computing technology and full Internet access. Additional details regarding platforms and connectivity are available by contacting the Department of Technology Systems.

Computer Networking Management

Courses in this concentration emphasize advanced technologies used in the design, implementation, administration, monitoring, optimization, and maintenance of data communication and computer networking systems in industry.

Digital Communications Technology

Courses in this concentration emphasize a broad understanding of communication theory and practice in the transmission of digital data, including signal generation, conditioning, transmission, error detection and correction, and the underlying technologies used to retrieve, process, store, and analyze data in organizations.

Environmental Planning and Development

Courses serving the needs of students to provide training that will equip the student to work in the coastal regions across the nation, developing sustainable building and hazard mitigation codes as well as maximizing the recreational opportunities while minimizing the impact on the environment.

Industrial Distribution and Logistics

This concentration prepares students for the evolving and changing technology management techniques and theories in the area of distribution and logistics. Focus is on understanding, modeling, analyzing, and improving the supply chain and its related elements.

Information Security

Courses in this concentration prepare students to design and manage a system for securing and protecting the integrity of information in governmental, private, and non-profit data network systems.

Manufacturing Systems

The manufacturing systems concentration prepares students for upper-level positions in the manufacturing industry. The curriculum provides industry based, problem-solving experiences in Lean manufacturing concepts, production planning and inventory management, computer integrated manufacturing, improvement of the quality of manufacturing enterprises, change management, and productivity improvement.

Performance Improvement

This concentration serves students with a human resource and organizational performance improvement career interest. Courses focus on a systems view of how to develop and implement significant improvement in organizational performance in a technology driven organization.

Quality Systems

The quality systems concentration prepares students for upper-level positions in quality management fields. The curriculum provides industry based, problem-solving experiences in Lean enterprise, quality planning and analysis, experimental design, improvement of the overall quality of enterprises, and process improvement of management systems.

Thesis Option

For students interested in a research focus, the MS in technology systems provides a thesis option with six credit hours of the required thirty hours dedicated to the development of independent research. Students should identify a thesis advisor early and develop an abstract of the research topic and the contribution. The MS thesis option committee will consist of three members.

PhD IN TECHNOLOGY MANAGEMENT

East Carolina University is one of five universities collaborating to provide an online PhD program in technology management. The degree is awarded through Indiana State University and is designed to prepare scholars for leadership positions in education, industry, government, and business. The program consists of a minimum of **90 s.h.** beyond the baccalaureate. Students are required to successfully complete preliminary and comprehensive examinations, design and conduct original research, and defend a doctoral dissertation. An individualized program of study and applied research internship is also required.

The program involves five areas of required study: technical core (15 s.h.), research core (27 s.h.), technical specialization (30 s.h.), internship (6 s.h.), and cognates (12 s.h.). Additional courses may be required to address deficiencies. ITEC 6050 is a prerequisite to all distance learning programs. Design of each candidate's program of study is dependent on their goals and background experiences.

Four technical specializations are currently available: digital communications systems, construction management, manufacturing systems, quality systems, and human resource development. ECU provides the lead on specializations in digital communications and manufacturing systems. Students identify a "home university" based on their technical specialization and/or geographic location.

CERTIFICATE PROGRAMS

Computer Network Professional Certificate Program

The computer network professional certificate program prepares graduates for employment in the computer networking industry. The skills developed in the course work lead to successful careers as network administrator, data communication manager, communication specialist, etc.

The program is structured to achieve this objective through 15 s.h. of advanced course work. Information in the courses is cumulative; therefore the program requires 18 months to complete.

The computer network professional certificate program is offered online via the Internet. Students in the program are required to have fully functional computer hardware and full Internet connectivity. Additional details regarding platforms are available by contacting the Department of Technology Systems, College of Technology and Computer Science.

Required courses: ICTN 6800, 6810, 6820, 6823, 6830.

Information Assurance Certificate Program

The information assurance certificate program prepares graduates for employment in various levels of information technology industry. The skills included in the course work are required to be successful in such positions as information security specialist, network security analyst, and information security manager.

The program is structured to achieve this objective through 15 s.h. of advanced course work. Information in the course is cumulative; therefore the program requires three semesters to complete.

The information assurance certificate program is offered online via the Internet. Students in the program are required to have fully functional computer hardware and full Internet connectivity.

Due to the nature of the advanced skills, the prerequisites of this program include the knowledge of basic data communication, computer networking, and computer operation as evidenced by one of the following: COMPTIA Network+ certification or Cisco CCNA certification or equivalent course work. The prerequisite requirement can also be achieved by taking several ECU courses.

Required courses: ICTN 6800, 6823, 6865, 6873, 6878.

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Lean Six-Sigma Black-Belt (LSSBB) Certificate Program

The lean six-sigma black-belt (LSSBB) certificate program prepares graduates for employment in industry in a variety of jobs related to quality and process improvement. The skills developed in the course work can lead to successful careers as a lean six sigma facilitator, continuous improvement manager, project leader, and similar positions. The program is structured to achieve this objective through internet-based, online advanced course work. Students are required to have high-speed internet connections.

Minimum certificate requirement is 15 s.h. of credit as follows:

Complete the following for 12 s.h.: ITEC 6110, 6112, 6501 and 6600.

Choose 3 s.h. from the following: ITEC 6002 or 6005.

Courses may have prerequisites that may be waived by the program coordinator based on student's background.

The courses are scheduled to allow completion of the certificate program in 18 months. External transfer hours are not accepted in the certificate program. For students who choose to pursue this certificate jointly with the MSTS degree with a concentration in either manufacturing systems or quality systems, a maximum credit of 6 s.h. are allowed to be used toward the certificate. The certificate program requires the undertaking of an industrial or business process project (ITEC 6501 – Enterprise Process Improvement Project) where certified savings or revenue increase should be shown. Students are responsible for finding and structuring the project.

Performance Improvement Certificate Program

Applicants to the Certificate in Performance Improvement must currently have a bachelors degree. Students may transfer up to 9 semester hours as a non degree student toward the graduate MS in Instructional Technology or an MS in Performance Systems Improvement. Graduate School retention standards will apply. Required courses: EDTC 6010, 6020, 6125, ITEC 6001, 6200, 6050

Website Developer Certificate Program

The website developer certificate program prepares graduates for employment as website developers and managers. The skills learned in this certificate program are required to be successful in jobs with titles such as web master, web designer, etc.

The program is structured to achieve this objective through 15 s.h. of advanced course work. Information in the courses is cumulative; therefore the program requires eighteen months to complete.

The website developer certificate program is offered online via the Internet. Students in the program are required to have fully functional computer hardware and full Internet connectivity. Additional details regarding platforms are available by contacting Department of Technology Systems in the College of Technology and Computer Science.

Required courses: ICTN 6800, 6815, 6825, 6835, 6845.

ICTN: INFORMATION AND COMPUTER TECHNOLOGY

6200. Information Technology Project Management (3) Skills and knowledge required to manage information technology projects including project planning, cost analysis, human factors, project network diagrams, and risk management.

6800. Internet Research Methods (3) Collaboration methods that emphasize problem-solving in industry and other technical environments.

6805. Computer Networking Hardware (3) Hardware components used in modern networking environment. Emphasis on operational characteristics and specification of each component used in computer network.

6810. Communication Technology (3) P/C: ICTN 6800 or ITEC 6050, 6805 or equivalent experience. Analysis of design, development, and operation of contemporary technical systems used by industry to transmit, process, retrieve, preserve, and store information.

6815. Network Media Services (3) Internet connectivity required. P/C: ICTN 6800 or 6050. Study of design and implementation of multimedia technology applied to enterprise website strategy. Topics include design of multimedia objects and technology for deploying media rich environment.

- 6820. Networking Technology for Industry (3)** P: ICTN 6810. Design, implementation, and maintenance of industrial computer networks.
- 6823. Information Security Management (3)** P/C: ICTN 6800 or 6050; 6810 or consent of instructor; ITEC 6050. Survey of information security terms, concepts, principles, and applications in data networking environment.
- 6825. Dynamic Web Services (3)** P: ICTN 6815. Modern technologies for providing dynamic contents with enterprise websites. Topics include creation and management of dynamics web services.
- 6830. Advanced Networking Technology (3)** P: ICTN 6810. Advanced topics in computer networking technology used in industry. Problem-solving activities dealing with installation, configuration, and security of internet and intranet services.
- 6835. Enterprise Web Services (3)** P: ICTN 6825. Study of integrated web services to a successful enterprise web presence. Topics include development of web site with multiple integrated services, website performance, and security consideration.
- 6840. Communication Strategies for Industry (3)** P: ICTN 6830. Models and techniques advocated by leaders in field of communications to provide basis for improving exchange of information at all levels of industrial organization.
- 6845. Web Site Development (3)** P: ICTN 6835. Latest technology in developing successful web sites on Internet as related to industry and business applications, including protocols, standards, and programming tools.
- 6850. Managing Technological Change (3)** P/C: ICTN 6800 or ITEC 6050. Operational policies and related legal issues for information technology systems in organizations. Topics cover government and industry regulations, policies applied to information technology, industry, development of enterprise polices on effective and legal use of information technology, and other polices related to information technology environment.
- 6853. Cryptography Algorithms and Applications (3)** P/C: ICTN 6800 or ITEC 6050. Key cryptographic terms, concepts, principles, and applications in networked environment.
- 6855. Networked Commerce Systems (3)** P/C: ICTN 6800 or ITEC 6050. Design and implementation of network-based commerce systems. Considers infrastructure support issues.
- 6860, 6861, 6862. Special Topic in Technology (1,2,3)** May be repeated for credit with consent of director of graduate studies. Research in trends, problems, and issues related to field of industrial technology.
- 6865. Fundamental Network Security (3)** P: ICTN 6800 or ITEC 6050. Survey of security challenge to data communication and computer network. Topics include evaluation of network security threats, fundamental configuration of enterprise network devices, and enterprise network security policy development.
- 6870. Advanced Network Security (3)** P: ICTN 6865. Advanced technology for providing secure access to enterprise information network and resources. Topics include Virtual Private Network (VPN) implementation, intrusion detection system implementation and configuration, and organizational security models.
- 6873. Network Intrusion Detection and Incident Response (3)** P: ICTN 6865. State-of-art intrusion detection technology for protecting data network from malicious attack.
- 6875. Emerging Technology (3)** Internet connectivity required. P: ICTN 6865. State-of-art technologies for accessing enterprise data communication network infrastructure. Topics include wireless, WLAN, broadband Internet access, web application on mobile units, and Storage Area Network.
- 6878. Legal and Ethical Issues in Information Technology (3)** P: ICTN 6823. Surveys legal environment of information technology and issues relating to privacy, policy, and unauthorized computer and network intrusion, as covered by federal, state, and local regulations.
- 6880. Advanced Topics in Information Infrastructure Design (3)** P: ICTN 6865. Advanced features in providing reliable information infrastructure for organizations. Topics include current and future development of dynamic routing and switching protocols, such as OSPF, BGP, MLS, etc. Covers issues on IPv6 and its deployment.

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6883. System Integrity for Information Technology (3) P: ICTN 6873. Capstone to provide systematic approaches to design and deployment of comprehensive information integrity measures for data network systems.

6885. Network Management Technology (3) P: ICTN 6880. Current technologies to address enterprise-wide data communication network management. Topics include planning and deploying hardware and software solution for enterprise network management.

6900. Practicum (I-3) May be repeated. A maximum of 3 s.h. will count towards the degree. P: Consent of instructor. Applied industry project in close alignment with student's technical area of specialization.

7000. Thesis (I-6) May be repeated up to a maximum of 6 s.h. P: Consent of instructor. Original research in student's area of specialization.

7001. Thesis: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

9001. Dissertation: Summer Research (I) May be repeated. No credit may count toward degree. Students conducting dissertation research may only register for this course during the summer.

IDIS: INDUSTRIAL DISTRIBUTION

6500. Collaborative Planning in the Supply Network (3) P/C: ITEC 6050. Detailed analysis of collaboration among supply network partners; specifically collaborative planning and forecasting for replenishment (CPFR).

6515. Logistical Security and Safety Management (3) P/C: ITEC 6050. Covers logistical issues involved with laws and regulations internationally and in US. Includes safety issues involved in logistics such as container security as well as new laws that have affected logistics since inception of Homeland Security.

6525. Transportation Logistics Management (3) P/C: ITEC 6050. Comprehensive examination of critical issues involved in domestic and international transportation management. Provides insight into most important laws, rules, regulations, treaties, and practices remaining in today's deregulated transportation environment.

6535. Supply Chain Logistics Management (3) P/C: ITEC 6050. Examines critical issues involved in supply chain logistics management. Issues such as e-business, procurement and outsourcing, supply chain distribution strategies, and latest technology trends in supply chain logistics management discussed.

6545. Global Logistics Management (3) P/C: ITEC 6050. Examines critical issues involved in global logistics management. Customs, global trading documentation, security issues, NAFTA and free trade, risk management, homeland security issues, and strategic global trade and business options discussed.

ITEC: INDUSTRIAL TECHNOLOGY

5100. Internship in Industrial Technology (3) Supervised internship. P: Consent of graduate director. Placement in industrial or technical firm. Requires journal of related activities and final report.

6000. Statistical Applications in Industry (3) P/C: ITEC 6050. Applies statistical quality control and assurance systems in technology context, including manufacturing, construction, and electronics.

6001. Technology Process Change Management (3) P/C: ITEC 6050. Effective change management for process improvement to create and grow world-class organizations. Focuses on the individual's role in bringing about change, creation of change vision and plan, executing change, and cultural change.

6002. Lean Manufacturing (3) P/C: ITEC 6050; or consent of instructor. Implementation of waste reduction and productivity improvement techniques for production systems, based on world-class Lean manufacturing principles and tools.

6003. Production Planning and Inventory Management (3) P/C: ITEC 6000, 6050. Planning and control of production of goods and services with a world-class business process view to perform inventory management, enterprise resource planning (ERP), manufacturing resource planning (MRP II) and materials requirements planning (MRP).

6005. Lean Enterprise (3) P/C: ITEC 6050; or consent of instructor. Implementation of waste reduction and productivity improvement techniques for service processes, including healthcare, administration and office systems, based on world-class Lean Enterprise principles and tools.

6010. Readings in Industry (3) P/C: ITEC 6050; consent of director of graduate studies. Comprehensive study of contemporary topics of importance. Reading, seminar discussion, written critiques, and conferencing between student and instructor.

6050. Strategies for Technical Management and Communications (3) Collaborative learning methods that emphasize problem-based learning, heuristics devices, and critical thinking to solve engineering and engineering-related problems.

6060. Research Methods in Technology (3) Study of academic research addressing the stages of scientific projects from the development of research proposals to publication of the findings.

6100. Practicum in Industrial Technology (3) May be repeated for maximum of 12 s.h. May count maximum of 3 s.h. P: ITEC 6400; P/C: ITEC 6050; consent of director of graduate studies. Capstone industry-based project. Supervised by committee of ITEC graduate faculty. Final report with formal electronic presentation.

6110. Quality Planning and Analysis (3) P/C: ITEC 6000; or consent of instructor. Six-sigma principles and methodologies, including the DMAIC (define, measure, analyze, improve, and control) process, statistical process control, correlation and regression analysis.

6112. Design of Experiments for Products and Processes (3) P/C: ITEC 6000; or consent of instructor. Statistical techniques and design of experiments to assess, monitor and improve performance of products and processes to world-class quality standards.

6200. Technology Project Management (3) P/C: ITEC 6050. Comprehensive systems used to control projects to achieve technical, managerial, and economic objectives. Emphasis on management controls, computer applications, human factors, and productivity.

6295. Digital Communications for Technology (3) Investigation and utilization of tools, techniques, and technical systems for transmitting information related to problems and issues of contemporary industry using digital technologies.

6400. Research in Industrial Technology (3) P/C: ITEC 6050. Applications-oriented study of nature of research in industry and selected strategies of research methodology. Focuses on interpreting engineering data, information retrieval systems, evaluation of industrial research reports, and preparation of industrial-type research proposal.

6406. Capital Project and Cost Analysis for Technology (3) P/C: ITEC 6050. Methods employed by technical managers to develop a business case for capital projects.

6407. Computer Integrated Manufacturing and Automation (3) P/C: ITEC 6050. Design, preparation, programming, and evaluation of systems with emphasis on contemporary and emerging applications of various technologies.

6501. Enterprise Process Improvement Project (3) P: ITEC 6110. Design and implementation of a business process improvement project based on world-class scientific technology management principles.

6600. Quality Systems (3) P/C: ITEC 6050; or consent of instructor. Appraisal of quality management systems, including Baldrige, ISO, Six-sigma and other industry specific models. Statistical techniques and continuous improvements are also reinforced.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

8100, 8101. Research Internship (3,3) P: Enrollment in ISU Consortium PhD in technology management offered by Indiana State University. Predissertation project(s) addressing technology systems.

9000. Dissertation (3-12) May be repeated. May count maximum of 9 s.h.

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SAFT: OCCUPATIONAL SAFETY

6001. Regulatory Aspects of Occupational and Environmental Safety (3) Formerly SAFT 6260

Overview and application of regulations affecting occupational and environmental safety.

6002. Technical Aspects and Field Audits in Occupational Safety (3) Formerly SAFT 6280 P/C: SAFT 6001 or consent of instructor. Comprehension and application of the technical aspects of safety to occupational settings.

6040. Critical Thinking and Research Methods in Occupational Safety (3) Application of critical thinking and research methods to the field of occupational safety.

6250. Occupational Ergonomics (3) P/C: SAFT 6040 or consent of instructor. Focus on dimensions of occupational ergonomics practice and applications intended to reduce worker/hardware/environmental interface problems in order to enhance worker performance while minimizing adverse physiological effects.

6282. Design for Safety and the Environment (3) P/C: SAFT 6001, 6002; or consent of instructor. Overview and application of strategy formulation, technical tools, and management tactics required to integrate safety and environmental principles into earliest life-cycle stages of products, processes, and technologies.

6288. Contemporary Issues in Occupational Safety (3) P/C: SAFT 6001, 6040; or consent of instructor. Examination of current topics in occupational safety.

6290. Fire Protection and Prevention (3) Prevention and control of fires through building construction, life safety code compliance, detection and alarm, and extinguishing methods. Examines occupancy types and fuels.

6292. Industrial Safety (3) P/C: SAFT 6001 or consent of instructor. Causes and prevention of occupational accidents and health hazards. Emphasis on organization and operation of safety programs and development of safety awareness.

6310. Loss Prevention and Workers' Compensation (3) P/C: SAFT 6001, 6040; or consent of instructor. Advanced study of risk management strategies in workers compensation system in reducing corporate financial losses. An overview of insurance and commercial general liability.

6320. Environmental Operations and Hazardous Materials (3) P/C: SAFT 6001 or consent of instructor. Measures applicable to handling, storage, and transportation of hazardous materials and disposal of waste. Examines emergency and disaster preparedness models.

6402. Applied Safety Management (3) P/C: SAFT 6001, 6040; or consent of instructor. Practical application of principles of supervisory safety management as related to supervision at various levels in line organization of manufacturing, construction, and service industries.

6410. Systems Safety Analysis (3) P/C: SAFT 6001 or consent of instructor. Applications-oriented study of recognition and evaluation of hazards in industrial environment. Formulation of control systems for alleviation of work related accidents and injuries.

6500. Field Audits in Occupational Safety (3) P/C: SAFT 6001 or consent of instructor. Review and critique of safety operations in factories, construction sites, and/or government agencies.

6805. Occupational Safety Monitoring and Control (3) P/C: SAFT 6001 or consent of instructor. Discovery, recognition, monitoring, and control of harmful agents in work place.

6901, 6902, 6903. Special Topics in Occupational Safety (1, 2, 3) May be repeated for credit with or consent of MSOS Program Coordinator. May count maximum 6 s.h. Research in trends, problems, and issues related to field of occupational safety.

6995. Practicum in Occupational Safety (3) P/C: Completion of all course work for the MSOS Program degree requirement or consent of MSOS Program Coordinator. A supervised industry-based project.

7000. Thesis (1-6) May be repeated. May count maximum of 6 s.h.

THOMAS HARRIOT COLLEGE OF ARTS AND SCIENCES**Department of Anthropology**

Linda D. Wolfe, Professor and Chair (PhD, University of Oregon)

Graduate Faculty

Christine Avenarius, Associate Professor (PhD, University of Cologne)

Eric Bailey, Professor (PhD, Wayne State University)

I. Randolph Daniel, Jr, Professor (PhD, University of North Carolina, Chapel Hill)

Charles R. Ewen, Professor (PhD, University of Florida)

David C. Griffith, Professor (PhD, University of Florida)

Holly F. Mathews, Professor (PhD, Duke University)

Megan Perry, Associate Professor (PhD, University of New Mexico)

Associate Graduate Faculty

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Edmond Boudreaux III, Assistant Professor (PhD, University of North Carolina, Chapel Hill)

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Luci Fernandes, Teaching Assistant Professor (PhD, Texas A&M University)

Heidi Luchsinger, Teaching Assistant Professor (PhD, Texas A&M University)

Laura Mazow, Assistant Professor PhD, University of Arizona

Benjamin Saidel, Assistant Professor (PhD, Harvard University)

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Jami Leibowitz, Teaching Associate Professor (PhD, University of Connecticut)

Department of Biology

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Tim Christensen, Assistant Professor (PhD, Cornell University)

Robert R. Christian, Professor (PhD, University of Georgia)

Lisa M. Clough, Associate Professor (PhD, State University of New York, Stony Brook)

Mary A. Farwell, Associate Professor and Director of Undergraduate Research, Division of Research and Graduate Studies
(PhD, University of California, Berkeley)

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Claudia L. Jolls, Associate Professor (PhD, University of Colorado)

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Joseph J. Luczkovich, Associate Professor (PhD, Florida State University)

Thomas J. McConnell, Professor and Associate Dean of the Graduate School (PhD, University of Florida Medical Center)

Susan B. McRae, Visiting Assistant Professor (PhD, University of Cambridge)

Ronald J. Newton, Professor and Assistant VC for Administration and Finance (PhD, Texas A&M University)

Anthony S. Overton, Associate Professor (PhD, University of Maryland, Eastern Shores)

Cindy Putnam-Evans, Professor (PhD, University of Georgia)

Enrique Reyes, Associate Professor (PhD, Louisiana State University)

Roger A. Rulifson, Professor (PhD, North Carolina State University)

John D. Rummel, Professor and Director of the Institute of Coastal Sciences and Policy (PhD, Stanford University)

Jean-Luc Scemama, Associate Professor (PhD, University of Toulouse)

Edmund J. Stellwag, Associate Professor (PhD, Medical College of Virginia)

John W. Stiller, Associate Professor (PhD, University of Washington)

Kyle G. Summers, Professor (PhD, University of Michigan)

SECTION 9: GRADUATE FACULTY

Heather Vance-Chalcraft, Visiting Assistant Professor (PhD, University of Illinois)

Terry L. West, Associate Professor and Director, Interdisciplinary Doctoral Program in Biological Sciences (PhD, Duke University)

Alan R. White, Professor and Dean, Thomas Harriot College of Arts and Science (PhD, University of North Carolina, Chapel Hill)

Yong Zhu, Associate Professor (PhD, Tokyo University)

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Xioping Pan, Assistant Professor (PhD, Texas Tech University)

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Elizabeth Jones, Teaching Instructor (PhD, East Carolina University)

Margit Schmidt, Teaching Assistant Professor (PhD, Ruprecht Karls University)

Charles Singhas, Assistant Professor (PhD, University of Virginia)

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Libero Bartolotti, Professor (PhD, Southern Illinois University)

Colin Burns, Associate Professor (PhD, University of North Carolina, Chapel Hill)

Allison S. Danell, Associate Professor (PhD, University of North Carolina, Chapel Hill)

Paul Gemperline, Professor (PhD, Cleveland State University)

Yumin Li, Associate Professor (PhD, Nanyang University of Science and Technology)

Kwang Hun Lim, Associate Professor (PhD, State University of New York, Stony Brook)

Brian Love, Associate Professor (PhD, Princeton University)

Andrew T. Morehead, Jr., Associate Professor (PhD, Duke University)

Art A. Rodriguez, Professor (PhD, University of North Texas)

Tim Romack, Associate Professor (PhD, University of North Carolina, Chapel Hill)

Andrew L. Sargent, Professor (PhD, Texas A&M University)

Yu Yang, Professor (PhD, University of Mainz)

Associate Graduate Faculty

Shouquan Huo, Assistant Professor (PhD, Nanjing University of Science and Technology)

Eli Hvastkovs, Assistant Professor (PhD, University of Wyoming)

Anthony Kennedy, Assistant Professor (PhD, Trinity College Dublin)

Anne Spuches, Assistant Professor (PhD, Yale University)

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Department of Economics

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Graduate Faculty

Okmyung Bin, Associate Professor (PhD, Oregon State University)
John A. Bishop, Professor (PhD, University of Alabama)
Andrzej Grodner, Assistant Professor (PhD, Syracuse University)
Mohammad R. Jahan-Parvar, Assistant Professor (PhD, University of North Carolina, Chapel Hill)
Andrew Keeler, Professor (PhD, University of North Carolina, Chapel Hill)
Jamie Lynette Kruse, Professor (PhD, University of Arizona)
Craig E. Landry, Associate Professor (PhD, University of Maryland)
Haiyong Liu, Assistant Professor (PhD, University of North Carolina, Chapel Hill)
Randall E. Parker, Professor (PhD, University of Kentucky)
Philip A. Rothman, Professor (PhD, New York University)
Nicholas G. Rupp, Associate Professor (PhD, Texas A&M University)
Lester A. Zeager, Professor (PhD, University of Pittsburgh)

Associate Graduate Faculty

Fan-Chin Kung, Assistant Professor (PhD, Washington University)
Xuan Liu, Assistant Professor (PhD, Duke University)

Graduate Teaching Faculty

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Graduate Faculty

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Michael Albers, Associate Professor (PhD, Texas Tech University)
Ellen L. Arnold, Associate Professor (PhD, Emory University)
William Banks, Assistant Professor (PhD, Illinois State University)
Margaret Bauer, Professor (PhD, University of Tennessee)
Lida Cope, Associate Professor (PhD, University of Arizona)
Seodil Deena, Professor (PhD, Indiana University of Pennsylvania)
Slobodanka Dimova, Assistant Professor (PhD, Purdue University)
Thomas E. Douglass, Associate Professor (PhD, University of North Carolina, Chapel Hill)
Michele F. Eble, Associate Professor (PhD, Georgia State University)
Julie Fay, Professor (MFA, University of Arizona)
Helena M. Feder, Assistant Professor (PhD, University of California, Davis)
Anna Froula, Assistant Professor (PhD, University of Kentucky)
William Hallberg, Associate Professor (MFA, Bowling Green State University)
Dana Harrington, Associate Professor (PhD, University of Texas)
Brent Henze, Associate Professor (PhD, Pennsylvania State University)
Thomas Herron, Assistant Professor (PhD, University of Wisconsin)
Ronald W. Hoag, Professor (PhD, University of North Carolina, Chapel Hill)
James C. Holte, Professor (PhD, University of Cincinnati)
John Hoppenthaler, Assistant Professor (MFA, Virginia Commonwealth University)
Su-ching Huang, Assistant Professor (PhD, University of Rochester)
Donna Kain, Assistant Professor (PhD, Iowa State University)
James W. Kirkland, Professor (PhD, University of Tennessee)
Andrea Kitta, Assistant Professor (PhD, Memorial University of Newfoundland)
Amanda Klein, Assistant Professor (PhD, University of Pittsburgh)
Anne Mallory, Assistant Professor (PhD, Cornell University)
Joyce Middleton, Associate Professor (PhD, University of Maryland)
Marianne Montgomery, Assistant Professor (PhD, University of Virginia)

SECTION 9: GRADUATE FACULTY

Donald E. Palumbo, Professor (PhD, University of Michigan)
Kenneth Parille, Assistant Professor (PhD, University of Virginia)
Diane Penrod, Professor (PhD, Syracuse University)
Nicole Sidhu, Assistant Professor (PhD, Rutgers University)
Robert Siegel, Associate Professor (MFA, Brooklyn College)
Wendy Sharer, Associate Professor (PhD, Pennsylvania State University)
E. Thomson Shields, Associate Professor (PhD, University of Tennessee)
Catherine F. Smith, Professor (PhD, University of North Carolina, Chapel Hill)
Sherry G. Southard, Associate Professor (PhD, Purdue University)
Kirk St. Amant, Associate Professor (PhD, University of Minnesota)
Charles W. Sullivan III, Professor (PhD, University of Oregon)
Richard C. Taylor, Associate Professor (PhD, Pennsylvania State University)
Laureen Tedesco, Associate Professor (PhD, Texas A&M University)
Janice K. Tovey, Associate Professor (PhD, Purdue University)
Reginald Watson, Associate Professor (PhD, Indiana University of Pennsylvania)
Luke Whisnant, Professor (MFA, Washington University in St. Louis)
Liza Wieland, Assistant Professor (PhD, Columbia University)
David Wilson-Okamura, Associate Professor (PhD, University of Chicago)

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Donna Lillian (PhD, York University)

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John A. Stevens, Professor and Interim Chair (PhD, Duke University)

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Michael F. Bassman, Associate Professor (PhD, University of Connecticut)
Juan Daneri, Assistant Professor (PhD, Washington University)
Paul Fallon, Associate Professor (PhD, University of Kansas)
John Given, Associate Professor (PhD, University of Michigan)
Sylvie Debevec Henning, Professor (PhD, Case Western Reserve University)
Birgit Jensen, Associate Professor (PhD, Ohio State University)
Dale Knickerbocker, Professor (PhD, State University of New York, Stony Brook)
Javier Lorenzo, Associate Professor (PhD, Pennsylvania State University)
Elena Murenina, Assistant Professor (PhD, Saratov State University)
Miriam Reed, Teaching Assistant Professor (PhD, University of North Carolina, Chapel Hill)
Marcela Ruiz-Funes, Associate Professor (PhD, Virginia Polytechnic Institute and State University)
Michael J. Schinasi, Associate Professor (PhD, University of Washington)
Peter Standish, Professor (PhD, University of Bristol)
John A. Stevens, Associate Professor (PhD, Duke University)
Jill Twark, Associate Professor (PhD, University of Wisconsin)
Jennifer Valko, Assistant Professor (PhD, University of California, Davis)

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Katherine Ford, Assistant Professor (PhD, Emory University)
Susanne Jones, Assistant Professor (PhD, University of Cincinnati)
David Smith, Assistant Professor (PhD, University of North Carolina, Chapel Hill)

Graduate Teaching Faculty

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Mary Papalas, Assistant Teaching Professor (PhD, The Ohio State University)
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Thomas Allen, Associate Professor (PhD, University of North Carolina, Chapel Hill)
Jennifer Arrigo, Assistant Professor (PhD, Boston University)
Amy Blizzard, Assistant Professor (PhD, East Carolina University)
Jennifer Brewer, Assistant Professor (PhD, Clark University)
Thomas W. Crawford, Assistant Professor (PhD, University of North Carolina, Chapel Hill)
Scott Curtis, Assistant Professor (PhD, University of Wisconsin)
Paul A. Gares, Professor (PhD, Rutgers University)
Holly Hapke, Associate Professor (PhD, Syracuse University)
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Deirdre M. Mageean, Associate Professor (PhD, Open University)
Daniel Marcucci, Assistant Professor (PhD, University of Pennsylvania)
Ron Mitchelson, Professor (PhD, Ohio State University)
E. Jeffrey Popke, Associate Professor (PhD, University of Kentucky)
Tom Rickenbach, Assistant Professor (PhD, Colorado State University)
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Alex Manda, Assistant Professor (PhD, University of Massachusetts)
Richard Miller, Professor (PhD, North Carolina State University)
Siddhartha Mitra, Assistant Professor (PhD, College of William and Mary)
Donald W. Neal, Associate Professor (PhD, West Virginia University)
Michael O'Driscoll, Associate Professor (PhD, Pennsylvania State University)
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Catherine A. Rigsby, Professor (PhD, University of California, Santa Cruz)
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David E. Long, Associate Professor (PhD, Florida State University)

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Michael A. Palmer, Professor (PhD, Temple University)

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Bradley A. Rodgers, Professor (PhD, Union Institute)

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Mona L. Russell, Associate Professor (PhD, Georgetown University)

David J. Stewart, Assistant Professor (PhD, Texas A&M University)

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Anoush F. Terjanian, Assistant Professor (PhD, Johns Hopkins University)

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John A. Tilley, Associate Professor (PhD, Ohio State University)

Larry E. Tise, Wilbur and Orville Wright Distinguished Teaching Professor (PhD, University of North Carolina, Chapel Hill)

John A. Tucker, Professor (PhD, Columbia University)

Kenneth E. Wilburn, Assistant Professor (DPhil, Oxford University)

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Kennetta H. Perry, Assistant Professor (PhD, Michigan State University)

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Annalies Corbin (PhD, University of Idaho)

Henry Ferrell (PhD, University of Virginia)

Ed Harris (PhD, University of London)

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Chal Benson, Professor (PhD, Yale University)
Robert L. Bernhardt, Professor (PhD, University of Oregon)
Christopher Carolan, Associate Professor (PhD, University of Iowa)
Chris Jantzen, Professor (PhD, University of Chicago)
Elias Katsoulis, Professor (PhD, University of Athens)
David Pravica, Professor (PhD, University of Toronto)
Njina Randriampiry, Assistant Professor (PhD, Kansas State University)
Gail Ratcliff, Professor (PhD, Yale University)
M. S. Ravi, Associate Professor (PhD, University of Rochester)
Heather Ries, Associate Professor (PhD, State University of New York, Binghamton)
Zachary Robinson, Professor (PhD, Harvard University)
Said Elmahdy Said, Associate Professor (PhD, North Carolina State University)
Alexandra Shlapentokh, Professor (PhD, New York University)
Michael Spurr, Professor (PhD, Tulane University)
Peng Xiao, Assistant Professor (PhD, University of Texas at Dallas)

Department of Philosophy

George Bailey, Associate Professor and Chair (PhD, University of Miami)

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Calvin Mercer, Professor (PhD, Florida State University)

Department of Physics

John C. Sutherland, Professor and Chair (PhD, Georgia Institute of Technology)

Graduate Faculty

Martin Bier, Associate Professor (PhD, Clarkson University)
George Bissinger, Professor Emeritus (PhD, University of Notre Dame)
Orville Day, Associate Professor (PhD, Brigham Young University)
Michael Dingfelder, Associate Professor and Assistant Chair for Graduate Studies (PhD, Eberhard-Karls University)
Xin-Hua Hu, Professor (PhD, University of California, Irvine)
James M. Joyce, Professor (PhD, University of Pennsylvania)
Edson Luiz B. Justiniano, Associate Professor (PhD, Kansas State University)
Ruth Kempf, Professor (PhD, Rensselaer Polytechnic Institute)
John Kenney, Associate Professor (PhD, State University of New York, Stony Brook)
Gregory Lapicki, Professor (PhD, New York University)
Yong-Qing Li, Associate Professor (PhD, Chinese Academy of Science)
Zi-Wei Lin, Assistant Professor (PhD, Columbia University)
Jun Qing Lu, Associate Professor (PhD, University of California, Irvine)
Edward J. Seykora, Professor (PhD, North Carolina State University)
Jefferson L. Shinsaugh, Professor (PhD, Kansas State University)
Mark W. Sprague, Associate Professor (PhD, University of Mississippi)
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SECTION 9: GRADUATE FACULTY

Adjunct Graduate Faculty

Author Bode (PhD, University of North Carolina, Chapel Hill)

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Brad Lockerbie, Professor and Chair (PhD, University of Iowa)

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Steve Ballard, Professor and Chancellor (PhD, Ohio State University)

Jody Baumgartner, Associate Professor (PhD, Miami University)

David P. Conradt, Professor (PhD, Brown University)

Thomas F. Eamon, Associate Professor (PhD, University of North Carolina, Chapel Hill)

Peter Francia, Associate Professor (PhD, University of Maryland)

Lauriston King, Associate Professor (PhD, University of Connecticut)

William R. Mangun, Professor (PhD, Indiana University)

Bonnie G. Mani, Professor (PhD, Virginia Commonwealth University)

Jonathan Morris, Associate Professor (PhD, Purdue University)

Jalil Roshandel, Associate Professor (PhD, Université des Sciences Sociales)

Carmine P. Scavo, Associate Professor (PhD, University of Michigan)

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Alethia Cook, Assistant Professor (PhD, Kent State University)

Younhee Kim, Assistant Professor (PhD, Rutgers University)

Marie Olson Lounsbury, Assistant Professor (PhD, Wayne State University)

Dursun Peksen, Assistant Professor (PhD, University of Missouri)

Graduate Teaching Faculty

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Patricia Mitchell, Visiting Assistant Professor (DPA, University of Georgia)

William Nicholls, Visiting Assistant Professor (PhD, University of Kentucky)

Sharon Paynter, Assistant Professor (PhD, North Carolina State University)

Lisa Schiavinato (JD, University of Florida)

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Department of Psychology

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Larry M. Bolen, Professor (EdD, University of Georgia)

Jennifer Bowler, Assistant Professor (PhD, University of Tennessee)

Mark C. Bowler, Assistant Professor (PhD, University of Tennessee)

Michael B. Brown, Professor (PhD, Virginia Polytechnic Institute and State University)

Lisa Campbell, Assistant Professor (PhD, University of Florida)

Tony Cellucci, Clinical Professor (PhD, University of North Carolina, Greensboro)

Rosina C. Chia, Professor (PhD, University of Michigan)

John G. Cope, Professor (PhD, Virginia Polytechnic Institute and State University)

Robert Denney, Assistant Professor (PhD, Indiana University)

Christyn Dolbier, Associate Professor (PhD, University of Texas)

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D. Erik Everhart, Associate Professor (PhD, Virginia Polytechnic Institute and State University)

John F. Finch, Assistant Professor (PhD, Arizona State University)

Jeannie A. Golden, Assistant Professor (PhD, Florida State University)
Cathy W. Hall, Professor (PhD, University of Georgia)
Heather Littleton, Assistant Professor (PhD, Virginia Polytechnic Institute and State University)
Amy Lyndon, Assistant Professor (PhD, University of North Carolina, Greensboro)
Susan L. McCammon, Professor (PhD, University of South Carolina)
Scott Methe, Assistant Professor (PhD, University of Massachusetts)
G. Michael Poteat, Associate Professor (PhD, University of Tennessee)
T. Christopher Riley-Tillman, Associate Professor (PhD, Syracuse University)
Dennis Russo, Clinical Professor (PhD, University of California, Santa Barbara)
Samuel F. Sears, Professor (PhD, University of Florida)
Tuan Tran, Assistant Professor (PhD, University of South Carolina)
Cecelia Valrie, Assistant Professor (PhD., University of North Carolina, Chapel Hill)
Christy Walcott, Assistant Professor (PhD, Illinois State University)
Tamara Warner, Assistant Professor (PhD, University of Florida)
Karl L. Wuensch, Professor (PhD, Miami University)

Associate Graduate Faculty

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Graduate Teaching Faculty

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Beverly Harju, Associate Professor Emeritus (PhD, California School of Professional Psychology)
Lesley D. Lutes, Assistant Professor (PhD, Virginia Polytechnic Institute and State University)
John Finch, Assistant Professor (PhD, University of California, Los Angeles)
Lisa Maag, Teaching Assistant Professor (PhD, University of Florida)
Lotus Meshreki (PhD, Rhode Island University)
Jon Reed, Associate Professor (PhD, University of New Mexico)
Nate Vietor, Assistant Professor (PhD, University of Houston)
Theodore Whitley, Teaching Professor (PhD, Duke University)

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Bob Edwards, Professor (PhD, Catholic University of America)
Andrew Jacobs, Associate Professor (PhD, Michigan State University)
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Sitawa Kimuna, Associate Professor (PhD, Kansas State University)
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James P. Mitchell, Professor (PhD, Oklahoma State University)
Susan C. Pearce, Assistant Professor (PhD, New School for Social Research)
Rebecca Powers, Associate Professor (PhD, Louisiana State University)
Marieke Van Willigen, Associate Professor (PhD, Ohio State University)
Kenneth R. Wilson, Professor (PhD, Purdue University)

Associate Graduate Faculty

Melinda D. Kane, Assistant Professor (PhD, Vanderbilt University)
Linda Mooney, Associate Professor (PhD, University of Akron)

PROFESSIONAL SCHOOLS

COLLEGE OF ALLIED HEALTH SCIENCES

Stephen W. Thomas, Professor and Dean (EdD, University of Arizona)

Department of Biostatistics

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Graduate Faculty

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Graduate Teaching Faculty

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Andrada Ivanescu, Assistant Professor (PhD, Florida State University)

Qiang Wu, Assistant Professor (PhD, University of Iowa)

Department of Clinical Laboratory Science

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Department of Communication Sciences and Disorders

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Laura Ball, Associate Professor (PhD, University of Nebraska)

Kathleen T. Cox, Associate Professor (PhD, Ohio State University)

Deborah S. Culbertson, Clinical Associate Professor (PhD, University of Iowa)

Monica Hough, Professor (PhD, Kent State University)

Sherri M. Jones, Associate Professor (PhD, University of Nebraska)

Timothy A. Jones, Professor (PhD, University of California, Davis)

Joseph Kalinowski, Professor (PhD, University of Connecticut)

Michael P. Rastatter, Professor (PhD, Bowling Green State University)

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Deborah E. Bengala, Clinical Associate Professor (MA, Western Michigan University)

Julia Morrow, Clinical Instructor (MA, University of Pittsburgh)

Sharon Rutledge, Clinical Assistant Professor (AuD, University of Florida)

Martha L. Smith, Clinical Professor and Clinical Coordinator (PhD, East Carolina University)

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Michael H. Kennedy, Associate Professor (PhD, Rensselaer Polytechnic Institute)

Robert Kulesher, Associate Professor (PhD, University of Delaware)

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SECTION 9: GRADUATE FACULTY

COLLEGE OF BUSINESS

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Joseph Hagan, Associate Professor (PhD, Georgia State University)
James M. Kohlmeier, Assistant Professor (PhD, University of South Florida)
Mark G. McCarthy, Professor (PhD, University of South Carolina)
Frederick Niswander, Professor (PhD, Texas A&M University)
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John T. Reisch, Associate Professor (PhD, University of South Carolina)
Douglas Schneider, Professor (PhD, University of Georgia)

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Audrey Scarlata, Assistant Professor (PhD, University of Kentucky)

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James E. Holloway, Professor (JD, University of North Carolina, Chapel Hill)
Jack E. Karns, Professor (SJD, Loyola University)
James Nelson, Associate Professor (PhD, University of Arizona)
Robert S. Prati, Assistant Professor (PhD, Florida State University)
Frederick P. Schadler, Associate Professor (PhD, University of South Carolina)

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Eli Beracha, Assistant Professor (PhD, University of Kansas)
Kaysia Campbell, Assistant Professor (PhD, Georgia State University)
Brett D. Cotten, Assistant Professor (PhD, Florida State University)
Charmaine Glegg, Assistant Professor (PhD, Florida Atlantic University)
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 Kenneth E. Bass, Professor (DBA, Louisiana Technical University)
 Amy McMillen, Associate Professor (DBA, Louisiana Technical University)
 Shanan Gibson, Associate Professor (PhD, Virginia Polytechnic Institute and State University)
 W. Lee Grubb, Associate Professor (PhD, Virginia Commonwealth University)
 Michael Harris, Associate Professor (EdD, North Carolina State University)
 Judith R. Hunt, Associate Professor (PhD, University of Tennessee)
 Roy L. Simerly, Professor (PhD, Virginia Polytechnic Institute and State University)

Associate Graduate Faculty

Joshua R. Aaron, Assistant Professor (PhD, University of Alabama)
 Andrew O. Herdman, Assistant Professor (PhD, Virginia Polytechnic & State University)
 R. Eugene Hughes, Professor (DBA, University of Kentucky)
 Joy Karriker, Assistant Professor (PhD, Virginia Commonwealth University)
 William McDowell, Assistant Professor (PhD, University of North Texas)
 L. Melita Prati, Assistant Professor (BS, PhD, Florida State University)
 James O. Smith, Jr., Associate Professor (University of Mississippi)
 Laura J. Stanley, Assistant Professor (PhD, University of Georgia)
 Robert Zinko, Assistant Professor (PhD, Florida State University)

Department of Management Information Systems

Richard D. Hauser, Jr., Associate Professor and Chair (PhD, Florida State University)

Graduate Faculty

John H. Bradley, Professor (PhD, University of Texas, Arlington)
 Brenda Lou Killingsworth, Associate Professor (PhD, University of South Carolina)
 Henry E. Newkirk, Associate Professor (PhD, University of Kentucky, Lexington)
 Margaret T. O'Hara, Associate Professor and Assistant Dean (PhD, University of Georgia)
 Ravi Paul, Associate Professor (PhD, Clemson University)
 Paul Schwager, Associate Professor (PhD, Auburn University)
 Elaine D. Seeman, Associate Professor (PhD, Indiana State University)

Associate Graduate Faculty

Huigang Liang, Assistant Professor (PhD, Auburn University)
 April Reed, Assistant Professor (Ph.D., DePaul University)
 Yajiong Xue, Assistant Professor (PhD, Auburn University)

Graduate Teaching Faculty

Michael S. Lapke, Teaching Instructor (PhD, Virginia Commonwealth University)

Department of Marketing and Supply Chain Management

Kenneth Anselmi, Associate Professor and Chair (PhD, University of Nebraska, Lincoln)

Graduate Faculty

Margaret M. Capen, Professor (PhD, University of South Carolina)
 Margaret P. Conchar, Assistant Professor (PhD, University of Georgia)
 Scott Dellana, Associate Professor (PhD, University of Missouri)
 John F. Kros, Associate Professor (PhD, University of Virginia)
 Pat Long, Director of Sustainable Tourism (EdD, Western Michigan University)
 Kenneth R. MacLeod, Associate Professor (PhD, University of South Carolina)
 Hava J. Meric, Associate Professor (PhD, University of North Carolina, Chapel Hill)
 Anthony Polito, Associate Professor (PhD, University of Georgia)
 William Swart, Professor (PhD, Georgia Institute of Technology)

SECTION 9: GRADUATE FACULTY

Judy A. Wagner, Associate Professor (PhD, Virginia Polytechnic Institute and State University)

David A. West, Associate Professor (PhD, University of Rhode Island)

James Zemanek, Professor (PhD, Texas A&M University)

Associate Graduate Faculty

Christy Ashley, Assistant Professor (PhD, University of Rhode Island)

Haozhe Chen, Assistant Professor (PhD, University of Oklahoma)

Reid P. Claxton, Associate Professor (PhD, University of Arkansas)

Susan DeVecchio, Associate Professor (PhD, Virginia Polytechnic Institute and State University)

Mauro Falasca, Assistant Professor (PhD, Virginia Polytechnic Institute and State University)

Christopher Keller, Assistant Professor (PhD, Indiana University; JD, University of Chicago)

Enping Mai, Assistant Professor (PhD, Syracuse University)

Jason D. Oliver, Assistant Professor (PhD, University of Rhode Island)

Thomas R. Robbins, Assistant Professor (PhD, Pennsylvania State University)

W. Jason Rowe, Assistant Professor (PhD, University of Kentucky)

Tracy L. Tuten, Associate Professor (PhD, Virginia Commonwealth University)

Graduate Teaching Faculty

Richard E. Cook, Visiting Instructor (PhD, Wayne State University)

COLLEGE OF EDUCATION

Linda A. Patriarca, Professor and Dean (PhD, Michigan State University)

John Swope, Associate Professor and Associate Dean (EdD, University of Kentucky)

Vivian W. Mott, Professor and Interim Associate Dean (PhD, University of Georgia)

Alana Zambone, Associate Professor and Interim Associate Dean (PhD, Vanderbilt University)

Vivian Martin Covington, Teaching Assistant Professor and Director of Teacher Education (EdD, East Carolina University)

Diana B. Lys, Interim Director of Assessment and Accreditation (EdD, University of North Carolina at Chapel Hill)

Department of Business and Information Technologies Education

Ivan G. Wallace, Professor and Chair (EdD, University of Georgia)

Graduate Faculty

Maureen Ellis, Associate Professor (PhD, Indiana University)

Elizabeth Hodge, Associate Professor (PhD, University of Florida)

Eric Kisling, Assistant Professor (PhD, Indiana University)

Shelia Tucker, Associate Professor (PhD Virginia Polytechnic Institute and State University)

Graduate Teaching Faculty

Scott Williams, Visiting Instructor (PhD, Virginia Polytechnic Institute)

Department of Higher, Adult and Counselor Education

Vivian W. Mott, Professor and Chair (PhD, University of Georgia)

Graduate Faculty

Crystal Chambers, Assistant Professor (PhD, University of Virginia)

Joseph C. Ciechalski, Professor (EdD, North Carolina State University)

Maria Clay, Professor (PhD, University of North Carolina, Chapel Hill)

Kylie Dotson-Blake, Assistant Professor (PhD, College of William and Mary)

Joseph Scott Glass, Associate Professor (PhD, University of North Carolina, Greensboro)

Cheryl McFadden, Associate Professor (EdD, Widener University)

Michael Pooch, Associate Professor (PhD, Kent State University)

Steven W. Schmidt, Assistant Professor (PhD, University of Wisconsin – Milwaukee)

Sandra Seay, Associate Professor (EdD, East Tennessee State University)

David J. Siegel, Associate Professor (PhD, University of Michigan)

Associate Graduate Faculty

Austin Bunch, Senior Associate Provost and Teaching Assistant Professor (PhD, University of Mississippi)
 Lynn Roeder, Associate Vice Chancellor/Dean of Students (PhD, State University of New York at Buffalo)

Graduate Teaching Faculty

Lisa Harrell, Teaching Assistant Professor (PhD, North Carolina State University)
 Elizabeth Knott, Associate Professor (PhD, North Carolina State University)
 Stephanie Lanier, Teaching Associate Professor (EdD, North Carolina State University)
 Earline Orndorff, Teaching Associate Professor (EdD, Virginia Polytechnic Institute and State University)
 Mark Scholl, Assistant Professor (PhD, University of North Carolina, Greensboro)
 Nicole Smith, Clinical Instructor (EdS, North Carolina State University)
 Florence Weaver, Professor (PhD, Florida State University)

Department of Curriculum and Instruction

Carolyn Ledford, Associate Professor and Interim Chair (EdD, East Carolina University)

Graduate Faculty

Terry Atkinson, Associate Professor (PhD, University of North Carolina, Greensboro)
 Susan Bashinski, Associate Professor (EdD, University of Kansas)
 Dan Boudah, Associate Professor (PhD, University of Kansas)
 Virginia Ann Bullock, Associate Professor (PhD, Virginia Commonwealth University)
 Lora Lee Smith Canter, Assistant Professor (PhD, University of South Carolina)
 Kristen C. Cuthrell, Assistant Professor (EdD, Wilmington College)
 Melissa Engleman, Professor (EdD, University of Kansas)
 Ruth Chan Evans, Assistant Professor (PhD, North Carolina State University)
 Johna L. Faulconer, Associate Professor (EdD, North Carolina State University)
 Alice Feret, Associate Professor (EdD, Virginia Polytechnic Institute and State University)
 Todd Finley, Associate Professor (PhD, University of Minnesota)
 Elizabeth Fogarty, Assistant Professor (PhD, University of Connecticut)
 David A. Gabbard, Professor (EdD, University of Cincinnati)
 Carol Greene, Associate Professor (PhD, Virginia Polytechnic Institute and State University)
 Robin Griffith, Assistant Professor (PhD, Texas Tech University)
 Allen Guidry, Assistant Professor (EdD, University of North Carolina, Chapel Hill)
 Laura King, Assistant Professor (PhD, University of Central Florida)
 Mark L'Esperance, Associate Professor (PhD, University of North Carolina, Greensboro)
 James A. McKernan, Professor (PhD, Ulster University)
 Jane C. Manner, Associate Professor (EdD, Florida International University)
 Katherine E. Misulis, Associate Professor (PhD, Syracuse University)
 Dorothy H. Muller, Associate Professor (PhD, Florida State University)
 Katherine O'Connor, Associate Professor (EdD, University of North Carolina, Chapel Hill)
 Betty Peel, Associate Professor (PhD, Virginia Polytechnic Institute and State University)
 David Powers, Professor Emeritus (EdD, University of Alabama)
 Diane Rodriguez, Associate Professor (PhD, Fordham University)
 Christine Shea, Professor (PhD, University of Illinois)
 Marilyn Sheerer, Professor, Provost and Senior Vice Chancellor for Academic and Student Affairs (PhD, Ohio University)
 Joy Stapleton, Associate Professor (PhD, University of Tennessee)
 Sharilyn Steadman, Assistant Professor (PhD, University of Michigan)
 Elizabeth Swaggerty, Assistant Professor (PhD, University of Tennessee)
 Michael R. Vitale, Professor (PhD, Florida State University)
 Karen S. Voytecki, Assistant Professor (PhD, University of South Florida)
 Louis Warren, Professor (PhD, University of Georgia)
 Kathi Wilhite, Teaching Assistant Professor (EdD, Ball State University)
 Jennifer B. Williams, Assistant Professor (PhD, North Carolina State University)
 Sarah Williams, Associate Professor (PhD, University of North Carolina, Chapel Hill)
 Nancy Zeller, Professor (PhD, Indiana University) Associate Graduate Faculty
 Guili Zhang, Assistant Professor (PhD, University of Florida)

SECTION 9: GRADUATE FACULTY

Associate Graduate Faculty

Benjamin Blaisdell, Teaching Assistant Professor (PhD, University of North Carolina, Chapel Hill)
Brian Housand, Assistant Professor (PhD, University of Connecticut)
Ran Hu, Assistant Professor (PhD, University of Georgia)
Judith Smith, Assistant Professor (EdD, East Carolina University)

Graduate Teaching Faculty

Jamin Carson, Assistant Professor (PhD, University of Texas, Austin)
Tessie Guidry, Teaching Assistant Professor (EdD, East Carolina University)
Troy Jones, Assistant Professor (PhD, Virginia Polytechnic Institute and State University)
Lanette Moret, Teaching Assistant Professor (EdD, East Carolina University)
Caitlin Ryan, Assistant Professor (PhD, Ohio State University)
Anne Ticknor, Assistant Professor (PhD, University of Iowa)
Marsha Craft Tripp, Teaching Assistant Professor (EdD, North Carolina State University)
Christina Tschida, Assistant Professor (PhD, University of North Carolina, Greensboro)
Peggy Yates, Assistant Professor (PhD, Regents University)

Department of Educational Leadership

William Rouse, Associate Professor and Interim Chair (EdD, East Carolina University)

Graduate Faculty

Lynn K. Bradshaw, Professor (EdD, North Carolina State University)
Kermit G. Buckner, Professor (EdD, University of North Carolina, Greensboro)
William Grobe, Associate Professor (EdD, State University of New York, Buffalo)
Hal Holloman, Associate Professor (PhD, University of South Carolina)
James O. McDowelle, Professor (EdD, University of Virginia)
Lane Mills, Associate Professor (PhD, University of South Carolina)
Joy Phillips, Associate Professor (PhD, University of Texas, Austin)
Marjorie C. Ringler, Assistant Professor (EdD, University of Florida)
Charles Thompson, Professor (EdD, Harvard University)

Graduate Teaching Faculty

Thomas Daly III, Teaching Professor (EdD, North Carolina State University)
Charles Gainey, Teaching Professor (PhD, University of North Carolina, Greensboro)
Eugene Gallelli, Teaching Professor (EdD, East Carolina University)
Lee Grier, Teaching Professor (EdD, Duke University)
Leon Holleman, Teaching Associate Faculty (EdD, University of North Carolina, Chapel Hill)
Linda Stevens, Teaching Professor (EdD, East Carolina University)

Graduate Teaching

Cathy Jo Korenek (EdD, East Carolina University)

Department of Library Science

Elaine Yontz, Professor and Chair (PhD, University of Florida)

Graduate Faculty

Ruth Clark, Associate Professor (PhD, Texas Woman's University)
John Harer, Associate Professor (PhD, Texas A&M University)
Jami Jones, Assistant Professor (PhD, Nova Southeastern University)
Plummer Alston Jones, Professor (PhD, University of North Carolina, Chapel Hill)
Barbara Marson, Teaching Assistant Professor (PhD, University of North Carolina)
Gail Munde, Assistant Professor (PhD, University of North Texas)
Larry White, Assistant Professor (PhD, Florida State University)

Associate Graduate Faculty

Lana Kaye Dotson, Assistant Professor (EdD, East Carolina University)

Graduate Teaching Faculty

Carenado Davis, Teaching Instructor (PhD, Capella University)
Edward Shearin, Teaching Instructor (EdD North Carolina State University)
Sharon Strecker Teaching Instructor (EdD, East Carolina University)

Department of Mathematics, Science, and Instructional Technology Education

Susan Ganter, Professor and Chair (Phd, University of California, Santa Barbara)

Graduate Faculty

Sunday Ajoose, Associate Professor (PhD, University of South Carolina)
Michael Bossé, Associate Professor (PhD, University of Connecticut)
Abbie Brown, Associate Professor (PhD, Indiana University)
Carol A. Brown, Associate Professor (EdD, University of Memphis)
Frank E. Crawley, Professor (EdD, University of Georgia)
Elizabeth C. Doster-Taft, Associate Professor (PhD, University of Georgia)
Charles S. Duncan, Professor (PhD, University of Arizona)
Martha Fewell, Assistant Professor (PhD, University of Illinois)
Ken Luterbach, Assistant Professor (PhD, Indiana University)
Rhea Miles, Associate Professor (PhD, University of Virginia)
Ronald Preston, Associate Professor (PhD, Indiana University)
Sidney Rachlin, Professor (EdD, University of Georgia)
Rose Sinicrope, Associate Professor (Virginia Polytechnic Institute and State University)
Sharon Smaldino, Teaching Assistant Professor (PhD, Southern Illinois University)
William A. Sugar, Associate Professor (PhD, Indiana University)
Anthony Thompson, Associate Professor (PhD, Florida State University)

Associate Graduate Faculty

Sharon Schleigh, Assistant Professor (EdD, Arizona State University)
Patricia J. Slagter van Tryon, Assistant Professor (EdD, Lehigh University)
Catherine Stein, Assistant Professor (PhD, University of North Carolina, Greensboro)

Graduate Teaching Faculty

Jason Atkinson, Teaching Instructor (MAEd, East Carolina University)
Renee Neal, Teaching Assistant Professor (EdD, University of Memphis)

COLLEGE OF FINE ARTS AND COMMUNICATION

School of Art and Design

Michael Drought, Professor and Director (MFA, University of Wisconsin)

Graduate Faculty

Kelly Adams, Associate Professor (MFA, East Carolina University)
Alice Arnold, Associate Professor (EdD, University of Illinois)
Cynthia A. Bickley-Green, Associate Professor (PhD, University of Georgia)
Carl R. Billingsley, Associate Professor (MFA, University of Wisconsin, Milwaukee)
Jessica Christie, Associate Professor (PhD, University of Texas)
Linda Darty, Professor (MFA, East Carolina University)
Michael A. Dorsey, Professor (MFA, Bowling Green University)
Scott Eagle, Associate Professor (MFA, East Carolina University)
Robert Ebendorf, Carol Grotnes Belk Distinguished Professor (MFA, University of Kansas)
Matthew Egan, Assistant Professor (MFA, University of South Dakota)
Michael W. Ehlbeck, Professor (MFA, University of Florida)
Seo Eo, Associate Professor (MFA, Indiana University)
Ronald S. Graziani, Associate Professor (PhD, University of California, Los Angeles)
Hanna Jubran, Professor (MFA, University of Wisconsin, Milwaukee)
Audrey Kilgore, Associate Professor (MFA, East Carolina University)
Punam Madhok, Associate Professor (PhD, University of Illinois)

SECTION 9: GRADUATE FACULTY

Mark Malley, Assistant Professor (PhD, University of Wisconsin, Milwaukee)
Craig D. Malmrose, Professor (MFA, Rochester Institute of Technology)
Joan Mansfield, Associate Professor (MFA, East Carolina University)
Sharon Pruitt, Associate Professor (PhD, Ohio State University)
Terry Smith, Professor (MFA, Cranbrook Academy of Art)
Gunnar Swanson, Assistant Professor (MFA, California State University)
Michael Voors, Professor (MFA, Eastern Michigan University)
Catherine C.E. Walker, Professor (MFA, East Carolina University)
Christine Zoller, Associate Professor (MFA, University of Georgia)

Associate Graduate Faculty

Beth Blake, Associate Professor (MFA, Ohio University)
Jelena Bogdanovic, Assistant Professor (MA, Vanderbilt University; MA Art and Archaeology, Princeton University)
Robin Haller, Assistant Professor (MFA, Kent State University)
Mi-Sook Hur, Associate Professor (MFA, University of Wisconsin)
Daniel Kariko, Assistant Professor (MFA, Arizona State University)
Nanyoung Kim, Associate Professor (EdD, University of Illinois of Urbana Champaign)
Kate LaMere, Assistant Professor (PhD, University of Minnesota)
Timothy Lazure, Associate Professor (MFA, University of Massachusetts, Dartmouth)
Borim Song, Assistant Professor (MFA, Seoul Women's College)
Jim Tisnado, Associate Professor (MFA, Ohio University)

Graduate Teaching Faculty

Michael H. Duffy, Associate Professor (PhD, University of Illinois)
Michael Tierno, Associate Professor (MFA, City of College of New York)
Gerald Weckesser, Wood Shop Supervisor (MFA, University of Massachusetts)

Adjunct Graduate Faculty

Lisa Beth Robinson (MFA, MLIS, University of Wisconsin at Madison)
Patricia Hayes, Teaching Instructor (MFA, East Carolina University)
Susan Luddeke, Teaching Instructor (MFA, East Carolina University)
Amy McIntyre, Teaching Instructor (MFA, East Carolina University)

School of Communication

Linda G. Kean, Associate Professor and Director (PhD, University of Wisconsin)

Graduate Faculty

T. Harrell Allen, Professor (PhD, Ohio State University)
Rebecca Dumlao, Associate Professor (PhD, University of Wisconsin)
Timothy Hudson, Professor (PhD, Temple University)
Brian Massey, Assistant Professor (PhD, Florida State University)
Laura Privera, Associate Director (PhD, Bowling Green State University)
Bernard Timberge, Associate Professor (PhD, University of Texas, Austin)

Associate Graduate Faculty

Hsiao Chu, Assistant Professor (MFA, University of North Carolina, Greensboro)
Cindy Elmore, Associate Professor (PhD, University of North Carolina, Chapel Hill)
Festus Eribo, Professor (PhD, University of Wisconsin)
Todd Fraley, Assistant Professor (PhD, University of Georgia)
Erick Yates Green, Assistant Professor (MFA, University of Southern California)
John W. Howard, III, Associate Professor (PhD, Bowling Green State University)
Glenn Hubbard, Assistant Professor (PhD, University of Tennessee)
Jin-Ae Kang, Assistant Professor (PhD, The University of Alabama, Tuscaloosa)
Kristen Kirschbaum, Assistant Professor (PhD, University of New Mexico)
Aysel Morin, Assistant Professor (PhD, University of Nebraska)
Sachiyo Shearman, Assistant Professor (PhD, Michigan State University)
Eric Shouse, Assistant Professor (PhD, University of South Florida)
Deborah Thomson, Assistant Professor (PhD, University of North Carolina, Chapel Hill)

Tami K. Tomasello, Assistant Professor (PhD, Florida State University)
Mary Tucker-McLaughlin, Instructor (PhD, University of South Carolina)
Linda Vangelis, Assistant Professor (PhD, University of South Florida)
Emma Wertz, Assistant Professor (PhD, University of Tennessee, Knoxville)
Ken Wyatt, Assistant Professor (MFA, Temple University)

School of Music

J. Christopher Buddo, Director (DMA, University of Iowa)

Graduate Faculty

Joanne Bath, Professor (MM, University of Michigan)
Kerry Carlin, Associate Professor (DME, Indiana University)
Amy Carr-Richardson, Associate Professor (PhD, Florida State University)
Mark Faris, Teaching Assistant Professor (PhD, Duke University)
Elliot P. Frank, Professor (DM, Florida State University)
Christine Gustafson, Professor (DM, University of Texas)
Michelle Hairston, Professor (EdD, University of Georgia)
Thomas J. Huener, Associate Professor (PhD, University of Iowa)
C. Gregory Hurley, Associate Professor (PhD, University of Wisconsin)
Edward Jacobs, Associate Professor (DMA, Columbia University)
Jay A. Juchniewicz, Assistant Professor (PhD, Florida State University)
John Kramar, Associate Professor (MM, Curtis Institute of Music)
Thomas McCaslin, Assistant Professor (MM, Arizona State University)
Kevin N. Moll, Associate Professor (PhD, Stanford University)
Mario Rey, Associate Professor (PhD, Florida State University)
Mark Richardson, Assistant Professor (PhD, Florida State University)
Mark Taggart, Professor (DMA, Cornell University)
Britton E. Theurer, Professor (DMA, Florida State University)
J. Christopher Ulfers, Associate Professor (MM, Indiana University)
Jonathan Wacker, Associate Professor (DM, Indiana University)

Associate Graduate Faculty

Susan Beck-Frazier, Associate Dean College of Fine Arts and Communication (EdD, East Carolina University)
Jay A. Juchniewicz, Assistant Professor (PhD, Florida State University)
Thomas McCaslin, Assistant Professor (MM, Arizona State University)
Jeffrey Ward, Assistant Professor (DMA, Shenandoah University)

Graduate Teaching Faculty

Mary A. Burroughs, Professor (DMA, University of Illinois)
George Broussard, Professor (MM, Northwestern University)
Carroll V. Dashiell, Jr., Associate Professor (MM, Howard University)
John Franklin, Visiting Assistant Professor (DM., Indiana University)
Ara Gregorian, Associate Professor (MM, Juilliard School of Music)
Linda High, Associate Professor (EdD, University of North Carolina, Greensboro)
Barbara C. Memory, Associate Professor (PhD, Michigan State University)
Jocelyn Nelson, Teaching Assistant Professor (DMA,
John B. O'Brien, Professor (DMA, University of Southern California)
Melissa L. Reardon, Assistant Professor (MM, GD, New England Conservatory)
Jorge L. Richter, Assistant Professor (DMA, Michigan State University)
Keiko Sekino, Assistant Professor (DMA, Johns Hopkins University)
Perry Smith, Associate Professor (DMA, University of Kentucky)
Lori Wacker, Teaching Assistant Professor (PhD, Indiana University)

SECTION 9: GRADUATE FACULTY

School of Theatre and Dance

John Shearin, Professor and Director (AB, The College of William and Mary; MFA, The Pennsylvania State University)
Robert Caprio, Associate Professor (BFA, East Carolina University; MFA, Syracuse University)
Jill Carlson, Associate Professor (BS, Illinois State; MFA, Western Illinois University)
John A. Carlson, Teaching Assistant Professor (BA, Salisbury State University; MFA, Western Illinois University)
Dawn Clark, Associate Professor (BFA, Ohio University; MEd, Bowling Green State University; EdD, University of North Carolina, Greensboro)
Patricia Clark, Associate Professor (BFA, MFA, Virginia Commonwealth University)
F. Leonard Darby, Associate Professor (BFA, MFA, Florida State University)
Teal Darkenwald, Assistant Professor (BFA, State University of New York; MFA, University of Arizona)
John Dixon, Assistant Professor (BA, University of Maryland; MBA, University of Washington)
Teresa A. Donohue, Associate Professor (BA, University of the Pacific; MFA, University of California, Davis)
Gregory Funaro, Associate Professor (BA, University of New Hampshire; MA, Brown University; MFA, Florida State University)
Tommi Galaska, Teaching Instructor (BFA, East Carolina University)
Hector Garza, Assistant Professor (BA, California State University; MFA, Western Illinois University; PhD, Arizona State University)
Andrea Heilman, Assistant Professor (BA, Macalester University; MFA, Brandeis University)
Erich Keil, Assistant Professor (BA, Western Michigan University; MFA, University of California-Los Angeles)
Mollye Otis, Teaching Instructor (BM, University of Kentucky; MM, University of Kentucky)
Galina R. Panova, Associate Professor (Ballet Artist, Perm Choreographic School of Ballet, Russia)
Jeni Parker, Associate Professor (BA, Lehigh University; MFA, Ohio University)
T. Reid Parker, Assistant Professor (BA, Western Carolina University; MFA, Ohio University, Athens)
Jeffery B. Phipps, Associate Professor (BA, Berea College; MFA, University of Texas at Austin)
Clarine Powell, Teaching Instructor (AA, Saint Mary's College; BA, Salem College; MEd, University of North Carolina, Charlotte)
Rhonda Riley, Teaching Instructor (BM, East Carolina University; MM, University of South Florida)
Natalie Stewart, Associate Professor (BA, University of Utah; MFA, National Theatre Conservatory, Denver, Colorado)
Josiah Stocker, Piano Accompanist (BM, University of Idaho; MM, University of Idaho)
Michael H. Tahaney, Assistant Professor (BA, University of Central Florida; MFA, San Diego State University)
Patricia Weeks, Associate Professor (BA, Mississippi State University; MA, Texas Woman's University; MFA, University of Utah)
Jeffery Woodruff, Teaching Instructor (BA, East Carolina University; MA, American University)

COLLEGE OF HEALTH AND HUMAN PERFORMANCE

Glen G. Gilbert, Professor and Dean (PhD, Ohio State University)

Department of Kinesiology

Stacey Altman, Associate Professor and Chair (JD, University of Alabama)

Graduate Faculty

Boni B. Boswell, Associate Professor (PhD, Texas Woman's University)
Jeffrey Brault, Assistant Professor (PhD, University of Missouri-Columbia)
Lucas Carr, Assistant Professor (PhD, University of Wyoming)
Ronald Cortright, Associate Professor (PhD, Kent State University)
Kathryn Davis, Associate Professor (PhD, Temple University)
James T. Decker, Associate Professor and Associate Dean (PhD, Ohio State University)
Paul DeVita, Professor (PhD, University of Oregon)
Katrina DuBose, Associate Professor (PhD, University of South Carolina)
Dana Espinosa, Associate Professor (PhD, Texas Woman's University)
Peter Farrell, Professor (PhD, University of Arizona)
Timothy Gavin, Professor (PhD, Indiana University)
Scott E. Gordon, Associate Professor (PhD, Pennsylvania State University)
Robert Hickner, Professor (PhD, Karolinska Institute)
Joseph A. Houmard, Professor, Director Human Performance Laboratory (PhD, Ball State University)
Kristina Karvinen, Assistant Professor (PhD, University of Alberta)

Matthew Mahar, Professor (EdD, University of Houston)
Mark Moore, Assistant Professor (PhD, University of Pittsburgh)
Nicholas Murray, Associate Professor (PhD, University of Florida)
P. Darrell Neuffer, Professor (PhD, East Carolina University)
Thomas D. Raedeke, Associate Professor (PhD, University of Oregon)
Melanie Sartore-Baldwin, Assistant Professor (PhD, Texas A&M University)
Stacy Warner, Assistant Professor (PhD, University of Texas, Austin)
Carol Witczak, Assistant Professor (PhD, University of Missouri, Columbia)

Associate Graduate Faculty

Katrina DuBose, Assistant Professor (PhD, University of South Carolina)
Bomma Ko, Assistant Professor (PhD, Ohio State University)
Mike McCammon, Teaching Instructor (MA, East Carolina University)
Donghai Zheng, Senior Research Associate (PhD, East Carolina University)

Graduate Teaching Faculty

Rebecca Allen-Davis, Teaching Instructor (MA, East Carolina University)
Clinton Etheridge, Teaching Instructor (MS, East Carolina University)
William Glascoff, Teaching Instructor (JD, University of Oregon)
Kandy L. Houmard, Teaching Instructor (RN, University of Toledo; MA, Ball State University)
C. David Kemble, Teaching Instructor (MA, East Carolina University)
Patrick Rider, Instructor and Biomechanics Lab Researcher (MA, East Carolina University)
Charles J. Tanner, Research Instructor (MA, East Carolina University)
Jessica Van Meter, Teaching Instructor (MA, East Carolina University)

Department of Health Education and Promotion

Timothy R. Kelley, Professor and Chair (PhD, University of Georgia)

Graduate Faculty

Victor Aeby, Associate Professor (EdD, University of Georgia)
Alice Anderson, Associate Professor (PhD, Bowling Green University)
Robert C. Barnes, Associate Professor (EdD, University of Tennessee)
Craig Becker, Associate Professor (PhD, Arizona State University)
W. Michael Felts, Professor (PhD, University of Maryland)
Mary A. Glascoff, Professor (EdD, West Virginia University)
Hans H. Johnson, Associate Professor (EdD, Montana State University)
Sharon M. Knight, Professor (PhD, University of Florida)
Mustafa Selim, Professor (PhD, University of Mississippi)
Kathleen (Katie) Walsh, Associate Professor (EdD, University of Southern California)
David White, Professor (EdD, University of Tennessee)

Associate Graduate Faculty

Jennifer Cremeens, Assistant Professor (PhD, University of Alabama)
Anthony Kulas, Assistant Professor (PhD, University of North Carolina, Greensboro)
Sharon Rogers, Assistant Professor (PhD, Virginia Polytechnic Institute)
Michelle Wallen, Assistant Professor (PhD, University of North Carolina, Greensboro)

Graduate Teaching Faculty

Janet Alexander, Teaching Instructor (MSPH, University of North Carolina at Chapel Hill)
Charles Humphrey, Instructor (MS, NC State University)
Melissa Haithcox-Dennis, Assistant Professor (PhD, Southern Illinois University)
Paul Knechtges, Teaching Assistant Professor (PhD, George Mason University)
William Koch, Lecturer (MSE, University of America)
Ryan Martin, Assistant Professor (PhD, University of Alabama, Tuscaloosa)
Susanne Raedeke, Instructor (MA, Western Michigan University)
Alice Richman, Assistant Professor (PhD, University of South Florida)

SECTION 9: GRADUATE FACULTY

Department of Recreation and Leisure Studies

Debra Jordan, Professor and Chair (ReD, Indiana University)

Graduate Faculty

Nelson Cooper, Associate Professor (PhD, Clemson University)
Carol Kline, Assistant Professor (PhD, North Carolina State University)
David Loy, Associate Professor (PhD, University of Georgia)
Susan McGhee, Associate Professor (PhD, University of Maryland)
Bill Obenour, Associate Professor (PhD, Clemson University)
Carmen Russoniello, Associate Professor (PhD, Gonzaga University)
Paige Schneider, Assistant Professor (PhD, Michigan State University)
Kindal Shores, Associate Professor (PhD, Texas A&M University)
Thomas K. Skalko, Professor (PhD, University of Maryland)
Cheryl Stevens, Associate Professor (PhD, Ohio State University)
Hans Vogel song, Associate Professor (PhD, Pennsylvania State University)
Clifton Watts, Assistant Professor (PhD, The Pennsylvania State University)
Richard S.T. Williams, Associate Professor (EdD, University of Georgia)

Graduate Teaching Faculty

David Loomis, Associate Professor (PhD, Texas A&M University)
Donna Mooneyham, Teaching Instructor (MA, East Carolina University)
Robert C. Wendling, Associate Professor (PhD, Texas A&M University)

COLLEGE OF HUMAN ECOLOGY

Judy Siguaw, Professor and Dean (DBA, Louisiana Tech University)

Department of Child Development and Family Relations

Cynthia E. Johnson, Professor and Chair (PhD, Ohio State University)

Graduate Faculty

Sharon Ballard, Associate Professor (PhD, University of Tennessee)
Elizabeth Carroll, Associate Professor (JD, Mississippi College)
Archana Hedge, Associate Professor (PhD, University of North Carolina, Greensboro)
E. Wayne Hill, Professor (PhD, University of North Carolina, Greensboro)
Jennifer L. Hodgson, Associate Professor (PhD, Iowa State University)
Cheryl Johnson, Associate Professor (PhD, Virginia Polytechnic Institute and State University)
Angela Lamson, Associate Professor (PhD, Iowa State University)
Linda Mitchell, Associate Professor (PhD, Pennsylvania State University)
Sandra L. Triebenbacher, Associate Professor (PhD, University of Tennessee)
Mark White, Associate Professor (PhD, Kansas State University)

Associate Graduate Faculty

Eboni Baugh, Assistant Professor (PhD, Florida State University)
Priti Desai, Assistant Professor (PhD, Maharaja Sayajirao University of Baroda)
Bernice Dodor, Assistant Professor (PhD, Iowa State University)
Bryce Jorgensen, Assistant Professor (PhD, Virginia Polytechnic Institute and State University)
Damon Rappleyea, Assistant Professor (PhD, Texas Tech University)
Natalie Sira, Associate Professor (PhD, Virginia Polytechnic Institute and State University)
Alan Taylor, Assistant Professor (PhD, Virginia Polytechnic Institute and State University)
Carmel White, Assistant Professor (PhD, Kansas State University)
Barbara Woods, Assistant Professor (PhD, Ohio State University)

Graduate Teaching Faculty

David A. Dosser, Jr., Professor (PhD, University of Georgia)
Jane King Teleki, Professor (PhD, Oklahoma State University)

Department of Criminal Justice

William P. Bloss, Professor and Chair (PhD, Sam Houston State University)

Graduate Faculty

James Anderson, Professor (PhD, Sam Houston State University)
 Gerald M. Jones, Professor (PhD, Sam Houston State University)
 John Kerbs, Associate Professor (PhD, University of Michigan)
 Hamid Kusha, Assistant Professor (PhD, University of Kentucky)
 Nancie Mangels, Assistant Professor (PhD, University of Missouri, Kansas City)

Graduate Teaching Faculty

Matthew Johnson, Assistant Professor (PhD, Sam Houston State University)
 Naoki Kanaboshi, Assistant Professor (SJD, University of Wisconsin)
 Patrice Morris, Assistant Professor (PhD, Rutgers University)

Department of Hospitality Management

Robert M. O'Halloran, Professor and Chair (PhD, Michigan State University)

Graduate Faculty

James A. Chandler, Associate Professor (PhD, University of Tennessee)
 Cynthia Deale O'Halloran, Associate Professor (PhD, University of Denver)
 Dori Dennison, RD, Professor (PhD, University of Missouri)
 David L. Edgell, Sr., Professor (PhD, University of Cincinnati)
 George Fenich, Professor (PhD, Rutgers University)
 Kathryn Hashimoto, Associate Professor (PhD Marketing, Century University; PhD Curriculum and Instruction, University of New Orleans)

Associate Graduate Faculty

Alleah Crawford, Assistant Professor (MS, Auburn University)
 David Rivera, Associate Professor (PhD, Texas Tech University)
 Mel Weber, Associate Professor (PhD, University of Missouri)

Department of Interior Design and Merchandising

Katherine L. Swank, Associate Professor and Chair (PhD, Michigan State University)

Graduate Faculty

W. Hunt Mckinnon, Teaching Assistant Professor (MA, Princeton University)
 N. Yaprak Savut, Associate Professor (PhD, Bilkent University, Turkey)
 Ginger Woodard, Associate Professor (PhD, University of North Carolina, Greensboro)

Associate Graduate Faculty

Maria Alexander, Associate Professor (PhD, Auburn University)
 Runying Chen, Associate Professor (PhD, Ohio State University)
 Erin Parrish, Assistant Professor (PhD, North Carolina State University)
 Rebecca Sweet, Associate Professor (MFA, Virginia Commonwealth University)

Department of Nutrition Science

William Forsythe, Professor and Chair (PhD, Michigan State University)

Graduate Faculty

Melani Duffrin, Associate Professor (PhD, Ohio University)
 Margie L. Gallagher, Professor and Associate Dean (PhD, University of California, Davis)
 Michael Wheeler, Associate Professor (PhD, University of North Carolina, Chapel Hill)

Associate Graduate Faculty

Oyinola Babatunde, Assistant Professor (PhD, Florida International University)
 Brenda Bertrand, Associate Professor (PhD, Auburn University)

SECTION 9: GRADUATE FACULTY

Kimberly Heidal, Associate Professor (PhD, University of Nebraska)
Ian Hines, Assistant Professor (PhD, Louisiana State University)
Roman Pawlak, Associate Professor (PhD, University of Southern Mississippi)
Elizabeth Wall-Bassett, Assistant Professor (PhD, Clemson University)

Graduate Teaching Faculty

Sylvia Escott-Stump, Clinical Instructor (MA, Indiana University)
Nancy Harris, Clinical Instructor (MS, East Carolina University)

School of Social Work

Shelia Grant Bunch, Professor and Director (PhD, North Carolina State University)

Graduate Faculty

Margaret Arnd-Caddigan, Associate Professor (PhD, Loyola University of Chicago)
Paige Averett, Assistant Professor (PhD, Virginia Polytechnic University)
Lena Carawan, Assistant Professor (PhD, St. John's Newfoundland, Canada)
Tracy Carpenter-Aeby, Associate Professor (PhD, University of Georgia)
Brenda Eastman, Associate Professor (PhD, Virginia Commonwealth University)
Linner W. Griffin, Professor (EdD, University of Houston)
David Harrison, Professor (PhD, University of Minnesota)
Mary S. Jackson, Professor (PhD, Case Western Reserve University)
Carol Jenkins, Associate Professor (PhD, Syracuse University)
Monte Miller, Associate Professor (PhD, University of Maine)
Blace Nalavany, Assistant Professor (PhD, Florida State University)
John Pierpont, Associate Professor (PhD, University of Kansas)
Richard Pozzuto, Associate Professor (PhD, University of Oregon)
Kelley Reinsmith-Jones, Associate Professor (PhD, Gonzaga University)
Intae Yoon, Assistant Professor (PhD, University of South Carolina)

Adjunct Graduate Faculty

Martha Early (PhD, Old Dominion University)

Graduate Teaching Faculty

Beth Dunn, Teaching Instructor (MSW, Adelphi University)
Beth Osborne, Teaching Instructor (MSW, University of North Carolina, Chapel Hill)
Nancy Pierson (MSW, East Carolina University)

BRODY SCHOOL OF MEDICINE

Paul R. G. Cunningham, Dean and Senior Vice Chancellor for Medical Affairs (MD, FACS, University of the West Indies)

Graduate Faculty

Abdel Abdel-Rahman, Professor (PhD, Leeds University)
Shaw M. Akula, Associate Professor (PhD, South Dakota State University)
Jeffery W. Bethel, Assistant Professor (PhD, University of California, Davis)
Fred E. Bertrand, Assistant Professor (PhD, University of Alabama)
Kori Brewer, Associate Professor (PhD, East Carolina University)
David Brown, Assistant Professor (PhD, University of Colorado, Boulder)
Jared Brown, Assistant Professor (PhD, University of Montana)
Hubert Burden, Professor (PhD, Tulane University)
Carlos Campos, Research Instructor (PhD, Georgia Institute of Technology)
Robert G. Carroll, Professor (PhD, University of Medicine and Dentistry of New Jersey)
Joseph M. Chalovich, Professor (PhD, University of Illinois)
Yan-Hua Chen, Associate Professor (PhD, Emory University School of Medicine)
John D. Christie, Professor (PhD, Rutgers University)
James P. Coleman, Associate Professor (PhD, North Carolina State University)
David Collier, Associate Professor (PhD, University of North Carolina, Chapel Hill; MD, East Carolina University)
Doyle M. Cummings, Professor (PhD, Philadelphia College of Pharmacy and Science)

M. Saeed Dar, Professor (PhD, Medical College of Virginia)
 Jian Ding Dean, Associate Professor (MD, Shanxi College; PhD, University of South Carolina)
 James E. DeVente, Associate Professor (MD, PhD, East Carolina University)
 Jamie DeWitt, Assistant Professor (PhD, Indiana University)
 Larry Dobbs, Associate Professor (MD, PhD, University of Kansas)
 G. Lynis Dohm, Professor (PhD, Kansas State University)
 Rukiyah Van Dross-Anderson, Assistant Professor (PhD, Rutgers University)
 Ronald W. Dudek, Professor (PhD, University of Minnesota)
 Stephen Engelke, Professor (MD, John Hopkins University)
 Donald J. Fletcher, Professor (PhD, Emory University)
 Paul L. Fletcher, Jr., Associate Professor (PhD, Vanderbilt University)
 Richard A. Franklin, Associate Professor (PhD, University of Illinois)
 James E. Gibson, Research Professor (PhD, University of Iowa)
 Carl E. Haisch, Professor (MD, University of Washington)
 Charles A. Hodson, Professor (PhD, Iowa State University)
 Donald R. Hoffman, Professor (PhD, California Institute of Technology)
 Thomas Irons, Vice Chancellor Regional Health Services (MD, University of North Carolina, Chapel Hill)
 Stephanie B. Jilcott, Assistant Professor (PhD, University of North Carolina, Chapel Hill)
 Roberta M. Johnke, Associate Professor (PhD, Duke University)
 Ronald S. Johnson, Professor (PhD, Northwestern University)
 George J. Kasperek, Professor (PhD, Oregon State University)
 Laxmansa C. Katwa, Associate Professor (PhD, University of Mysore)
 Brett D. Keiper, Associate Professor (PhD, Brandeis University)
 Cheryl B. Knudson, Professor (PhD, University of Southern California)
 Warren Knudson, Professor (PhD, University of Illinois)
 Kathy Kolasa, Professor (PhD, RD, LDN, University of Tennessee, Knoxville)
 Peter Kragel, Professor (MD, Georgetown University)
 Alan Kypson, Assistant Professor (MD, Columbia College of Physicians and Surgeons)
 Suzanne Lea, Associate Professor (PhD, University of California, Berkeley; MPH, Yale University)
 John Lehman, Professor (PhD, University of Pennsylvania, The Wistar Institute)
 Isabelle Lemasson, Assistant Professor (PhD, University Montpellier)
 Thomas Louis, Professor (PhD, Michigan State University)
 Qun Lu, Associate Professor (PhD, Emory University)
 Robert M. Lust, Professor (PhD, Texas Tech University)
 Achut Malur, Assistant Professor (PhD, Free University of Brussels)
 Mark D. Mannie, Professor (PhD, Northwestern University)
 Christopher Mansfield, Professor (PhD, Florida State University)
 Daniel W. Martin, Research Assistant (PhD, University of Texas, San Antonio)
 Mona M. McConaughy, Research Associate Professor (PhD, Indiana University)
 James A. McCubrey, Professor (PhD, University of Wisconsin)
 Brian A. McMillen, Professor (PhD, University of Illinois, Chicago)
 Daniel Moore, Professor (MD, Jefferson Medical College)
 Justin B. Moore, Assistant Professor (PhD, University of Texas, Austin)
 M.D. Motaleb, Assistant Professor (PhD, Osaka University)
 Barbara Muller-Borer, Associate Professor (PhD, University of North Carolina, Chapel Hill)
 Alexander Murashov, Associate Professor (MD, Moscow 2nd and Medical Institute; PhD, Academy of Medical Sciences)
 Lloyd F. Novick, Professor (MD, New York University; MPH Yale University)
 Phillip H. Pekala, Professor (PhD, Virginia Polytechnic Institute and State University)
 Everett C. Pesci, Professor (PhD, University of Kentucky)
 Tarun Podder, Clinical Associate Professor (PhD, University of Hawaii, Manoa)
 Walter J. Pories, Professor (MD, University of Rochester)
 Richard H. Ray, Professor (PhD, Medical College of Georgia)
 Lorita Rebellato-deVente, Associate Professor (PhD, East Carolina University)
 Randall H. Renegar, Professor (PhD, University of Florida)
 Jacques Robidoux, Assistant Professor (PhD, University of Montreal)
 Edson Rocha, Research Assistant Professor (PhD, Federal University of Rio de Janeiro/University of Glasgow)

SECTION 9: GRADUATE FACULTY

Roy Martin Roop, Professor (PhD, Virginia Polytechnic Institute and State University)
Rachael Roper, Associate Professor (PhD, University of Rochester)
Ruth A. Schwalbe, Associate Professor (PhD, University of Minnesota)
Edward R. Seidel, Professor (PhD, University of Alabama, Birmingham)
Claudio H. Sibata, Professor (PhD, University of Wisconsin)
George Sigounas, Professor (PhD, Boston University)
C. Jeffrey Smith, Professor (PhD, University of Illinois)
John P. Smith, Teaching Associate Professor (PhD, Medical College of Virginia)
Ken Soderstrom, Associate Professor (PhD, Oregon State University)
Ann O. Sperry, Associate Professor (PhD, Rice University)
Paul H. Strausbauch, Professor (MD, University of Miami; PhD, University of Washington)
David A. Taylor, Professor (PhD, West Virginia University)
David M. Terrian, Professor (PhD, Wayne State University)
Mary Jane Thomassen, Professor (PhD, University of Minnesota)
Michael R. Van Scott, Professor (PhD, West Virginia University)
Kathryn M. Verbanac, Professor (PhD, University of Iowa)
Jitka Virag, Assistant Professor (Louisiana State University)
David G. Weismiller, Professor (MD, Thomas Jefferson University)
John Edwin Wiley, Professor (PhD, North Carolina State University)
Christopher J. Wingard, Associate Professor (PhD, Wayne State University)
Li Yang, Assistant Professor (PhD, Wayne State University)
Emmanuel E. Zervos, Professor (MD, University of Michigan)

Associate Graduate Faculty

Ethan Anderson, Assistant Professor (PhD, Yale University)
Stefan Clemens, Assistant Professor (PhD, Université Bordeaux I, France)
Beng Fuh, Assistant Professor (PhD, Freie Universität Berlin, Germany)
Annette Greer, Clinical Assistant Professor (PhD, East Carolina University)
Christopher Geyer, Assistant Professor (PhD, University of Texas Health Science Center)
M.G.F. Gilliland, Professor (MD, Loyola University)
Heng Hong, Assistant Professor (MD, Shanghai Medical University; PhD, University of Southern California)
Zhibin Huang, Assistant Professor (PhD, Case Western University)
Suzanne Lazorick, Assistant Professor (MD, University of North Carolina, Chapel Hill)
Janet Malek, Assistant Professor (PhD, Rice University)
Maria Ruiz-Echevarria, Assistant Professor (PhD, Centro de Investigaciones (Madrid, Spain)
Saame Shaikh, Assistant Professor (PhD, Indiana University)
Brian M. Shewchuk, Assistant Professor (PhD, Pennsylvania State University)
Kristina Simeonsson, Assistant Professor (MD, University of North Carolina, Chapel Hill)
David Tulis, Associate Professor (PhD, Eastern Virginia Medical School)
Dianne M. Walters, Assistant Professor (PhD, Johns Hopkins Bloomberg School of Public Health)
Lauren MacKenzie Whetstone, Clinical Associate Professor (PhD, Claremont Graduate University)

Graduate Teaching Faculty

Edward Apetz, Clinical Instructor (MD, University of Zurich, Switzerland)
David Hannon, Professor (MD, University of South Florida)
Nicholas Polakowski, Research Instructor (PhD, Colorado State University)
Matt Rosenbaum, Assistant Professor (DVM, University of Tennessee)
Kelly Warren, Assistant Teaching Professor (Virginia Commonwealth University)
Douglas Weidner, Research Assistant Professor (PhD, University of Nevada)

COLLEGE OF NURSING

Sylvia T. Brown, Professor and Dean (EdD, North Carolina State University)

Graduate Faculty

Martha R. Alligood, Professor (PhD, New York University)
Rebecca Benfield, Associate Professor (PhD, University of South Carolina)
Josie M. Bowman, Chair, Undergraduate (DSN, University of Alabama, Birmingham)
Garris Conner, Associate Professor (DSN, University of Alabama at Birmingham)
Robin Webb Corbett, Associate Professor (PhD, University of South Carolina)
Nellie Droes, Associate Professor (Clinical Associate Professor, University of California, San Francisco)
Frances R. Eason, Professor (EdD, North Carolina State University)
Martha Engelke, Professor (PhD, North Carolina State University)
Patricia Fazzone, Professor (DScN, Rush University Doctoral Program in Nursing Science)
Phyllis N. Horns, Professor and Vice Chancellor (DSN, University of Alabama, Birmingham)
Darlene E. Jesse, Associate Professor (PhD, University of Tennessee)
Mary Kirkpatrick, Professor (EdD, North Carolina State University)
Linda Mayne, Associate Professor (PhD, University of North Carolina, Chapel Hill)
Maura McAuliffe, Professor (PhD, University of Texas)
Janice A. Neil, Associate Professor (PhD, Virginia Commonwealth University)
Marie E. Pokorny, Professor (PhD, University of Virginia)
Mary Ann Rose, Professor (EdD, North Carolina State University)
Elaine Scott, Associate Professor (PhD, East Carolina University)
Nancy N. Stephenson, Associate Professor (PhD, University of South Carolina)
Melvin S. Swanson, Professor (PhD, University of Pittsburgh)
Susan A. Williams, Associate Professor (DNS, Louisiana State University)
Carol Winters-Moorhead, Professor (PhD, University of Pittsburgh)

Associate Graduate Faculty

Bonnie Benetato, Assistant Professor (PhD, The Catholic University of America)
Laura T. Gantt, Assistant Professor (PhD, University of Colorado, Denver)
Barbara Kellam, Assistant Professor (PhD, Medical College of Georgia)
Kim L. Larson, Assistant Professor (PhD, University of North Carolina, Chapel Hill)
Annette I. Peery, Assistant Professor (EdD, North Carolina State University)
Donna W. Roberson, Assistant Professor (PhD, University of North Carolina, Chapel Hill)
Ann M. Schreier, Associate Professor (PhD, Stanford University)

Graduate Teaching Faculty

Rebecca Bagley, Clinical Assistant Professor (MSN, East Carolina University)
Lou Anne Baldree, Associate Professor (MD, East Carolina University)
Kristen Barbee, Clinical Instructor (MSN, East Carolina University)
Nicole Barrett, RN, ARNP, NNP-BC, Clinical Instructor (MSN, East Carolina University)
Martha Brinkso, Clinical Instructor (MS, University of North Carolina, Charlotte)
Connie DeWees, Clinical Assistant Professor (DPH, University of North Carolina, Chapel Hill)
Melydia Edge, Clinical Associate Professor (PhD, Catholic University of America)
Mary Elesha-Adams, Clinical Assistant Professor (MSN, East Carolina University)
Lou Everett, Clinical Professor (PhD, East Carolina University)
Debra Fell, Clinical Instructor (MSN, East Carolina University)
Kim Hardy, Clinical Associate Professor (MSN, East Carolina University)
Carolyn Horne, Clinical Instructor (MS, East Carolina University)
Krista Horne, Clinical Instructor (MSN, University of North Carolina, Chapel Hill)
Ruby Haynes, Clinical Instructor (MSN, East Carolina University)
Jackie Hutcherson, Clinical Assistant Professor (MSN, East Carolina University)
Philip W. Julian, RN, Clinical Assistant Professor (MSN, University of North Carolina, Greensboro)
Carol King, Assistant Professor (DNP, Duke University)
Debra Kosko, Clinical Assistant Professor (MSN, University of California, Los Angeles)
Donna Lake, Clinical Instructor (MED, University of Oklahoma)

SECTION 9: GRADUATE FACULTY

Wanda Lancaster, Clinical Instructor (MSN, Indiana University)
Bobby Lowery, Clinical Assistant Professor (MSN, Emory University)
Cathy McLean, Clinical Assistant Professor (MSN, East Carolina University)
Jane Miles, Clinical Instructor (MSN, The Catholic University of America)
Connie Mullinix, Clinical Associate Professor (PhD, University of Pennsylvania)
Melissa Ott, Clinical Assistant Professor (MS, University of New Hampshire)
Sandra Parks, Clinical Instructor (MSN, University of North Carolina, Chapel Hill)
Lucia Reardon, Clinical Instructor (MSN, East Carolina University)
Pam Reis, Clinical Assistant Professor (MSN, East Carolina University)
Michelle Skipper, Clinical Assistant Professor (MSN, Duke University)
Renee Spain, RN, Clinical Instructor (MSN, MAEd, East Carolina University)
Mollie Tripp, Clinical Instructor (MSN, East Carolina University)
Mary Wilson, Clinical Assistant Professor (MSN, East Carolina University)

Adjunct Graduate Teaching Faculty

Judy Bernhardt, Retired Professor (PhD, University of Illinois)

COLLEGE OF TECHNOLOGY AND COMPUTER SCIENCE

David M. White, Professor and Dean (EdD, University of Tennessee)
Leslie R. Pagliari, Associate Professor and Associate Dean (PhD, Walden University)
Evelyn Brown, Associate Professor and Associate Dean (PhD, University of Virginia)

Department of Computer Science

Karl Abrahamson, Associate Professor and Interim Chair (PhD, University of Washington, Seattle)

Graduate Faculty

Junhua Ding, Assistant Professor (PhD, Florida International University)
Qin Ding, Assistant Professor (PhD, North Dakota State University)
K. Gopalakrishnan, Associate Professor (PhD, University of Nebraska)
Lakshmi Narasimhan, Professor (PhD, University of Queensland)
John Placer, Professor (PhD, Oregon State University)
Ronnie W. Smith, Associate Professor (PhD, Duke University)
Mohammad H. N. Tabrizi, Professor (PhD, Sheffield University)
Sergiy Vilkomir, Assistant Professor (PhD, Kharkov Polytechnic University)

Associate Graduate Faculty

Masao Kishore, Associate Professor (PhD, Princeton University)
James F. Wirth, Associate Professor (PhD, University of Notre Dame)

Department of Construction Management

Syed M. Ahmed, Professor and Chair (PhD, Georgia Institute of Technology)

Graduate Faculty

David L. Batie, Associate Professor (PhD, Texas A&M University)

Associate Graduate Faculty

Gazan Bozai, Assistant Professor (PhD, Auburn University)
Keith E. Sylvester, Assistant Professor (PhD, Texas A&M University)
George C. Wang, Assistant Professor (PhD, University of Wollongong)

Graduate Teaching Faculty

Yong Han Ahn, Assistant Professor (PhD, Virginia Polytechnic Institute and State University)
Grady Eric Connell, Associate Professor (PhD, Texas A&M University)
Namhun Lee, Assistant Professor (PhD, University of Washington)
Huanqing Lu, Associate Professor (PhD, University of Florida)

Department of Engineering

O. Hayden Griffin, Professor and Chair (PhD, Virginia Polytechnic Institute and State University)

Graduate Faculty

Tarek Abdel-Salam, Associate Professor (PhD, Old Dominion University)

Eugene Dixon, Assistant Professor (PhD, University of Alabama in Huntsville)

Paul Kaufmann, Professor (PhD, Pennsylvania State University)

Gerald Micklow, Professor (PhD, Virginia Polytechnic Institute and State University)

Associate Graduate Faculty

Chad Bossetti, Assistant Professor (PhD, Duke University)

Stephanie George, Assistant Professor (PhD, Georgia Institute of Technology)

Graduate Teaching Faculty

Purvis H. Bedenbaugh, Assistant Professor (PhD, University of Pennsylvania)

Evelyn C. Brown, Associate Professor (PhD, University of Virginia)

William Howard, Assistant Professor (PhD, Marquette University)

John C. Reis, Professor (PhD, Stanford University)

Richard R. Williams, Assistant Professor (PhD, Auburn University)

Department of Technology Systems

Tijjani Mohammed, Associate Professor and Chair (PhD, Texas A&M University)

Graduate Faculty

David Batts, Assistant Professor (EdD, East Carolina University)

Michael Behm, Associate Professor (PhD, Oregon State University)

Robert A. Chin, Professor (PhD, University of Maryland)

Charles E. Coddington, Professor (PhD, University of Maryland)

Kanchan Das, Assistant Professor (PhD, University of Windsor)

Hamid Fonooni, Associate Professor (PhD, University of Cincinnati)

Andrew E. Jackson, Professor (PhD, University of Central Florida)

Chengcheng Li, Assistant Professor (PhD, Texas Tech University)

Philip J. Lunsford, Associate Professor (PhD, North Carolina State University)

Merwan Mehta, Associate Professor (PhD, University of Missouri, Rolla)

Richard Monroe, Associate Professor (PhD, Old Dominion University)

Erol Ozan, Associate Professor (PhD, Old Dominion University)

Associate Graduate Faculty

Te-Shun Chou, Assistant Professor (PhD, Florida International University)

Charles J. Lesko Jr., Assistant Professor (PhD, Walden University)

Peng Li, Assistant Professor (PhD, Texas Tech University)

Janet Sanders, Assistant Professor (PhD, North Carolina A&T State University)

Graduate Teaching Faculty

Samir Khoury, Assistant Professor (PhD, Capella University)

Christine Russell, Visiting Assistant Professor (JD, University of Missouri-Kansas City School of Law)

APPENDIX A

SIGNIFICANCE OF COURSE NUMBERS AND COURSE PREFIXES

SIGNIFICANCE OF COURSE NUMBERS

0001-0999 Remedial
1000-1999 Freshman
2000-2999 Sophomore

3000-3999 Junior
4000-4999 Senior
5000-5999 Master's

6000-7001 Master's
7002-7999 Doctoral
8000-9001 Doctoral

Five-thousand-level (5000-5999) courses are master's courses. Undergraduate students may be admitted to five-thousand-level courses if they have completed the stated prerequisite(s) or with the written permission of the instructor, chair of the department, director of the school, or the dean of the college in which the course is offered. Seven-thousand-level (7002-7999) courses are doctoral courses. Qualified master's students may enroll in seven-thousand-level courses if they have completed the stated prerequisite(s) or with the written permission of the instructor, chair of the department, director of the school, or the dean of the college in which the course is offered.

COURSE PREFIXES

AAAS	African and African American Studies	Thomas Harriot College of Arts and Sciences
ACCT	Accounting	College of Business
ADED	Adult Education	College of Education
AERO	Aerospace Studies	Military Programs
ANAT	Anatomy and Cell Biology	Brody School of Medicine
ANTH	Anthropology	Department of Anthropology
ART	Art and Design	College of Fine Arts and Communication
ASEU	Area Studies-European Studies	Thomas Harriot College of Arts and Sciences
ASIA	Asian Studies	Thomas Harriot College of Arts and Sciences
ASLS	American Sign Language Studies	College of Allied Health Sciences
ATEP	Athletic Training Education Program	College of Health and Human Performance
BIME	Biomedical Engineering	College of Technology and Computer Science
BIOC	Biochemistry	Brody School of Medicine
BIOE	Bioprocess Engineering	College of Technology and Computer Science
BIOL	Biology	Department of Biology
BIOS	Biostatistics	College of Allied Health Sciences
BISC	Biological Sciences	Brody School of Medicine
BITE	Business and Information Technologies Education	College of Education
BMSC	Biomedical Science	Brody School of Medicine
BUSI	Business	College of Business
CDFR	Child Development and Family Relations	College of Human Ecology
CHE	College of Human Ecology	College of Human Ecology
CHEM	Chemistry	Department of Chemistry
CHIN	Chinese	Department of Foreign Languages and Literatures
CLAS	Classical Studies	Thomas Harriot College of Arts and Sciences
CLSC	Clinical Laboratory Science	College of Allied Health Sciences
CMED	Comparative Medicine	Brody School of Medicine
CMGT	Construction Management	College of Technology and Computer Science
COAD	Counselor and Adult Education	College of Education
COAS	Coastal and Marine Studies	Thomas Harriot College of Arts and Sciences
COHE	Community Health	College of Allied Health Sciences
COMM	Communication	College of Fine Arts and Communication
CRM	Coastal Resources Management	Graduate School
CSCI	Computer Science	College of Technology and Computer Science
CSDI	Speech and Hearing Sciences	College of Allied Health Sciences
DESN	Design and Drafting	College of Technology and Computer Science
DNCE	Dance	College of Fine Arts and Communication
DRED	Driver Education	College of Health and Human Performance
ECON	Economics	Department of Economics
EDTC	Educational Technology	College of Education
EDUC	Education	College of Education

SIGNIFICANCE OF COURSE NUMBERS AND COURSE PREFIXES

EHST	Environmental Health	College of Health and Human Performance
ELEM	Elementary Education	College of Education
ENED	English Education	College of Education
ENGL	English	Department of English
ENGR	Engineering Core Courses	College of Technology and Computer Science
ENMA	Engineering Management	College of Technology and Computer Science
ETHN	Ethnic Studies	Thomas Harriot College of Arts and Sciences
EXSS	Exercise and Sport Science	College of Health and Human Performance
FACS	Family and Consumer Sciences	College of Human Ecology
FINA	Finance	College of Business
FLGC	Foreign Languages, Generic	Department of Foreign Languages and Literatures
FORL	Foreign Languages	Department of Foreign Languages and Literatures
FREN	French	Department of Foreign Languages and Literatures
GEOG	Geography	Department of Geography
GEOL	Geological Sciences	Department of Geological Sciences
GERM	German	Department of Foreign Languages and Literatures
GERO	Gerontology	College of Human Ecology
GRAD	Graduate Studies	Graduate School
GRBK	Great Books	Thomas Harriot College of Arts and Sciences
GRK	Greek	Department of Foreign Languages and Literatures
HIED	History Education	College of Education
HIMA	Health Information Management	College of Allied Health Sciences
HIST	History	Department of History
HLTH	Health	College of Health and Human Performance
HMGD	Hospitality Management	College of Human Ecology
HNRS	Honors	Honors College
HPRO	Health Professions	College of Allied Health Sciences
HSMA	Health Services Management	College of Allied Health Sciences
HUMS	Medical Humanities	Brody School of Medicine
ICTN	Information and Computer Technology	College of Technology and Computer Science
IDIS	Industrial Distribution and Logistics	College of Technology and Computer Science
IDSN	Interior Design	College of Human Ecology
IENG	Industrial Engineering Technology	College of Technology and Computer Science
INTE	Interdepartmental	Brody School of Medicine
INTL	International Studies	Thomas Harriot College of Arts and Sciences
IPAM	Indigenous Peoples of the Americas	Thomas Harriot College of Arts and Sciences
IRHE	Interdisciplinary Rural Health Education	Brody School of Medicine
ISYS	Industrial and Systems Engineering	College of Technology and Computer Science
ITAL	Italian	Department of Foreign Languages and Literatures
ITEC	Industrial Technology	College of Technology and Computer Science
JAPN	Japanese	Department of Foreign Languages and Literatures
JUST	Criminal Justice	College of Human Ecology
LATN	Latin	Department of Foreign Languages and Literatures
LDSP	Leadership	Thomas Harriot College of Arts and Sciences
LDVP	Leadership Development	Center for Leadership Development
LEED	Educational Leadership	College of Education
LIBS	Library Studies	College of Education
MAST	Maritime Studies	Department of History
MATE	Mathematics Education	College of Education
MATH	Mathematics	Department of Mathematics
MCBI	Microbiology	Brody School of Medicine
MENG	Mechanical Engineering	College of Technology and Computer Science
MGMT	Management	College of Business
MIDG	Middle Grades Education	College of Education
MIS	Management Information Systems	College of Business
MKTG	Marketing	College of Business

APPENDIX A

MLSC	Military Science	Military Programs
MPH	Public Health	Brody School of Medicine
MPRD	Media Production	College of Fine Arts and Communication
MRCH	Merchandising	College of Human Ecology
MRST	Medieval and Renaissance Studies	Thomas Harriot College of Arts and Sciences
MULT	Multidisciplinary Studies	Thomas Harriot College of Arts and Sciences
MUSC	Music	College of Fine Arts and Communication
NCST	North Carolina Studies	Thomas Harriot College of Arts and Sciences
NEUR	Neuroscience	Thomas Harriot College of Arts and Sciences and Brody School of Medicine
NURS	Nursing	College of Nursing
NUTR	Nutrition Science	College of Human Ecology
OCCT	Occupational Therapy	College of Allied Health Sciences
OMGT	Operations Management	College of Business
PADM	Public Administration	Department of Political Science
PADP	Physician Assistant	College of Allied Health Sciences
PATH	Pathology	Brody School of Medicine
PHAR	Pharmacology	Brody School of Medicine
PHIL	Philosophy	Department of Philosophy
PHLY	Physiology	Brody School of Medicine
PHYS	Physics	Department of Physics
PLAN	Planning	Department of Geography
POLS	Political Science	Department of Political Science
PSYC	Psychology	Department of Psychology
PTHE	Physical Therapy	College of Allied Health Sciences
RCLS	Recreation and Leisure Studies	College of Health and Human Performance
RCTX	Recreational Therapy	College of Health and Human Performance
READ	Reading	College of Education
REHB	Rehabilitation Studies	College of Allied Health Sciences
RELI	Religious Studies	Thomas Harriot College of Arts and Sciences
RONC	Radiation Oncology	Brody School of Medicine
RUSI	Russian Studies	Thomas Harriot College of Arts and Sciences
RUSS	Russian	Department of Foreign Languages and Literatures
SAFT	Occupational Safety	College of Technology and Computer Science
SCIE	Science Education	College of Education
SECS	Security Studies	Thomas Harriot College of Arts and Sciences
SENG	Software Engineering	College of Technology and Computer Science
SOCI	Sociology	Department of Sociology
SOCW	Social Work	College of Human Ecology
SPAN	Spanish	Department of Foreign Languages and Literatures
SPED	Special Education	College of Education
SUTO	Sustainable Tourism	Graduate School
SYSE	Systems Engineering	College of Technology and Computer Science
TCHR	Teacher Education	College of Education
TESL	Teaching English as a Second Language	College of Education
THEA	Theatre Arts	College of Fine Arts and Communication
WOST	Women's Studies	Thomas Harriot College of Arts and Sciences

COURSE DESCRIPTION KEY

Courses normally meet one hour per week for each semester hour credit. The numbers in parentheses following the title for each course listed under the various programs, departments, schools, and colleges of the university indicate the semester hours credit. Exceptions to the rule, such as labs, are printed after semester hours credits.

P=Prerequisite(s); C=Corequisite(s); P/C=Prerequisite(s) or Corequisite(s); R=Recommended P, C, or P/C

SUBSTANCE ABUSE POLICY

East Carolina University is dedicated to the pursuit and dissemination of knowledge and, as such, expects all members of the academic community to behave in a manner conducive to that end. The highest standards of personal and professional conduct must be maintained by faculty, staff, and students. Illegal or abusive use of drugs or alcohol, referred to in this policy as substance abuse, by members of the university community adversely affects the mission of the university and is prohibited.

Accordingly, the East Carolina University Board of Trustees adopts the following policy, consistent with The UNC Board of Governors' Policy on Illegal Drugs. The policy is intended to accomplish the following:

- (1) Prevent substance abuse through a strong educational effort;
- (2) Encourage and facilitate the use of counseling services and rehabilitation programs by those members of the academic community who require their assistance in stopping substance abuse; and
- (3) Discipline appropriately those members of the academic community who engage in illegal drug or alcohol-related behaviors.

Educational Efforts to Prevent Substance Abuse

In keeping with its primary mission of education, East Carolina University will conduct a strong educational program aimed at preventing substance abuse and illegal drug or alcohol use. Educational efforts shall be directed toward all members of the academic community and will include information about the incompatibility of the use or sale of illegal substances with the goals of East Carolina University; the health hazards associated with illegal drug or alcohol use; the incompatibility of substance abuse with the maximum achievement of educational, career, and other personal goals; and the potential legal consequences of involvement with illegal drugs or alcohol.

Counseling and Rehabilitation Services to Prevent Substance Abuse

Those faculty, staff, or students who seek assistance with a substance-related problem shall be provided with information about drug counseling and rehabilitation services available through East Carolina University and also through community organizations. Those who voluntarily avail themselves of university services shall be assured that applicable professional standards of confidentiality will be observed.

Disciplinary Actions to Prevent Substance Abuse

Students, faculty members, administrators, and other employees are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that make it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the university community who violates that law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the university.

It is expected that East Carolina University students, faculty members, administrators, and other employees who use or possess alcoholic beverages will do so as legally prescribed by the laws of the State of North Carolina, within the regulations of East Carolina University, and in a manner which does not disrupt the lives of others. A person whose conduct is outside these parameters will be subject to the judicial rules and procedures of the university.

It is not double jeopardy for both the civil authorities and the university to proceed against and punish a person for the same specified conduct. The university will initiate its own disciplinary proceedings against a student, faculty member, administrator, or other employee when the alleged conduct is deemed to affect the interests of the university.

Penalties will be imposed by the university in accordance with procedural safeguards applicable to disciplinary actions against students, faculty members, administrators, and other employees, as required by Sections V and VI of Appendix D of the East Carolina University Faculty Manual, by board of governors' policies applicable to the employees exempt from the State Personnel Act, by the East Carolina University Student Judicial System, and by regulations of the State Personnel Commission.

The penalties to be imposed by the university may range from written warnings with probationary status to expulsions from enrollment and discharges from employment*. However, the following minimum penalties shall be imposed for the particular offenses described.

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- (1) Trafficking in Illegal Drugs
 - (a) For the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedule I, NC General Statutes 90-89, or Schedule II, NC General Statutes 90-90 (including, but not limited to, heroin, mescaline, lysergic acid diethylamide, opium, cocaine, amphetamine, methaqualone), any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.
 - (b) For a first offense involving the illegal manufacture, sale, or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedules III through VI, NC General Statutes 90-91 through 90-94, (including but not limited to, marijuana, pentobarbital, codeine) the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent. For a second offense, any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.
- (2) Illegal Possession of Drugs
 - (a) For a first offense involving the illegal possession of any controlled substance identified in Schedule I, NC General Statutes 90-89, or Schedule II, NC General Statutes 90-90, the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent.
 - (b) For a first offense involving the illegal possession of any controlled substance identified in Schedules III through VI, NC General Statutes 90-91 through 90-94, the minimum penalty shall be probation, for a period to be determined on a case-by-case basis. A person on probation must agree to participate in a drug education and counseling program, consent to regular drug testing, and accept such other conditions and restrictions, including a program of community service, as the chancellor or the chancellor's designee deems appropriate. Refusal or failure to abide by the terms of probation shall result in suspension from enrollment or from employment for any unexpired balance of the prescribed period of probation.
 - (c) For second or other subsequent offenses involving the illegal possession of controlled substances, progressively more severe penalties shall be imposed, including expulsion of students and discharge of faculty members, administrators, or other employees.
- (3) Possession and Use of Alcohol
 - (a) For offenses involving the illegal possession, use, sale and/or distribution of alcohol in violation of NC General Statutes 18B-300 & 18B-301 & 302; 18B-1006 (a); or Greenville Ordinance No. 812-1-2, a student will be subjected to a progressive penalty system based on the type of infraction and the circumstances involved. Penalties may be a warning, probation, fine, volunteer community service, and/or removal from the residence system or the university.
 - (b) In certain circumstances, involvement in an alcohol education and/or counseling program may be offered to a student in lieu of being referred to the honor board with a recommendation for suspension. Specifically, a student given this option will be required to participate in a program of assessment, education and counseling; pay a fee of sixty dollars (\$60), and be placed on university probation. A student may participate in this program only once in lieu of disciplinary action.
 - (c) University employees subject to the State Personnel Act may be disciplined in accordance with the rules and regulation for personal misconduct, i.e., final written warning, which may include a three (3) day suspension without pay, or dismissal.

When a student, faculty member, administrator, or other employee has been charged by the university with a violation of policies concerning illegal drugs or alcohol, he or she may be suspended from enrollment or employment before initiation or completion of regular disciplinary proceedings if, assuming the truth of the charges, the chancellor or, in the chancellor's absence, the chancellor's designee concludes that the person's continued presence within the university community would constitute a clear and immediate danger to the health or welfare of other members of the university community; provided, that if such a suspension is imposed, an appropriate hearing of the charges against the suspended person shall be held as promptly as possible thereafter.

In the case of employees, anyone convicted of a criminal drug statute violation occurring in the workplace shall notify the university no later than five days after such a conviction. The university will commence disciplinary action against such an individual within thirty (30) days of notice of the conviction.

Responsibilities Under This Policy

Authority to implement the policy shall reside in the chancellor.

The chancellor shall designate a coordinator of drug and alcohol education who shall, acting under the authority of the chancellor, be responsible for overseeing all actions and programs relating to this policy.

All employees and students shall be responsible for abiding by the provisions of this policy. In the case of employees, adherence with the provisions of the policy shall be a condition of employment.

The chancellor will render an annual report to the board of trustees on the effectiveness of this policy.

Dissemination of This Policy

A copy of this policy shall be given annually to each employee and to all new employees at the beginning of their employment. Each student shall receive a copy and new students shall be given a copy during orientation.

The policy shall be printed on appropriate student documents and posted on official bulletin boards of the university.

Amended October, 1990

The Board of Trustees of East Carolina University

EAST CAROLINA UNIVERSITY AFFIRMATIVE ACTION/EQUAL OPPORTUNITY POLICY

East Carolina University is committed to equality of opportunity and does not discriminate against applicants, students, or employees based on race, religion, color, creed, national origin, sex, age, sexual orientation, or disability.

All employment decisions will be made so as to further the principle of equal employment opportunity. The university will recruit, hire, train, and promote persons in all positions without regard to race, religion, color, creed, national origin, sex, age, or disability. Consistent with this principle, all promotion decisions will be made using valid requirements and all personnel actions (such as compensation, benefits, transfers, layoffs, return from layoff, university sponsored training, education, tuition assistance, and social and recreational programs) will be administered without regard to race, religion, color, creed, sex, national origin, age, sexual orientation, or disability.

This policy on nondiscrimination and the Affirmative Action Program of East Carolina University are consistent with and pursuant to the guidelines set forth in Executive Order 11246 and its implementing regulations. The Affirmative Action Program implements guidelines set forth under Title VII of the Civil Rights Act of 1964, the Rehabilitation Act of 1973, the Age Discrimination In Employment Act of 1976, the Vietnam Veterans Readjustment Assistance Act of 1974 as amended, and the Americans with Disabilities Act of 1992.

The university's policy is consistent with NCGS 126-16: "All State ... agencies ... of North Carolina shall give equal opportunity for employment without regard to race, religion, color, creed, national origin, sex, age, or handicapping condition to all persons qualified, except where specific age, sex, or physical requirements constitute bona fide occupational qualifications necessary to proper and efficient administration. This section with respect to equal opportunity as to age shall be limited to individuals who are at least forty years of age but less than seventy years of age." It is also consistent with The Code of The University of North Carolina, Section 103: "Admission to, employment by, and promotion in The University of North Carolina and all of its constituent institutions shall be on the basis of merit and there shall be no discrimination on the basis of race, color, creed, religion, sex, national origin, age, or disability."

The responsibility for implementation of this plan rests with the chancellor. The vice chancellors, dean of the College of Arts and Sciences, deans of professional schools, departmental chairpersons, and principal administrative directors are responsible for assisting him in implementing these policies. These responsibilities also include coordination of the university's efforts to comply with all applicable aspects of the Americans with Disabilities Act of 1992. They will assure that decisions involving recruitment, selection, appointment, and promotion of faculty and staff at all levels are made in a nondiscriminatory manner and in accordance with the goals of the ECU Affirmative Action Plan.

The chancellor has also appointed the associate provost for equity, diversity and community relations to coordinate all aspects of the Affirmative Action Plan, initiate programs to assist in reaching the goals of the Affirmative Action Plan, maintain a record system, identify problem areas, monitor progress, and assist faculty, staff, and students to resolve problems. These

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responsibilities also include coordination of the university's efforts to comply with all applicable aspects of the Americans with Disabilities Act of 1992.

Any student of East Carolina University who has a complaint of discrimination should follow the guidelines as published by the Dean of Students Office. Current, former, or prospective faculty or staff who have a complaint should follow the procedures outlined in the Faculty Manual or the East Carolina University Business Manual. Professional staff in the Office of Equity, Diversity and Community Relations will provide information to any individual concerning the appropriate grievance procedures.

Copies of the Affirmative Action Plan are available in the Office of Equity, Diversity and Community Relations and via the Internet at www.ecu.edu/eoo.

This Affirmative Action Plan will be evaluated annually and a report prepared by the the Office of Equity, Diversity and Community Relations for review by the chancellor. Taffye Benson Clayton, the associate provost for equity, diversity and community relations, acts as the university's EEO officer. The Office of Equity, Diversity and Community Relations is located in G-406 Old Cafeteria Building. The telephone number is 252-328-6804.

NOTICE OF NONDISCRIMINATION

East Carolina University is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, national origin, religion, gender, sexual orientation, age, or disability.

East Carolina University supports the protections available to members of its community under all applicable federal laws, including Titles VI and VII of the Civil Rights Act of 1964; Title IX of the Education Amendments of 1972; SECTION 899A and 845 of the Public Health Service Act; the Equal Pay Act; the Age Discrimination Act of 1975; the Rehabilitation Act of 1973, as amended by the Rehabilitation Act Amendments of 1974; the Vietnam Era Veteran's Readjustment Assistance Act of 1974; the Americans with Disabilities Act of 1992; and Executive Order 11246, as amended by Executive Order 11375.

In compliance with Section 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act of 1992, accommodations of the disabled extend to student programs, employment practices, elimination of physical barriers, and special assistance to disabled students and employees within the university.

This nondiscrimination policy covers admission, readmission, access to, and treatment and employment in university programs and activities, including, but not limited to, academic admissions, financial aid, any services, and employment.

Any student who believes that he or she has been discriminated against by the university because of his or her race, color, national origin, religion, gender, age, sexual orientation, or disability a representative in the Dean of Students Office in Mendenhall Student Center. Following that discussion, a student who wishes to file a formal or informal grievance will be directed to the appropriate office. Any member of the university community desiring information or having a complaint or grievance in regard to these provisions should contact Taffye Benson Clayton, G406 Old Cafeteria Building, East Carolina University, Greenville, NC 27858-4353; telephone 252-328-6804 or a staff representative.

SEXUAL HARASSMENT PREVENTION PLAN, POLICY, AND GRIEVANCE PROCEDURE FOR COMPLAINTS OF SEXUAL HARASSMENT

Sexual harassment and discrimination are illegal and endanger the environment of tolerance, civility, and mutual respect that must prevail if the university is to fulfill its mission. East Carolina University is committed to providing and promoting an atmosphere in which employees can realize their maximum potential in the work place and students can engage fully in the learning process. Further, amorous relations between a student and a university employee who is responsible for supervising or evaluating the student, or between an employee and the person supervising that employee may derogate the merit principle of supervision and evaluation. This policy is the university's statement of its intent to prohibit sexual harassment and discrimination and to prohibit amorous relations between the university's employees and students, and employees and supervisors when these relations create a risk of favoritism.

The following constitute sexual harassment: making verbal remarks or committing physical actions that propose to people of either sex that they engage in or tolerate activities of a sexual nature in order to avoid some punishment or to receive some reward; singling out people of either sex and creating or attempting to create a hostile university or working environment or otherwise attempting to harm or harming people because of their sex; and continuing verbal or physical conduct of a sexual

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nature when the person the conduct is directed toward has indicated clearly, by word or action, that this conduct is unwanted.

Sexual discrimination consists of actions that subject employees or students to unequal treatment on the basis of their sex.

It is the responsibility of members of the university community to strive to create an environment free of sexual harassment and discrimination and free of unprofessional bias in the supervision and evaluation of students and employees. It is against the policies of East Carolina University for its employees or students to propose to other employees or students that they engage in or tolerate activities of a sexual nature in order to avoid some punishment or to receive some reward; to create a hostile university or work place environment for an individual or group because of the individual's or the group's sex; to continue verbal or physical conduct of a sexual nature when the employees or students of the university such conduct is directed toward have indicated clearly, by word or action, that such conduct is unwanted; to engage in consensual amorous relationships with students or other university employees whom the employee is or will be supervising or evaluating; and to subject other employees or students to unequal treatment on the basis of their sex.

Complaints brought against East Carolina University students by East Carolina University students, faculty, staff, administrators, or visitors are governed by the grievance procedures published by the Dean of Students Office.

Complaints brought against East Carolina University staff by East Carolina University students, faculty, staff, administrators, or visitors are governed by the grievance procedures stated in the *East Carolina University Business Manual*, Policy Statement 7: Employee Relations in the Human Resources Section.

Complaints brought against East Carolina University faculty members or administrators holding faculty status by East Carolina University students, faculty, staff, administrators, or visitors are governed by the grievance procedures presented in the *East Carolina University Faculty Manual*.

Any person having a complaint of sexual harassment should contact Taffye Benson Clayton, associate provost for equity, diversity and community relations. The telephone number is 252-328-6804. The Office of Equity, Diversity and Community Relations is located in G-406 Old Cafeteria Building.

RACIAL AND ETHNIC HARRASSMENT POLICY

Section I. Rationale

The faculty, staff, administration, and students of East Carolina University maintain that it is important to create an atmosphere in which instances of racial and ethnic harassment are discouraged. Well-publicized policies and procedures such as these will help to create an atmosphere in which individuals who believe that they are the victims of racism or ethnic harassment are assured that their grievances will be dealt with in a timely, confidential, fair, and effective manner. Toward this end, all members of the university community should understand that racial and ethnic harassment violates university policy and will not be condoned. Members of the university community are encouraged to express freely, responsibly, and in an orderly way their opinions and feelings about any problem or complaint of harassment prohibited under these policies. Any act by a university employee or student of reprisal, interference, restraint, penalty, discrimination, coercion, or harassment against a student or an employee for using these policies responsibly interferes with free expression and openness and violates this policy. Accordingly, members of the university community are prohibited from acts of reprisal against those who bring charges or are involved as witnesses or otherwise try to responsibly use this policy.

Section II. Racial and Ethnic Harassment Policy

A. Introduction. Racial and/or ethnic harassment endangers the environment of tolerance, civility, and mutual respect that must prevail if the university is to fulfill its mission. Such harassment will not be condoned by members of the university community. This policy is the university's statement of its intent to protect its educational environment by prohibiting specific forms of racial and/or ethnic harassment. The university recognizes that the free and unfettered interchange of competing views is essential to the institution's educational mission, and that the peoples' right to express opinions is guaranteed by the United States Constitution.

B. Definitions. The following constitute racial and/or ethnic harassment:

- a. Singling out people because of their race or ethnic affiliation and subjecting them to unequal or unfair treatment.

b. Harming, attempting to harm, or threatening to harm people because of their race and/or ethnic affiliation.

C. Policy. It is the responsibility of members of the university community to strive to create an environment free of racial and/or ethnic harassment.

C-1. It is against the policies of East Carolina University for its employees or students to single out employees or students of the university because of their race or ethnic affiliation and subject them to unequal or unfair treatment.

C-2. It is against the policies of East Carolina University for its employees or students to single out employees or students of the university or visitors to the university because of their race or ethnic affiliation and subject them to conduct which causes severe emotional disturbance.

Section III. Grievances Against East Carolina University Students

Complaints brought against East Carolina University students by East Carolina University students, faculty, staff, administrators, or visitors are governed by the grievance procedures published by the Dean of Students Office.

Section IV. Grievances Against East Carolina University Staff

Complaints brought against East Carolina University staff by East Carolina University students, faculty, staff, administrators, or visitors are governed by the grievance procedures stated in the *East Carolina University Business Manual*, Volume 2, Section VIII.

Section V. Grievances Against East Carolina University Faculty Members or Administrators Holding Faculty Status

Complaints brought against East Carolina University faculty members or administrators holding faculty status by East Carolina University students, faculty, staff, administrators, or visitors ordinarily are governed by the grievance procedures stated in the East Carolina University Faculty Manual, Appendix X. However, if a faculty member raises allegations of racial or ethnic harassment or discrimination during a hearing he or she requested before the Due Process Committee, the Reconsideration Committee, or the Faculty Hearing Committee (in accordance with the policies and procedures set forth in the *East Carolina University Faculty Manual*, Appendix D), the relevant committee shall determine the merits and bearing, if any, of the allegations raised by the faculty member on the matter before the committee. Such actions by the Due Process Committee, the Reconsideration Committee, or the Faculty Hearing Committee shall not preclude a faculty member from independently bringing a complaint of racial or ethnic harassment or discrimination in accordance with the grievance procedures stated in the *East Carolina University Faculty Manual*, Appendix X. The outcome of an Appendix X grievance brought by a faculty member against other faculty members or administrators holding faculty status either may be appealed in accordance with the provisions for appeal set forth in section J of Appendix X or may be appealed before the Faculty Affairs Committee in accordance with the policies and procedures set forth in Appendix D of the *East Carolina University Faculty Manual*, but not both.

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BUILDING ABBREVIATIONS

USED ON STUDENT SCHEDULES KEYED TO MAP

A	6	Austin Building
AH	13	Belk Building
B	5	Howell Science Complex
BA	8	Brewster (Wing A)
BB	8	Brewster (Wing B)
BC	8	Brewster (Wing C)
BD	8	Brewster (Wing D)
BN	5	Howell Science Complex-North
BS	5	Howell Science Complex-South
C		Clinic
CH	7	Christenbury Memorial Gym
CL	123	Irons Building
EL	58	Eller Building
F	2	Flanagan Building
GC	95	Bate Building
GR	3	Graham Building
H	91	Pitt County Memorial Hospital
HE	10	Rivers Building
J	14	Jenkins Fine Arts Center
L	1	Joyner Library
LA	1	Joyner Library Basement
MB	9	Fletcher Music Center
MC	37	Minges Coliseum
MS	15	Brody Medical Sciences Building
MT	33	McGinnis Auditorium
NB	10	Rivers Building
NC	47	Old Cafeteria Building
PE	5	Howell Science Complex
R	4	Rawl Building
RG	85	Ragsdale Building
SM	97	Ward Sports Medicine Building
SP	12	Speight Building
SZ	203	Science and Technology Building
TA	34	Messick Theatre Arts Center
TL		Industry and Technology Annex
WA	32	Wright Annex
WB	31	Whichard Building

MAIN CAMPUS

Alphabetical Listing of Buildings and Other Facilities

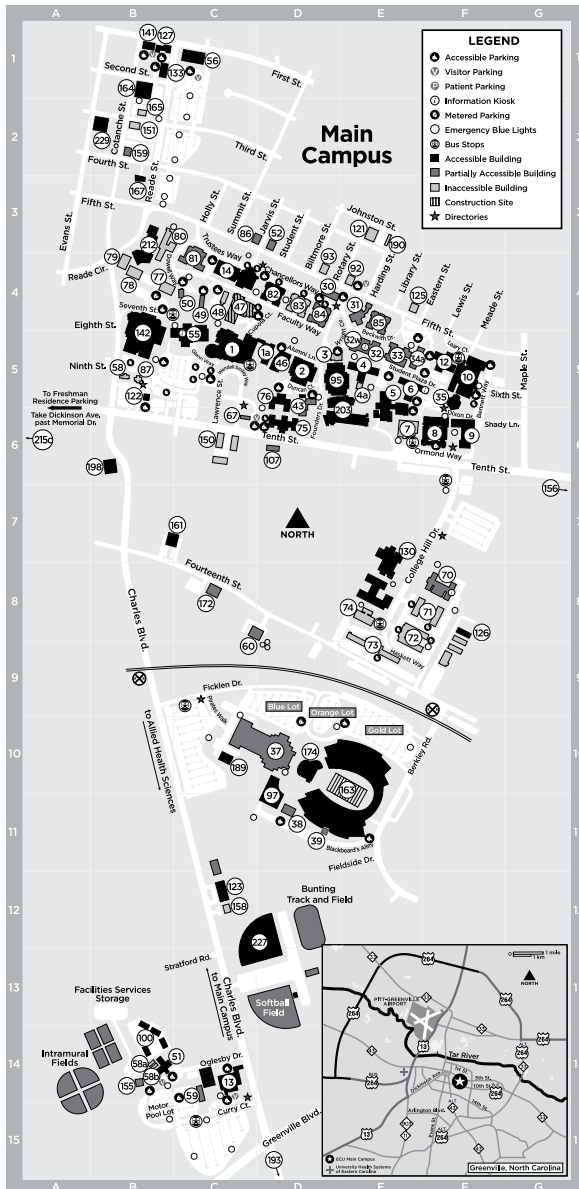
47 1 Card Office (C4)
 151 Administrative Support Annex (B2)
 31 Admissions (E4)
 14 Art and Design, School of (C4)
 95 Arts and Sciences, Thomas Harriot College of (D5)
 237 Athletic Grounds Storage (D13)
 39 Athletic Ticket Office (D11)
 6 Austin Building (E5)
 95 Bate Building (D5)
 95 BB&T Center for Leadership Development (D5)
 59 Belk Annex 1 (C14)
 13 Belk Building (C14)
 67 Blount House (ECU Police) (C6)
 155 Blount Recreational Sports Complex (B14)
 50 Bloxton House (C4)
 8 Brewster Building (F6)
 123 Building 123 (C12)
 127 Building 127 (B1)
 141 Building 141 (B1)
 158 Building 158 (C12)
 159 Building 159 (B2)

165 Building 165 (B2)
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 189 Building 189 (C10)
 198 Building 198 (B6)
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 95 Business, College of (D5)

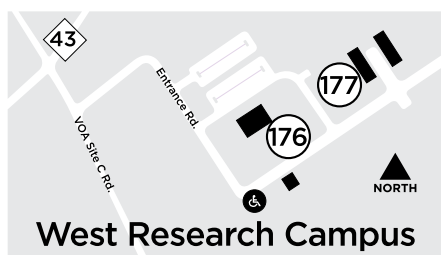
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 35 Croatan (F5)
 55 Destination 360 (C5)
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 212 West End Dining Hall (B3)
 32 Wright Place, The (E5)

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 215c Central Stores and Receiving (A6)
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 164 Cotanche Building (B1)
 76 Disability Support Services (D5)
 163 Dowdy-Ficklen Stadium (E10)
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 126 Facilities Services Eppes Complex (F8-F9)
 100 Facilities Services Grounds Complex (B14)
 60 Facilities Services Steam Plant (D8)
 161a Facilities Warehouse (B7)
 107 Family Therapy Clinic (D6)
 47 Financial Aid Office (C4)
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 193 Greenville Centre (D15)
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 51 Irons Building (B14)
 14 Jenkins Fine Arts Center (C4)
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 1a Joyner East (D5)
 50 Ledonia Wright Cultural Center (Bloxton House) (C4)
 43 Mail Services (D5)
 48 Mamie Jenkins Building (C4)
 58a Maritime Conservation Lab (B14)
 141 Materials Management (B1)
 33 McGinnis Theatre (E5)
 55 Mendenhall Student Center (C5)
 34a Messick Theatre Arts Centre (E5)
 37 Minges Coliseum (D10)
 174 Murphy Center (D10)
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 47 Old Cafeteria Complex (C4)
 122 Parking and Transportation Services (B5)
 39 Pirate Club Building (D11)
 67 Police, ECU (Blount House) (C6)
 150 Professional Center (C6)



- # HEALTH SCIENCES CAMPUS



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