COMMITTEE: University Curriculum Committee

MEETING DATE: January 24, 2013

PERSONS PRESIDING: Donna Kain

REGULAR MEMBERS IN ATTENDANCE: Reece Allen, Leigh Cellucci, Annette Greer, Donna Kain, Amy McMillan, Mark Richardson, and Angela Whitehurst

EX-OFFICIO MEMBERS IN ATTENDANCE: Linner Griffin, Jean-Luc Scemama, Katherine Swank, and Karen Vail-Smith

EXCUSED: None

ABSENT: Jennifer Warren

SUPPORT: Kimberly Nicholson

OTHERS IN ATTENDANCE:
   College of Health and Human Performance: Rhonda Kenny and Susan McGhee
   College of Technology and Computer Science: Evelyn Brown, Karl Abrahamson, David Batie, BJ Kim, and Barbara Muller-Borer
   The Honors College: Katherine O'Connor, Todd Fraley, and Richard Eakin
   Thomas Harriot College of Arts and Sciences: James Collins, Eli Hvastkovs, Nathan Richards, and Jerry Weitz

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ACTIONS OF MEETING

Agenda Item: I. Call to Order

(1.) Minutes
   The 12-13-12 UCC minutes were distributed for an electronic vote then sent to the Faculty Senate for agenda placement.

   Discussion:

   NA

   Action Taken:

   NA

(2.) Announcements

   Dr. Kain reported that she expected our agendas will remain full throughout the spring term.
Discussion:
NA

Action Taken:
NA

Agenda Item: I. Thomas Harriot College of Arts and Sciences, Department of Chemistry

(1.) Prerequisite Revision of Existing Courses: CHEM 1160, 1161

Discussion:
Dr. Hvastkovs presented.

Action Taken:
Dr. Allen moved that the proposal be approved as presented. Dr. Greer seconded. Motion passed.

Agenda Item: II. Thomas Harriot College of Arts and Sciences, Department of History

(1.) Proposal of New Course: HIST 2600

Discussion:
Dr. Richards presented.

Dr. Richardson asked if the course was a required course or an elective. Dr. Richards replied that it is an elective.

Dr. Griffin asked if the course should be listed as a distance course. Dr. Richards said that was the case and will note that in the proposal.

Dr. Allen confirmed that CTE approval is not required for this course.

Dr. Richardson asked about the syllabus. He noted that the texts need to be identified as required or optional.
Dr. Richardson recommended that the course objectives follow the tag line, “Upon
completion of this course, students will be able to . . .”

Dr. Kain noted that the summer session could be added to the catalog copy. Dr. Richards
decided to leave the term off for future flexibility.

**Action Taken:**

Dr. Richardson moved the proposal be accepted as amended. Dr. Allen seconded. Motion passed.

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**Agenda Item:** IV. College of Health and Human Performance, Department of Kinesiology

(1.) Proposal of New Courses: EXSS 4701, 4801, 4990

**Discussion:**

Dr. Kenny presented.

Dr. Griffin asked if the bookstore assigned an ISBN # for course packets. Ms. Whitehead replied, “No as ISBN #s are Library of Congress numbers.”

Dr. Greer commended Dr. Kenny on a job well done.

**Action Taken:**

Dr. Greer moved that the proposal be approved as presented. Dr. Allen seconded. Motion passed.

(2.) Prerequisite Revision of Existing Courses: EXSS 4700, 4800, 4992

**Discussion:**

Dr. Kenny presented.

**Action Taken:**

Dr. Greer moved that the proposal be approved as presented. Dr. Allen seconded. Motion passed.

(3.) Revision of Existing Degrees: BS in Exercise Physiology, BS in Health Fitness Specialist, BS in Sports Studies

**Discussion:**
Dr. Kenny presented

Dr. Kain recommended they remove the number of general electives for the BS in Sports Studies revision in the marked catalog copy.

Action Taken:

Dr. Greer moved that the proposal be approved as amended. Dr. Allen seconded. Motion passed.

Agenda Item: V. The Honors College

(1.) Proposal of New Courses: HNRS 2000, 3000, 4000, 4500, 4550

Discussion:

Dr. Eakin presented.

Dr. Allen asked how many hours the students will meet for each course and noted that the number should be in the proposals.

Dr. Vail-Smith noted that all objectives need to be measurable.

Dr. Griffin recommended that—in the justification—HNRS 3000 should be listed as the second as opposed to the first as typed in the proposal.

Dr. Vail-Smith reminded that changes made in the proposal need to be made in the catalog copy as well.

Action Taken:

Dr. Allen moved that the proposal be accepted as amended. Ms. Whitehurst. seconded. Motion passed.

(2.) Revision of the Honors College Text: Program Requirements

Discussion:

Dr. Eakin presented.

Dr. Allen noted that the notation to remove 4500 should be changed (from the red font, which indicates removal to blue font, which indicates it as an addition).
Action Taken:

Dr. Allen moved that the proposal be accepted as amended. Ms. Whitehurst seconded. Motion passed.

Agenda Item: VI. College of Technology and Computer Science, Department of Computer Science

(1.) Revision of Existing Degree: BS in Computer Science

Discussion:

Dr. Abrahamson presented.

Action Taken:

Dr. Allen moved that the proposal be accepted as presented. Dr. Greer seconded. Motion passed.

Agenda Item: VII. College of Technology and Computer Science, Department of Construction Management

(1.) Revision of Existing Courses: CMGT 2200, 4400, 4500

Discussion:

Dr. Batie presented.

CMGT 2200

Dr. Allen recommended the course description be made more concise and focus clearly on sustainability.

Dr. Allen also noted that the status of the text (required or optional) should be listed.

CMGT 4400

Dr. Allen noted that the status of the text (required or optional) should be listed.

Dr. Allen also confirmed that the course does not require CTE approval.

CMGT 4500

Dr. Griffin recommended that it be noted that the faculty who approved the proposal are from the Department of Construction Management.
Dr. Allen recommended that all objectives be measurable.

Dr. Allen asked about the course assignment for completion of on-line assessment surveys. Dr. Batie noted that this was part of class participation and the participation would merit a certain percentage. Each course requirement must show students are learning something in the course that relates to the objectives.

**Action Taken:**

Dr. Richardson moved that the proposal be accepted as amended. Dr. McMillan seconded. Motion passed.

(2.) Prerequisite Revision of Existing Course: CMGT 4300

**Discussion:**

Dr. Batie presented.

**Action Taken:**

Dr. Richardson moved that the proposal be accepted as presented. Dr. McMillan seconded. Motion passed.

(3.) Revision of Existing Transfer Option: Construction Management Transfer Option

**Discussion:**

Dr. Batie presented.

**Action Taken:**

Dr. Richardson moved that the proposal be accepted as presented. Dr. McMillan seconded. Motion passed.

(4) Revision of Existing Minor

**Discussion:**

Dr. Batie presented. The total s.h. required for the minor increased from 27 to 28 as a result of the s.h. increase of course CMGT 2200.

**Action Taken:**

Dr. Richardson moved that the proposal be accepted as presented. Dr. McMillan seconded. Motion passed.
Agenda Item: VIII. College of Technology and Computer Science, Department of Engineering

(1.) Proposal of New Course: BIME 4050

Discussion:

Dr. Muller-Borer presented.

Dr. Vail-Smith recommended that Dr. Muller-Borer note in the justification that 4040 is being expanded into two courses—4040 and 4050.

Ms. Whitehurst noted that it should be indicated if the course is to be delivered face to face in the future.

Dr. Allen noted that the text book just needs the citation (include ISBN number).

Dr. Griffin indicated the “3 lecture hour per week” statement is not needed in the course description of a 3 s.h. course that does not have a lab component.

Unit was asked to remove the 1st section of text from the assignments/grading box.

Action Taken:

Dr. Allen moved that the proposal be accepted as amended. Dr. Richardson seconded. Motion passed.

(2.) Revision of Existing Course: BIME 4040

Discussion:

Dr. Muller-Borer presented.

Dr. Vail-Smith recommended that Dr. Muller-Borer noted in the justification that 4040 is being expanded into two courses—4040 and 4050.

Ms. Whitehurst noted that it should be indicated if the course is to be delivered face to face in the future.

Dr. Allen noted that the text book just needs the citation (include ISBN number).

Dr. Vail-Smith recommended that single objectives be noted separately in the syllabus.
Dr. Griffin indicated the “3 lecture hour per week” statement is not needed in the course description of a 3 s.h. course that does not have a lab component.

Unit was asked to remove the 1st section of text from the assignments/grading box.

**Action Taken:**

Dr. Allen moved that the proposal be accepted as amended. Dr. Richardson seconded. Motion passed.

(3.) Renumbering and Revision of Existing Course: BIME 3000 (to 2080)

**Discussion:**

Dr. Muller-Borer presented.

Dr. Vail-Smith noted that it should be indicated if the course is to be delivered face to face in the future.

Dr. Vail-Smith recommended the course description be made more concise. Dr. Muller-Borer said the last sentence which denotes a list of topics covered in the course could be deleted.

**Action Taken:**

Dr. Allen moved that the proposal be accepted as amended. Dr. Richardson seconded. Motion passed.

(4.) Prerequisite Revision of Existing Courses: BIME 4030, 4200; EENG 3530; ENGR 1012, 2022, 2050, 2450, 3012, 3420, 3901, 3902, 3903; MENG 4150, 4260, 4650

**Discussion:**

Dr. Muller-Borer presented.

**Action Taken:**

Dr. Allen moved that the proposal be accepted as presented. Dr. Richardson seconded. Motion passed.

(5.) Revision of Existing Degree: BS in Engineering

**Discussion:**

Dr. Muller-Borer presented.
Dr. Vail-Smith recommended that the catalog copy be changed to reflect changes made in the proposal course description.

Dr. Vail-Smith asked about the deletion of Microbiology in the course catalog. Dr. Brown replied that the Microbiology should have been deleted prior to these changes; it had been left in the catalog by mistake. They are removing it to reflect current course requirements and electives.

**Action Taken:**

Dr. Allen moved that the proposal be accepted as amended. Dr. Richardson seconded. Motion passed.

(6.) Editorial Revision of Existing Courses: ENGR 1002, 2022, 2450, 3400; MENG 3624, 4018, 4260, 4650

**Discussion:**

Dr. Muller-Borer presented.

The phrase “3 lectures per week” will be removed in the catalog copy if the class is a 3 s.h. lecture without lab component (note: this is only for catalog clean-up).

**Action Taken:**

Dr. Allen moved that the proposal be accepted as amended. Dr. Richardson seconded. Motion passed.

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**Agenda Item:** IX. Thomas Harriot College of Arts and Sciences, Department of Geography

(1.) Proposal of New Courses: PLAN 3430; 4045; 4055; 4065; 4121, 4131; 4430

**Discussion:**

Dr. Weitz presented.

4045
Dr. Allen recommended the course description be changed to “framework for studying” from “frame of reference” for clarity.

4055
Dr. Allen noted that it should be included that there is a required one hour per week for field study.
Dr. Kain recommended that the course description be shortened by deleting the last sentence. Dr. Weitz agreed.

Dr. Griffin recommended that total credits should be listed as “2,3.” She also recommended that the objectives # 6 and #7 in 4131 have measurable verbs.

It was recommended that the total credits should be listed as “3” lab hours per week for “3” s.h. credit.

Dr. Greer recommended the deletion of the specific measures in the first objective because the specific measures may change over time.

**Action Taken:**

Dr. Allen moved the proposal be approved as amended. Dr. Greer seconded. Motion passed.

(2.) Unbanking and Revision of Existing Courses: PLAN 4040

**Discussion:**

Dr. Weitz presented.

**Action Taken:**

Dr. Allen moved the proposal be approved as proposed. Dr. Greer seconded. Motion passed.

(3.) Renumbering and Revision of Existing Course(s): PLAN 3015 (to 4075), PLAN 3051 (to 2410)

**Discussion:**

Dr. Weitz presented.

Dr. Griffin reminded that the course description must match the catalog copy.

Dr. Griffin noted that the objectives in the syllabus must be measurable verbs.

**Action Taken:**

Dr. Allen moved the proposal be approved as amended. Dr. Greer seconded. Motion passed.
(4.) Prerequisite Revision of Existing Course(s): GEOG 3420, 3430, 3450, 3460, 4150, 4340, 4410, 4430, 4440, 4450, 4460; PLAN 4096, 4305

Discussion:

Dr. Weitz presented.

Action Taken:

Dr. Allen moved the proposal be approved as proposed. Dr. Greer seconded. Motion passed. Both Dr. Weitz and the committee would like Diane Coltraine to look at the format of the new text from an editorial standpoint.

(5.) Editorial Revision of Existing Courses (terms offered): PLAN 1900, 3022, 3030, 3041, 4015, 4046, 4050, 4096, 4099

Discussion:

Dr. Weitz presented.

Action Taken:

Dr. Allen moved the proposal be approved as proposed. Dr. Greer seconded. Motion passed.

(6.) Deletion of Existing Course: PLAN 4021, 4041

Discussion:

Dr. Weitz presented.

Action Taken:

Dr. Allen moved the proposal be approved as proposed. Dr. Greer seconded. Motion passed.

(7.) Removal of 5000-level Courses from Undergraduate Catalog Previously Deleted or Renumbered by the GCC: PLAN 5025; 5045; 5065; 5121, 5131

Discussion:

Dr. Weitz presented.

Action Taken:

Dr. Allen moved the proposal be approved as proposed. Dr. Greer seconded. Motion passed.
(8.) Revision of Existing Degrees: BS in Geographic Information Science and Technology, BS in Urban and Regional Planning

Discussion:

Dr. Weitz presented.

Dr. Kain noted editorial recommendations regarding “same as” and “formerly” statements in the catalog copy.

Dr. Kain noted that prerequisites should be consistent with the GEOG and PLAN course descriptions.

Ms. Nicholson will help Dr. Weitz with consistency issues in the marked catalog copy.

It was recommended the unit clarify whether a GEOG or PLAN course is required in the catalog copy.

Action Taken:

Dr. Allen moved the proposal be approved as amended. Dr. Greer seconded. Motion passed.

(9.) Deletion of Existing Concentrations within the BS in Urban and Regional Planning Degree: Accounting and Public Finance, Decision Science, Economic Development, Historic Preservation and Design, Land Use and Real Estate, Personal Management and Administration, Societal Issues and Policies

Discussion:

Dr. Weitz presented.

Action Taken:

Dr. Allen moved the proposal be approved as proposed. Dr. Greer seconded. Motion passed.

Dr. Griffin advised Dr. Weitz that this action will require submission to the Educational Policies and Planning Committee (EPPC) for approval.

(10.) Proposal of New Concentrations within the BS in Urban and Regional Planning Degree: Geographic Information Science, Rural Development, Public Administration, Urban Studies

Discussion:

Dr. Weitz presented.
Dr. Kain noted that the new concentration will need to be submitted to EPPC. Dr. Weitz affirmed this.

Dr. Kain recommended editorial changes regarding “same as” statements in the catalog copy.

Dr. Kain noted that prerequisites should for courses should be consistent with the GEOG and PLAN course descriptions.

Ms. Nicholson will help Dr. Weitz with consistency issues in the marked catalog copy.

It was recommended the unit clarify whether a GEOG or PLAN course is required in the catalog copy.

**Action Taken:**

Dr. Allen moved the proposal be approved as amended. Dr. Greer seconded. Motion passed.

(11.) Revision of Existing Certificate(s): Certificate in Geographic Information Science

**Discussion:**

Dr. Weitz presented.

Dr. Kain made editorial recommendations regarding “same as” and “formerly” statements in the catalog copy.

Dr. Kain noted that prerequisites should for courses should be consistent with the GEOG and PLAN course descriptions.

Ms. Nicholson will help Dr. Weitz with consistency issues in the marked catalog copy.

It was recommended the unit clarify whether a GEOG or PLAN course is required in the catalog copy.

**Action Taken:**

Dr. Allen moved the proposal be approved as amended. Dr. Greer seconded. Motion passed.

(12.) Deletion of Existing Certificate(s): Certificate in Urban Design

**Discussion:**

Dr. Weitz presented.
Dr. Weitz shared that this action was approved by the UCC in 2011, however was never submitted to EPPC. He asked if the original approval date would stand or if this meeting would now be the approval date.

Dr. Kain stated that this meeting as the official approval and confirmed that Dr. Weitz would submit this action to EPPC for approval as well.

**Action Taken:**

Dr. Allen moved the proposal be approved as proposed. Dr. Greer seconded. Motion passed.

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**Agenda Item: X. Thomas Harriot College of Arts and Sciences, Department of Foreign Languages and Literatures**

(1.) Prerequisite Revision of 5000-level Courses Previously Approved by the GCC: SPAN 5440, 5445, 5550, 5700

**Discussion:**

NA

**Action Taken:**

Dr. Vail-Smith moved that the proposal be approved as submitted. Dr. Allen seconded. Motion passed.

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**Agenda Item: V. Old Business**

(1.) Review of 04-26-12 UCC minutes not approved by the Faculty Senate, with special attention to pending Item VI, #2

**Discussion:**

Dr. Kain explained that the motion “supported” by the committee on April 26 was not approved.

**Action Taken:**

Dr. Allen moved that the changes to the undergraduate certificate presented on April 26, 2012 be approved. Dr. Greer seconded. Motion passed.
Agenda Item: VI. New Business

Discussion:
NA

Action Taken:
NA

Curricular Actions Reviewed at This Meeting:
New Courses: 17
Revised/Renumbered/Unbanked Courses (includes title/prereq./prefix): 63
New Degrees/Programs: 0
New Minors: 0
New Concentrations: 4
New Certificates: 0
Revised Existing Degrees/Concentrations/Departmental Text: 9
Deletion of Existing Degrees/Concentrations: 7
Revised Minors/Certificates: 2
Deletion of Existing Minors/Certificates: 1
Banked Courses: 0
Deletion of Existing /Banked Courses: 7

Curricular Actions Reviewed to Date (to include this meeting):
New Courses: 24
Revised/Renumbered/Unbanked Courses (includes title/prereq./prefix): 160
New Degrees/Programs: 0
New Minors: 0
New Concentrations: 4
New Certificates: 0
Revised Existing Degrees/Concentrations/Departmental Text 23
Deletion of Existing Degrees/Concentrations: 8
Revised Minors/Certificates: 8
Deletion of Existing Minors/Certificates: 2
Banked Courses: 4
Deletion of Existing /Banked Courses: 8

NEXT MEETING: February 14, 2013

ITEMS TO BE DISCUSSED:
See agenda.

Dr. Cellucci moved to adjourn at 6:00 pm. Motion passed. Meeting adjourned.

Respectfully Submitted by

Leigh W. Cellucci
Secretary of the UCC
Admission Requirements

Students enrolled at East Carolina University or transferring from other institutions who have a minimum 2.0 GPA and a minimum grade of C in CHEM 1150, 1151, 1160, 1161 and MATH 1065 may apply for admission as chemistry majors. Students who hold a baccalaureate degree qualify for admission to the chemistry degree program if they have completed comparable courses as described above with a minimum grade of C as part of their first degree.

BA in Chemistry

The BA program provides a flexible major designed to provide the student with a broad education in chemistry appropriate for further study in a wide range of fields, such as business, medicine, pharmacy, and law as well as careers dependent on a basic knowledge in chemistry. The BA in chemistry, in conjunction with two semesters of laboratory-based biology courses, satisfies the course requirements for application to most US medical schools. It is different than the BS degree in the required chemistry, math, and physics courses. Any of the required major courses or cognates, however, may be replaced by courses that cover the same topics at a more advanced level. For example, CHEM 3950, 3960 may be taken instead of CHEM 3850. It is the student’s responsibility to ensure that the prerequisites for such courses have been met. If a student successfully completes a higher-level cognate course after bypassing the lower-level prerequisite course(s), he/she may use free electives to substitute for the prerequisite hours. All students are required to take a departmentally administered assessment examination before graduation. Scores from this examination will not be included in the calculation of GPA for academic standing. The performance on this exam will be noted on the student’s transcript. Minimum degree requirement is **126 s.h.** of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum.*) - 42 s.h.
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: 1260 or 2360)

2. Foreign language through level 1004. - 12 s.h.
3. Core. - 30 s.h.

CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C (2.0), 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI, WI) (F,S) (P: CHEM 1160, 1161; CHEM 2650 or 2750)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C: CHEM 2760)
CHEM 3450. Elementary Inorganic Chemistry (3) (F,S) (P: CHEM 2250, 2251; C: CHEM 3451)
CHEM 3451. Elementary Inorganic Chemistry Laboratory (1) (WI) (F,S) (P: CHEM 2250, 2251; C: CHEM 3450 or 5550)
CHEM 3850, 3851. Introduction to Physical Chemistry (4,1) (WI, WI) (F,S) (P: CHEM 1160, 1161; MATH 2122 or 2172; PHYS 1260, 1261)

4. Cognates. - 6-13 s.h.

MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or 1077 with a minimum grade of C) and MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (P: MATH 2121)

or
MATH 1083. Introduction to Functions (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C) or MATH 1085. Pre-Calculus Mathematics (5) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C) and MATH 2171. Calculus I (4) (F,S,SS) (FC:MA) (P: Minimum grade of C in any of MATH 1083 or 1085 or 2122) and MATH 2172. Calculus II (4) (F,S,SS) (FC:MA) (P: MATH 2171 with a minimum grade of C or MATH 2122 with consent of instructor)

5. Electives to complete requirements for graduation.

BS in Chemistry
The BS degree in chemistry is the appropriate program for students considering advanced degree programs in chemistry, biochemistry, and other related fields or a professional career in chemistry. Graduates of this program meet certification requirements of the American Chemical Society. Students are strongly encouraged to pursue undergraduate research with a faculty member. Up to 6 s.h. of undergraduate research may be applied toward degree requirements. Information regarding undergraduate research may be obtained from the director of undergraduate studies. Students completing the BS degree are encouraged to consider some of the following courses as electives: COMM 2410 or COMM 2420; ITEC 3290 or ENGL 3820; MATH 2228, 3256, 4331; CHEM 4515, 4516, 4517; advanced 5000-level courses in chemistry; and BIOL 5800 or 5810. If a student successfully completes a higher-level cognate course after bypassing the lower-level prerequisite course(s), he/she may use free electives to substitute for the prerequisite hours. All students are required to take a departmentally administered assessment examination before graduation. Scores from this examination will not be included in the calculation of GPA for academic standing. The performance on this exam will be noted on the student’s transcript. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum.)

MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: 1260 or 2360)
PHYS 2350, 2360. University Physics (4,4) (F,S,SS) (FC:SC) (P for 2350: MATH 2121, 2151, or 2171; P for 2360: PHYS 2350)

2. Core. - 45 s.h.

CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C (2.0), 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2103. Introduction to Chemical Literature (1) (WI) (F) (P: CHEM 2750)
CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI, WI) (F,S) (P: CHEM 1160, 1161; CHEM 2650 or 2750)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C: CHEM 2760)
CHEM 2770. Biological Chemistry (3) (S) (P: CHEM 2650 or 2760)
CHEM 3451. Elementary Inorganic Chemistry Laboratory (1) (WI) (F,S) (P: CHEM 2250, 2251; C: CHEM 3450 or 5550)
CHEM 3950, 3951. Physical Chemistry and Laboratory I (4,1) (WI, WI) (S) (P: PHYS 1261, 2360; MATH 2173; CHEM 2250, 2251)
CHEM 3960, 3961. Physical Chemistry and Laboratory II (4,1) (WI, WI) (F) (P: CHEM 3950, 3951)
CHEM 4103. Seminar (1) (S) (P: Junior or senior standing; CHEM 2103)
CHEM 5350, 5351. Instrumental Analysis (3,1) (WI, WI) (P: CHEM 3960)
CHEM 5550. Advanced Inorganic Chemistry (4) (F) (P: CHEM 3950; C: CHEM 3451 [for BS chemistry majors only])

3. Elective labs (Choose a minimum of 2 s.h. from the following). - 2 s.h.

   BIOL 5821. Principles of Biochemistry Laboratory (1) (F,S) (P/C: BIOL 5800 or 5810)
   CHEM 2301. Teaching Laboratory Chemistry (2,0) (F,S) (P: Grade of B or higher in CHEM 1160 and CHEM 1161 or permission of instructor) May count only 1 s.h. toward the 2 s.h. lab requirement
   CHEM 2771. Biological Chemistry Laboratory (1) (S) (P: CHEM 2770)
   CHEM 3301. Practicum in Teaching (1) (F,S) (P: CHEM 2301 and consent of instructor)
   CHEM 4515, 4516, 4517. Research Problems in Chemistry (1,2,3) (F,S,SS) (P: Consent of instructor)
   CHEM 5993. Industrial Internship in Chemistry (3) (P: Selection by joint Chemistry department/industry screening committee; CHEM 2250, 2760, 3950)
   PHYS 3700, 3701. Advanced Laboratory (3,0) (3700:WI) (S) (P: PHYS 2360)

4. Cognates. - 15-17 s.h.

   MATH 1083. Introduction to Functions (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C) or MATH 1085. Pre-Calculus Mathematics (5) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)
   MATH 2171, 2172, 2173. Calculus I, II, III (4,4,4) (F,S,SS) (FC:MA) (P for 2171: minimum grade of C in any of MATH 1083, 1085 or 2122; P for 2172: MATH 2171 with a minimum grade of C or 2122 with consent of instructor; P for 2173: MATH 2172 with a minimum grade of C)

5. Electives to complete requirements for graduation.

Chemistry Minor

Minimum requirement for the chemistry minor is **25-26 s.h.** of credit as follows:
Core. - 25-26 s.h.

   CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065)
   CHEM 1160, 1161. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 **with a minimum grade of C** (2.0), 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
   CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI, WI) (F,S) (P: CHEM 1160, 1161; CHEM 2650 or 2750)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C: CHEM 2760)
CHEM 3450. Elementary Inorganic Chemistry (3) (F,S) (P: CHEM 2250, 2251; C: CHEM 3451) and CHEM 3451. Elementary Inorganic Chemistry Laboratory (1) (WI) (F,S) (P: CHEM 2250, 2251; C: CHEM 3450 or 5550) or CHEM 3850, 3851.
Introduction to Physical Chemistry (4,1) (WI, WI) (F,S) (P: CHEM 1160, 1161; MATH 2122 or 2172; PHYS 1260, 1261)

Chemistry Honors Program

The Department of Chemistry Honors Program provides an opportunity for outstanding chemistry majors to do intensive study and research in areas of special interest. A student desiring to enter the honors program must be a junior or senior majoring in chemistry, and possess a minimum GPA of 3.2 in all courses taken at East Carolina University as well as in all chemistry and cognate courses. Before participating in the honors program, students must notify the director of undergraduate studies chemistry and select a project supervisor from the chemistry faculty. Program participants are expected to select a topic mutual interest to both the student and project supervisor, research the topic through the scientific literature, and then conduct independent research on the topic. Upon completion of the research, the student must submit a detailed written research report and make an oral presentation on the honors project. Course requirements: CHEM 4103; a minimum of 5 h. research and/or independent study from: CHEM 4505, 4506, 4507, 4515, 4516, 4517.

Bachelor of Science and Accelerated MS in Chemistry

Students working toward a BS degree in chemistry have the opportunity to earn an MS degree in two or three additional semesters of study. These students are encouraged to begin research projects as undergraduates and take advanced classes that can be used to waive some MS course requirements. As seniors they may be granted early admission to the MS program and would be eligible to receive paid teaching assistantships. To be enrolled in the MS program as a senior, a student must within 6 s.h. credit of completing all undergraduate degree requirements. Applications to the MS program should be submitted during the first semester of the senior year and must include GRE scores.

http://www.ecu.edu/cs-acad/ugcat/CoursesC.cfm#chem

CHEM: Chemistry

0150. Preparation for College Chemistry (3) (F,S,SS)
May not count toward foundations curriculum science requirement. C: MATH 1065. Intensive review and study of basic chemical laws and mathematical tools needed for further study in general chemistry.

1020. General Descriptive Chemistry (4) (S) (FC:SC)
May not count toward foundations curriculum science requirement for science majors.

1021. General Descriptive Chemistry Laboratory (1) (S) (FC:SC)
3 lab hours per week. Chemistry lab for non-science majors. P/C: CHEM 1020. Lab experiences illustrate fundamental chemical principles and relevance of chemistry in modern world. Topics include chemical measurements, acids, synthesis and purification of biochemical substances and DNA fingerprinting.

1120. Introduction to Chemistry for the Allied Health Sciences (3) (F,S,SS) (FC:SC)
3 lecture and 1 recitation hours per week. May not count toward foundations curriculum science requirement for science majors. Fundamental concepts of chemistry emphasizing applications within the health professions.

1121. Basic General, Organic, and Biochemistry Laboratory I (1) (F,S) (FC:SC)
3 lab hours per week. C: CHEM 1120. Introduces lab techniques in general, organic, and biochemistry.

1130. Organic and Biochemistry for the Allied Health Sciences (4) (F,S,SS) (FC:SC)
4 lecture hours per week. May not count toward foundations curriculum requirement for science majors. P: CHEM 1120. Fundamentals of organic and biochemistry emphasizing applications within the health professions.

1131. Basic General, Organic, and Biochemistry Laboratory II (1) (F,S,SS) (FC:SC)
3 lab hours per week. C: CHEM 1130. Continuation of CHEM 1121.

1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC)
For science majors. 3 lecture and 3 lab hours per week. P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150. Basic principles and laws of chemistry. Topics include measurements, reactions and stoichiometry, thermochemistry, atomic structure, periodicity, bonding and molecular structure, and states of matter.

1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC)
3 lecture and 3 lab hours per week. P: CHEM 1150 with a minimum grade of C (2.0), 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085. Continuation of CHEM 1150. Topics include solutions, kinetics, equilibrium, acid-base theory, thermodynamics, and electrochemistry. Introduces organic, nuclear, and coordination chemistry.

1500. Materials Chemistry I (3) (S)
Chemistry of elements and compounds, atomic structure, molecular geometry and intermolecular forces and their effect on the design and uses of materials. May not count toward chemistry major.

1510, 1511. Materials Chemistry II and Laboratory (1,1) (F)
1 hour lecture and 3 hours lab per week. P: CHEM 1500; C for CHEM 1510: CHEM 1511; C for CHEM 1511: CHEM 1510. Continuation of CHEM 1500. Chemistry of elements and compounds, equilibrium, thermodynamics and kinetics and their effect on the design and uses of materials. Lab experience demonstrates chemical properties of materials. May not count toward chemistry major.

2103. Introduction to Chemical Literature (1) (WI) (F)
CHEM 2750. Introduces methods used to search and access chemical literature. Development of technical writing skills.

2110. Scientific Glassblowing (1) (F,S,SS)
3 lab hours per week. P: Consent of instructor. Fundamentals of glassblowing with emphasis on the properties of glass and techniques commonly used in the construction and repair of specialized glassware in chemical laboratories.

2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI, WI) (F,S)
3 lecture and 4 lab hours per week. P: CHEM 1160, 1161; CHEM 2650 or 2750; C for 2250: CHEM 2251; C for 2251: CHEM 2250. Theories and techniques of classical quantitative and modern instrumental analysis.

2301. Teaching Laboratory Chemistry (2,0) WI) (F,S)
1 lecture and 3 lab hours per week. P: Grade of B or higher in CHEM 1160 and CHEM 1161 or permission of instructor. Instruction and supervised experience in methods and practice of teaching introductory chemistry lab.

2650. Organic Chemistry for the Life Sciences (4) (F)
May not count toward CHEM major or minor. May not substitute as a prerequisite for CHEM 2760. P: CHEM 1160, 1161. Principles of organic chemistry. Emphasis on biologically important topics.

2651. Organic Chemistry Lab for the Life Sciences (1) (F)
3 lab hours per week. May not count toward CHEM major or minor. May not substitute as a prerequisite for CHEM 2763. C: CHEM 2650. Organic lab techniques.

2750. Organic Chemistry I (3) (F,S,SS)
P: CHEM 1160, 1161; C: CHEM 2753. Classes of compounds and their typical reactions, mechanisms, stereochemistry, and instrumental methods in organic chemistry.

2753. Organic Chemistry Laboratory I (1) (F,S,SS)
3 lab hours per week C: CHEM 2750. Organic lab techniques.

2760. Organic Chemistry II (3) (F,S,SS)
P: CHEM 2750; C: CHEM 2763. Continuation of CHEM 2750.

2763. Organic Chemistry Laboratory II (1) (F,S,SS)
3 lab hours per week P: CHEM 2750, 2753; C: CHEM 2760. Continuation of CHEM 2753.

2770. Biological Chemistry (3) (S)
P: CHEM 2650 or 2760. Chemistry and intermediary metabolism of proteins, carbohydrates, lipids, and nucleic acids.

2771. Biological Chemistry Laboratory (1) (S)
3 lab hours per week. C: CHEM 2770. Applies chemical lab techniques to study of proteins, carbohydrates, lipids, and nucleic acids.

3301. Practicum in Teaching (1) (F,S)
3 lab hours per week. May be repeated for credit. May count maximum of 4 s.h. toward CHEM major. P: CHEM 2301 and consent of instructor. Supervised practicum in teaching introductory chemistry lab.

3450. Elementary Inorganic Chemistry (3) (WI) (F,S)
P: CHEM 2250, 2251; C: CHEM 3451. Survey of fundamental concepts and theories of inorganic chemistry, periodicity, descriptive chemistry of selected main group elements and transition metals, and their role in organometallic, bioinorganic, and industrial chemistry.
3451. Elementary Inorganic Chemistry Laboratory (1) (WI) (F,S)  
P: CHEM 2250, 2251; C: CHEM 3450 or 5550. Inorganic laboratory techniques, physical  
methods, and the synthesis and characterization of inorganic and organometallic  
compounds.

3501, 3502, 3503. Special Topics in Chemistry (1,2,3)  
May be repeated for maximum of 6 s.h. with change of topic. May not count toward  
foundations curriculum science credit. P: CHEM 1160; consent of instructor. Selected  
topics of contemporary interest.

3850, 3851. Introduction to Physical Chemistry (4,1) (WI, WI) (F,S)  
4 lecture and 3 lab hours per week. P: CHEM 1160, 1161; MATH 2122 or 2172; PHYS  
1260, 1261; C for 3850: CHEM 3851; C for 3851: CHEM 3850. Physical chemistry for  
students with limited mathematical background.

3950, 3951. Physical Chemistry and Laboratory I (4,1) (WI, WI) (S)  
4 lecture and 3 lab hours per week. P: CHEM 2250, 2251; MATH 2173; PHYS 1261,  
2360; C for 3950: CHEM 3951; C for 3951: CHEM 3950. Theoretical and mathematical  
treatment of fundamental laws and theories underlying science of chemistry.

3960, 3961. Physical Chemistry and Laboratory II (4,1) (WI, WI) (F)  
4 lecture and 3 lab hours per week. P: CHEM 3950, 3951; C for 3960: CHEM 3961; C  
for 3961: CHEM 3960. Continuation of CHEM 3950, 3951.

4103. Seminar (1) (S)  
P: Junior or senior standing; CHEM 2103. Discuss contemporary topics in chemistry,  
instruction on technical presentations, and submission of written and oral reports on  
approved topics. Requires attendance at selected departmental seminars.

4505, 4506, 4507. Independent Study (1,2,3) (F,S,SS)  
May be repeated for credit. May count a maximum of 3 s.h. toward CHEM major. P:  
Consent of instructor and dept chair. Individual study in selected area of chemistry under  
immediate direction of faculty member.

4515, 4516, 4517. Research Problems in Chemistry (1,2,3) (F,S,SS)  
May be repeated for credit. May count maximum of 6 s.h. toward CHEM major. P:  
Consent of instructor. Advanced problems in chemistry pursued under supervision of  
faculty member.

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 (for BS chemistry majors only). 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 count maximum of 3 s.h. toward CHEM major. May be repeated. P: Selection by joint Department of Chemistry/Industry screening committee; CHEM 2250, 2760, 3950. Professional experience in industrial application of chemistry.

CHEM Banked Courses
1163. Introduction to Computer Techniques in Experimental Chemistry (1)
1500. Materials Chemistry I (3) (S)
1510, 1511. Materials Chemistry II and Laboratory (1,1) (F)
2110. Scientific Glassblowing (1) (F,S,SS)
2111. Applications of Molecular Modeling (1)
3860, 3861. Introduction to Instrument - Computer Interfacing (2,1)
5390. Bioanalytical Chemistry (2)
5450. Industrial Chemistry (3)
5560. Inorganic Reaction Mechanisms (2)
5950, 5951. Introduction to Nuclear Chemistry (2,1)
5970. Chemical Thermodynamics (2)

Agenda Item III

Thomas Harriot College of Arts and Sciences

Department of History

http://www.ecu.edu/cs-acad/ugcat/history.cfm

Department of History

Gerald J. Prokopowicz, Chair, A-315 Brewster Building

Students may choose between the BA in history and the BS in public history. Students may also minor in either program.

BA in History

Minimum degree requirement is 126 s.h. of credit as follows:

Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum.) - 42 s.h.
Foreign language through level 1004 - 12 s.h.
Core - 36 s.h.
HIST 2000. Introduction to History (3) (WI) (F,S)
HIST 4000. Senior Seminar (3) (P: HIST 2000; declared major in either history or public history, with senior standing or consent of instructor)

Choose 9 s.h. from the following:
HIST 1030. World Civilizations to 1500 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1031. World Civilizations Since 1500 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1050. American History to 1877 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1051. American History Since 1877 (3) (WI*) (F,S,SS) (FC:SO)

Choose a minimum of 21 s.h. of electives above 2999, at least one 3 s.h. course from each area as listed below (Minimum of 3 s.h. must be taken at the 4001-5999 level, excluding HIST 4531, 4532, 4533, 4550, 4551):

American History:
HIST 3010. Constitutional History of the United States to 1888 (3) (FC:SO)
HIST 3011. Constitutional History of the United States Since 1888 (3) (FC:SO)
HIST 3031. Economic History of the United States Since 1865 (3) (FC:SO)
HIST 3100. North Carolina History (3) (F,S) (FC:SO)
HIST 3110. History of African-Americans (3) (FC:SO)
HIST 3121. American Military History to 1900 (3) (FC:SO)
HIST 3122. American Military History Since 1900 (3) (FC:SO)
HIST 3140. Women in American History (3) (FC:SO)
HIST 3170. History of Native Americans (3) (FC:SO)
HIST 3200. Diplomatic History of the United States (3) (WI*) (FC:SO)
HIST 3205. History of American Urban Life (3) (FC:SO)
HIST 3210. Colonial American to 1763 (3) (WI*) (FC:SO)
HIST 3215. American Revolution and the Federal Era, 1763-1800 (3) (WI*) (FC:SO)
HIST 3225. The Era of Sectionalism and Civil War, 1848-1877 (3) (FC:SO)
HIST 3230. The Birth of Modern America, 1865-1892 (3) (WI*) (FC:SO)
HIST 3235. The Era of Populism and Progressivism in American History, 1892-1919 (FC:SO)
HIST 3240. The Age of Franklin Roosevelt, 1919-1945 (3) (WI*) (FC:SO)
HIST 3245. The United States Since 1945 (3) (WI*) (FC:SO)
HIST 3260. The United States and the Middle East (3) (FC:SO)
HIST 3300. History of American Rural Life (3) (F) (FC:SO)
HIST 3920. Social History of American Medicine (3) (S) (FC:SO)
HIST 5122. Social and Cultural History of the United States Since 1865 (3)
HIST 5125. American Political Development in the Nineteenth Century (3)
HIST 5140. The Old South (3)
HIST 5141. The South Since 1877 (3) (WI*)
HIST 5220. Selected Topics in US Women’s History (3)
HIST 5230. Themes in African-American History (3)
HIST 5520. Maritime History of the Western World Since 1815 (3)
HIST 5960. Introduction to Oral History (3)

European History:
HIST 3405. History of Ancient Greece to 146 BC (3) (FC:SO)
HIST 3406. War and Society in Ancient Greece and Rome (3) (F)
HIST 3410. History of Ancient Rome (3) (F) (FC:SO)
HIST 3412. A History of Christianity to 1300 (3) (FC:SO)
HIST 3413. A History of Christianity, 1300 to Present (3) (FC:SO)
HIST 3414. The Celtic World, 700 BC - 1601 AD (3)
HIST 3415. The Middle Ages (3) (F) (FC:SO)
HIST 3420. Early Modern Europe to 1648 (3) (F) (FC:SO)
HIST 3430. History of Europe, 1815-1914 (3) (F) (FC:SO)
HIST 3435. History of Europe Since 1914 (3) (FC:SO)
HIST 3444. Old Regime and Revolutionary France (3) (FC:SO)
HIST 3445. Modern France, 1815 to Present (3) (FC:SO)
HIST 3460. Germany, 1790-1914 (3) (FC:SO)
HIST 3461. Germany Since 1914 (3) (FC:SO)
HIST 3480. Britain to 1688 (3) (FC:SO)
HIST 3482. Britain, 1688-1832 (3) (FC:SO)
HIST 3484. Britain from 1832 (3) (FC:SO)
HIST 3551. Medieval Russia, 862 - 1682 (3)
HIST 3552. Imperial Russia, 1682-1917 (3)
HIST 3553. Soviet Russia, 1917-1991 (3)
HIST 4400. Science and Religion in Europe and America, 1600-1900 (3)
HIST 4445. The European Enlightenments (3)
HIST 4470. The Great War: Experience, Memory and Legacy (3)
HIST 4500. Political Culture and Community in Eighteenth-Century Britain (3)
HIST 5310. Intellectual History of Europe (3)
HIST 5350. The Renaissance in European History (3)
HIST 5360. The Reformation, 1450-1598 (3)
HIST 5440. Twentieth Century England (3)
HIST 5450. Tudor-Stuart England (3)
HIST 5470. History of Soviet Russia Since 1917 (3)
HIST 5480. Weimar and the Rise of Hitler (3)
HIST 5505. Maritime History of the Western World to 1415 (3)
HIST 5555. Constitutionalism and Kingship in Early Modern Europe (3)
HIST 5660. Imperialism in Theory and Practice, 1800 to the Present (3) (WI*)
HIST 5670. A Diplomatic History of Europe, 1815 to the Present (3)

World History:
HIST 3610. History of East Asia to 1600 (3) (FC:SO)
HIST 3611. History of East Asia Since 1600 (3) (FC:SO)
HIST 3615. History of Traditional Japan (3) (FC:SO)
HIST 3620. History of Modern Japan (3) (F) (FC:SO)
HIST 3625. Field Study in Japanese Historical Culture (3) (FC:SO)
HIST 3626. Field Study in Japanese Historical Texts (3) (FC:SO)
HIST 3627. History of Japanese Buddhism (3) (FC:SO)
HIST 3629. History of Traditional China (3) (FC:SO)
HIST 3630. History of Modern China (3) (FC:SO)
HIST 3669. History of the Middle East, 600-1500 (3) (FC:SO)
HIST 3670. History of the Middle East Since 1500 (3) (WI*) (FC:SO)
HIST 3710. Introduction to Latin-American History: Colonial Period (3) (WI*) (FC:SO)
HIST 3711. Introduction to Latin-American History: Since 1808 (3) (WI*) (FC:SO)
HIST 3780. Mexico and Central America (3) (WI*) (FC:SO)
HIST 3810. History of Africa (3) (WI*) (FC:SO)
HIST 3820. History of South Africa (3) (WI) (FC:SO)
HIST 3830. Africa and Islam (3) (WI) (FC:SO)
HIST 4610. History of Southeast Asia (3) (FC:SO)
HIST 5300. Comparative History of Non-Western Civilizations (3) (WI*)
HIST 5340. The Ancient Near East (3)
HIST 5680. Diplomatic History of Modern Asia (3)
HIST 5765. Latin-America: 1492 to the Present (3) (WI*)

The following courses vary in content and will be classified according to topic:
HIST 3005. Selected Topics in History (3) (WI*)
HIST 3333. Biography and History (3)
HIST 3350. War and Society (3) (FC:SO)
HIST 4531, 4532, 4533. Directed Readings in History (1,2,3) (FC:SO) (P: Consent of dept chair)
HIST 4550, 4551. Honors (3,3) (F,S)
HIST 5005. Selected Topics in History (3) (WI*)

BS in Public History
Minimum degree requirement is 126 s.h. of credit as follows:
Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum.) - 42 s.h.
Foreign language through level 1004 - 12 s.h.
Core - 36 s.h.
HIST 2000. Introduction to History (3) (F,S)
HIST 4000. Senior Seminar (3) (P: HIST 2000; declared major in either history or public history, with senior standing or consent of instructor)

Choose 9 s.h. from the following:
HIST 1030. World Civilizations to 1500 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1031. World Civilizations Since 1500 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1050. American History to 1877 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1051. American History Since 1877 (3) (WI*) (F,S,SS) (FC:SO)

Choose a minimum of 21 s.h. of HIST courses above 2999, including a minimum of one course each in American, European, and other world areas. (See BA degree for course area designations.)
Professional courses - 24 s.h.
Required public history courses - 12 s.h.
HIST 3900. Introduction to Public History (3)
HIST 3993. Approaches to Historical Objects (3)
HIST 5910. Introduction to the Administration of Archives and Historical Manuscripts (3)
HIST 5920, 5921. Techniques of Museum and Historic Site Development (3,0)

Public history electives - 6-9 s.h.
Choose from the following:
HIST 3980. Shipwreck Archaeology (3) (F, S)
HIST 3985. History of American Architecture (3)
HIST 5930, 5931. Field and Laboratory Studies in Museum and Historic Site Development (3,0)
HIST 5950. Introduction to Quantitative History (2) (P: 20 s.h. of undergraduate history)
HIST 5951. Directed Readings and Research in Quantitative History (1) (C: HIST 5950)
HIST 5960. Introduction to Oral History (3)
HIST 5970. Living History (3)
HIST 5985. Historic Preservation Planning (3)

Internship - 3-6 s.h.
Choose from the following:
HIST 4940, 4941, 4942. Internship in Archives and Historical Records Administration (3,6,9) (F,S,SS) (P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor)
HIST 4943, 4944, 4945. Internship in Museum Administration (3,6,9) (F,S,SS) (P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor)
HIST 4946, 4947, 4948. Internship in Historic Site Administration (3,6,9) (F,S,SS) (P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor)

Maximum of 6 s.h. may count toward the requirement.

Cognates (Choose from the following.) - 6 s.h.
ACCT 2101. Survey of Financial and Managerial Accounting (3) (F,S) (P: MATH 1065 or 1066)
ANTH 2000. Archaeology Around the World (3) (F,S) (FC:SO)
ANTH 3077. Archaeological Methods (3) (S) (P: ANTH 2000 or consent of instructor)
ART 1906. Art History Survey (3) (F,S) (FC:FA) (P: ART 1905 or 1910)
ART 1907. Art History Survey (3) (F,S) (FC:FA) (P: ART 1905 or 1910)
ART 2905. Masterpieces in the Visual Arts and Literature (3) (FC:FA)
ART 4948. Art of the United States (3)
ENGL 3870. Introduction to Editing and Abstracting (3) (WI) (F,S) (P: ENGL 1200)
IDSN 2700. Historic Interiors I: 3000 BC Through Mid-Nineteenth Century (3) (WI) (F)
IDSN 2750. Historic Interiors II: Late Nineteenth and Twentieth Centuries (3) (WI) (S)
History Minor
The minor requires 24 s.h. credit. History courses used for the minor may not be counted toward history major.

Required HIST courses (Choose from the list below.) - 9 s.h.
HIST 1030. World Civilizations to 1500 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1031. World Civilizations Since 1500 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1050. American History to 1877 (3) (WI*) (F,S,SS) (FC:SO)
HIST 1051. American History Since 1877 (3) (WI*) (F,S,SS) (FC:SO)
HIST electives above 2999 - 15 s.h.

Public History Minor
The minor requires 24 s.h. credit. History courses used for the minor may not be counted toward history major.

Required HIST courses - 6 s.h.
HIST 3900. Introduction to Public History (3)
HIST 3993. Approaches to Historical Objects (3)
HIST electives (Choose from the following.) - 9 s.h.
HIST 3980. Shipwreck Archaeology (3) (F, S)
HIST 3985. History of American Architecture (3)
HIST 4940, 4941, 4942. Internship in Archives and Historical Records Administration (3,6,9) (P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor)
HIST 4943, 4944, 4945. Internship in Museum Administration (3,6,9) (P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor)
HIST 4946, 4947, 4948. Internship in Historic Site Administration (3,6,9) (P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor)
HIST 5910. Introduction to the Administration of Archives and Historical Manuscripts (3)
HIST 5920, 5921. Techniques of Museum and Historic Site Development (3.0)
HIST 5930, 5931. Field and Laboratory Studies in Museum and Historic Site Development (3,0)
HIST 5960. Introduction to Oral History (3)
HIST 5970. Living History (3)
HIST 5985. Historic Preservation Planning (3)

Cognates - 9 s.h.
ANTH 2000. Archaeology Around the World (3) (F,S) (FC:SO)
ART 1906. Art History Survey (3) (F,S) (FC:FA) (P: ART 1905 or 1910)
ART 1907. Art History Survey (3) (F,S) (FC:FA) (P: ART 1905 or 1910)
ART 2905. Masterpieces in the Visual Arts and Literature (3) (FC:FA)
ART 4948. Art of the United States (3)
ENGL 3870. Introduction to Editing and Abstracting (3) (WI) (F,S) (P: ENGL 1200)
IDSN 2700. Historic Interiors I (3) (WI)
IDSN 2750. Historic Interiors II: Late Nineteenth and Twentieth Centuries (3) (WI) (F)

History Honors Program
A student desiring to enter the honors program in history must be a second semester junior majoring in history; possess a minimum cumulative and major 3.0 GPA; and have a minimum of 20 s.h. in history (exceptions may be made at the discretion of the dept chair). Furthermore, a student engaged in the history honors program shall be enrolled as a part of the regular curriculum in HIST 4550 and 4551, starting the sequence the spring semester of the junior year and concluding at the end of the first semester of the senior year. Upon completion of the two courses, the student will receive 6 s.h. credit in advanced history.
Each honors scholar will carry out an extensive program of carefully supervised reading and research in one of nine areas of history: Colonial America; Nineteenth-Century America; Twentieth-Century America; Ancient and Medieval; Europe, 1500-1815; Europe, 1815 to Present; Asia; Latin America; Africa.

A history honors award is given annually to the history honors program student who completes and defends the most outstanding honors paper.

http://www.ecu.edu/cs-acad/ugcat/CoursesH.cfm#hist

HIST: History

1030. World Civilizations to 1500 (3) (WI*) (F,S,SS) (FC:SO) May receive credit for one of HIST 1030, 1552. Evolution of world civilizations from prehistory to 1500.

1031. World Civilizations Since 1500 (3) (WI*) (F,S,SS) (FC:SO) May receive credit for one of HIST 1031, 1553. World civilizations since 1500 and their economic, social, cultural, and political development.

1050. American History to 1877 (3) (WI*) (F,S,SS) (FC:SO) May receive credit for one of HIST 1050, 1550. History of US from discovery of America in 1492 to end of Reconstruction.

1051. American History Since 1877 (3) (WI*) (F,S,SS) (FC:SO) May receive credit for one of HIST 1051, 1551. History of US from Reconstruction to present.

1550. Honors, American History to 1877 (3) (F) (FC:SO) May receive credit for one of HIST 1050, 1550. P: By invitation or consent of instructor. History of US from discovery of America in 1492 to end of Reconstruction.

1551. Honors, American History Since 1877 (3) (WI*) (S) (FC:SO) May receive credit for one of HIST 1051, 1551. P: By invitation or consent of instructor. History of US from Reconstruction to present.

1552. Honors, World History to 1500 (3) (F) (FC:SO) May receive credit for one of HIST 1030, 1552. P: By invitation or consent of instructor. Evolution of world civilizations from prehistory to 1500.

1553. Honors, World History Since 1500 (3) (S) (FC:SO) May receive credit for one of HIST 1031, 1553. P: By invitation or consent of instructor. World civilizations since 1500 and their economic, social, cultural, and political development.

2000. Introduction to History (3) (WI) (F,S) Introduction to the discipline of history and to historical research, writing, and methodology.


2222. Western Europe Since 1500 (3) (F) (FC:SO) History of Western Europe from Age of Discovery to present. Emphasis on development and growth of nation state system using Spain, France, England, and Germany as examples.

2444. The History of Sports in Western Society (3) (F) (FC:SO) Role of sports from ancient Greeks to twentieth century. Focus on how sports mirror historical developments and social and cultural trends.

2600. Maritime Heritage of the Outer Banks (3) An introduction to the study of maritime historical and archaeological resources of North Carolina’s Outer Banks region.

3000. History: Its Nature and Method (3) (WI) (F,S) P: 6 s.h. in HIST. Designed for students in the HIED program. Introduction to historical thought and method and varieties and uses of history. May not count toward the “above 2999” HIST major requirement in the BA in history or the BSP in public history. May not count toward the history or public history minor.

3005. Selected Topics in History (3) (WI*) May be repeated for credit with change of topic. May count 3 s.h. toward HIST major or minor. Selected topics from historical perspective.

3010. Constitutional History of the United States to 1888 (3) (FC:SO) Constitutional development of US from colonial period through Waite Court.

3011. Constitutional History of the United States Since 1888 (3) (FC:SO) Constitutional evolution of US. Emphasis on Supreme Court’s response to industrial developments, politics, war, and civil liberties.

3031. Economic History of the United States Since 1865 (3) (FC:SO) Economic development of US since Civil War.

3100. North Carolina History (3) (F,S) (FC:SO) Political, social, and economic developments in NC from colonial era to present.

3121. American Military History to 1900 (3) (F) (FC:SO) History of military thought and institutions in US from era of American Revolution through nineteenth century. Emphasis on interrelationship between war and society by study of political, economic, and social aspects of military affairs.

3122. American Military History Since 1900 (3) (S) (FC:SO) American military thought and institutions since 1900. Emphasis on interrelationship between war and society by study of political, economic, and social aspects of military affairs.

3130. Problems in American History (3) Principal turning points in American history. Emphasis on varying interpretations.

3140. Women in American History (3) (FC:SO) Variety of women’s experience in American history. Role of women in nation’s social, economic, political, and cultural development.

3170. History of Native Americans (3) (FC:SO) Historical approach to understanding the socio-economic, political, legal, and cultural changes experienced by Native Americans focusing on the territory that is now the United States.

3200. Diplomatic History of the United States (3) (WI*) (FC:SO) American diplomatic history from 1776 to present. Emphasis on major episodes, policies, and personalities.


3225. The Era of Sectionalism and Civil War, 1848-1877 (3) (FC:SO) Rise of sectionalism and events of Civil War and Reconstruction.

3230. The Birth of Modern America, 1865-1892 (3) (WI*) (FC:SO) Major historical trends in US from end of Civil War to 1890s.


3240. The Age of Franklin Roosevelt, 1919-1945 (3) (FC:SO) US politics and society of 1920s, Great Depression, New Deal, and background and impact of World War II.

3245. The United States Since 1945 (3) (FC:SO) Economics, politics, and society of US from Truman years to present.

3260. The United States and the Middle East, 1783 to the Present (3) (FC:SO) History of American interests and involvement in Middle East since 1783.

3300. History of American Rural Life (3) (F) (FC:SO) Rural America from pre-contact to present. Major themes include regional development of agricultural economy, agrarian ideology, myths and realities of family farms, farm protest and public policy, and representations of American rural life in literature, music, and film.

3333. Biography and History (3) May be repeated for credit with change of topic. May count maximum of 3 s.h. may count toward HIST major or minor. Selected influential people and their impact on society.

3350. War and Society (3) (F) (FC:SO) Survey of interrelationship between society and warfare from dawn of civilization to present.

3405. History of Ancient Greece to 146 BC (3) (FC:SO) Political, social, and cultural developments in Greece from 800 BC to 146 BC.

3406. War and Society in Ancient Greece and Rome (3) Military and social history of Ancient Greece and Rome.

3410. History of Ancient Rome (3) (F) (FC:SO) Examines political, social, and cultural developments in Rome from 753 BC to 476 AD.

3412. A History of Christianity to 1300 (3) (FC:SO) Formation and evolution of institutional church and its role in society from its origins to Renaissance. Emphasis on historical interaction between Mediterranean and trans-Alpine cultures.


3415. The Middle Ages (3) (F) (FC:SO) Major aspects of political, social, economic, and cultural history of Middle Ages from third to sixteenth centuries.

3420. Early Modern Europe to 1648 (3) (F) (FC:SO) Political, social, and intellectual transformation that marked beginnings of modern European history.

3430. History of Europe, 1815-1914 (3) (F) (FC:SO) Europe from Congress of Vienna to outbreak of first world war. Emphasis on political, social, and economic developments of period.

3435. History of Europe Since 1914 (3) (FC:SO) Transformations in European society and institutions from outbreak of first world war to present.

3444. Old Regime and Revolutionary France (3) (FC:SO) RP: HIST 1031. Major themes in politics, society and culture from the “Old Regime” to Napoleon’s defeat (1660-1815).

3445. Modern France, 1815-present (3) (FC:SO) RP: HIST 1031 and/or HIST 3444. The history of French culture, politics and society from the defeat of Napoleon to the present day.

3460. Germany, 1790-1914 (3) (FC:SO) RP: HIST 1031. Political, social, economic, and cultural development of Germany from late eighteenth century to World War I. Not open to students who have successfully completed HIST 3450.

3461. Germany Since 1914 (3) (FC:SO) RP: HIST 1031. Political, social, economic, and cultural development of Germany from World War I to the present. Not open to students who have successfully completed HIST 3450.

3480. Britain to 1688 (3) (FC:SO) Social, political, and cultural development of the British Isles to 1688, with particular emphasis on methods of historical research.

3482. Britain, 1688-1832 (3) (FC:SO) Social, political and cultural development of British Isles from 1688 to 1832, with particular emphasis on historiography.

3484. Britain from 1832 (3) (FC:SO) Social, political and cultural development of British Isles from 1832, with particular emphasis on collective memory.

3551. Medieval Russia, 862-1682 (3) History of Russia from its legendary foundation in 862 to reign of Peter the Great. Emphasis on religious history as well as impact of nationalism on historical writing.

3552. Imperial Russia, 1682-1917 (3) Political, social, cultural and intellectual history of Russia under Romanovs from Peter I to October Revolution.


3610. History of East Asia to 1600 (3) (FC:SO) Contrasting religions, life-styles, and institutions of major civilizations of traditional Asia. Emphasis on China and Japan.

3611. History of East Asia Since 1600 (3) (FC:SO) Main themes of modern Asian history. Emphasis on revolutionary impact of the West on civilizations of China, Japan, and Southeast Asia (including Vietnam).

3615. History of Traditional Japan (3) (FC:SO) Japanese history from ancient times to 1600. Emphasis on foundations of traditional patterns, in politics society, religion, philosophy, and art.


3625. Field Study in Japanese Historical Culture (3) (FC:SO) Field study of traditional Japanese culture and history, based in former imperial capital (794-1868) of Japan, Kyoto.

3626. Field Study in Japanese Historical Texts (3) (FC:SO) Field study of traditional Japanese historical texts produced in former imperial capital (794-1868) of Japan, Kyoto.


3629. History of Traditional China (3) (FC:SO) History of China before 1600, focusing primarily on main forces operative within intellectual history of China, Confucianism, Daoism, Mohism, Legalism, various schools of Buddhism, and Neo-Confucianism.

3630. History of Modern China (3) (FC:SO) Factors responsible for collapse of China’s traditional Confucian culture and triumph of communism. Emphasis on role of West in this revolutionary transformation.

3669. History of the Middle East, 600-1500 (3) (FC:SO) Social, political, economic, and religious developments of the Middle East, as well as Islamic Empires in Europe and Central Asia.

3670. History of the Middle East Since 1500 (3) (WI*) (FC:SO) People, land, and religious groups of Middle East. Emphasis on Islam and imperialism.

3710. Introduction to Latin-American History: Colonial Period (3) (WI*) (FC:SO) Establishment and administration of Spanish and Portuguese colonies in New World, 1492-1808.
3711. Introduction to Latin-American History: Since 1808 (3) (WI*) (FC:SO) Wars of Independence. Latin-American nations since independence. Emphasis on growth of republican institutions, social organizations, and economic and cultural developments.

3760. The ABC Powers: Argentina, Brazil, Chile (3) (FC:SO) Major developments in Republics of Argentina, Brazil, and Chile since independence. Emphasis on conservative-liberal struggle, development of democratic institutions, and economic changes.

3780. Mexico and Central America (3) (WI*) (F) (FC:SO) Major developments in history of Mexico and Central American republics.

3810. History of Africa (3) (WI) (F) (FC:SO) Emphasis on pre-colonial African societies, interactions between African societies and Europeans during colonial era, and African quest for independence.


3830. Africa and Islam (3) (FC:SO) Examination of relationship between Africans and Islam. Emphasis on the impact of Islam on African societies, especially in North, West, and East Africa.

3900. Introduction to Public History (3) (F) May not count toward BS in HIST. Meaning and various aspects and practices of public history. Emphasis on reading, discussion, and fieldwork projects.


3980. Shipwreck Archaeology (3) (F, S) Introduction to the field of maritime archaeology using archaeological and historical case studies from around the world.

3985. History of American Architecture (3) Introduction to American architectural styles and techniques, within the broader context of American social and technological history. Emphasis on vernacular architecture and basic concepts of historic preservation.

3993. Approaches to Historical Objects (3) Social, cultural, political, and intellectual implications of classifying, conserving, and displaying historical objects. Topics include artifacts, archives, monuments, cultural policy, commercial history, and historical memory.

4000. Senior Seminar (3)(WI*) P: HIST 2000; declared major in either history or public history, with senior standing or consent of the instructor. Capstone course in undergraduate study of history.

4400. Science and Religion in Europe and America, 1600-1900 (3) Examines debate between intellectuals who believed that scientific discovery and religious faith were compatible and those who did not. Primary and secondary sources.

4444. Studies in French History (3) May be repeated with change of topic. May count maximum of 3 s.h. toward HIST major or minor. Varied selected topics in French history from Middle Ages to present day.

4445. The European Enlightenments (3) RP: A 3000-level course in history, political science, philosophy and/or classical studies. History and major texts of period and process called Enlightenment, including its critics and legacy in modern history and politics.


4500. Political Culture and Community in Eighteenth-century Britain (3) RP: HIST 3480, or 3482 or 3484. Dimensions of British political culture during long eighteenth century, 1688 to 1832.

4531, 4532, 4533. Directed Readings in History (1,2,3) (F,S) (FC:SO) P: Consent of dept chair. Intensive examination of specific field in student’s area of interest. May be repeated once with change of topic and permission of the director of undergraduate studies and the department chair.

4550, 4551. Honors (3,3) (F,S) Independent reading and research program under direction of major area professor.

4610. History of Southeast Asia (3) (FC:SO) Evolution of modern Southeast Asia. Emphasis on transformation of traditional cultures under impact of western colonial rule.

4940, 4941, 4942. Internship in Archives and Historical Records Administration (3,6,9) (FC:SO) 140 hours for 3 s.h., 280 hours for 6 s.h., 420 hours for 9 s.h. Maximum of 3 s.h. in HIST 4940-4948 may count toward HIST requirement for BS or minor in public history. May not count toward HIST major or minor elective requirements above 2999. P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor. Practical field experience under supervision in archival and manuscript agencies.

4943, 4944, 4945. Internship in Museum Administration (3,6,9) (F,S) 140 hours for 3 s.h., 280 hours for 6 s.h., 420 hours for 9 s.h. May not count toward HIST major or minor elective requirements above 2999. Maximum of 3 s.h. in HIST 4940-4948 may count toward HIST requirement for BS or minor in public history. P: Senior standing;
minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor. Practical field experience under supervision.

**4946, 4947, 4948. Internship in Historic Site Administration (3,6,9) (F,S)** 140 hours for 3 s.h., 280 hours for 6 s.h., 420 hours for 9 s.h. Maximum of 3 s.h. in HIST 4940-4948 may count toward HIST requirement for BS or minor in public history. May not count toward HIST major or minor elective requirements above 2999. P: Senior standing; minimum cumulative 2.2 GPA; minimum 2.5 GPA in HIST; consent of instructor. Practical field experience under supervision.

**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) (F)** 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) (S)** In-depth exploration of topics. Analysis of major themes, documents, and theoretical work.

**5230. Themes in African American History (3) (S)** Intensive examination of pivotal themes and writings.

**5300. Comparative History of Non-Western Civilizations (3) (WI*)** May not count toward 3 s.h. 5000-level requirement for undergraduate HIST majors. Evolution of major civilizations of Asia, Africa, and Middle East. Emphasis on comparative cultural foundations of civilizations.


**5340. The Ancient Near East (3)** Civilizations from lower paleolithic age to conquest of Persia by Alexander the Great.

**5350. The Renaissance in European History (3) (S)** 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.


**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.


**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.


5910. Introduction to the Administration of Archives and Historical Manuscripts (3) Undergraduates may not count toward 3 s.h. 5000-level HIST major requirement. 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) Undergraduates may not count toward 3 s.h. 5000-level HIST major requirement. 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) Undergraduates may not count toward 3 s.h. 5000-level HIST major requirement. Develop 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.


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. Examination of theoretical, legal, historical, and design bases of preservation planning.

HIST Banked Courses
3030. Economic History of the United States to 1865 (3)
3220. Continental Expansion of the United States, 1800-1848 (3)
3486. Constitutional History of England (3)
3910. History of Science (3)
3915. History of Western Medical Thought (3)
4450. History of Eastern Europe (3)

Agenda Item IV

College of Health and Human Performance
Department of Kinesiology

http://www.ecu.edu/cs-acad/ugcat1213Fixed/ExerSport.cfm

College of Health and Human Performance
Department of Kinesiology

Stacey R. Altman, Chair, 176 Minges Coliseum
**BS in Exercise Physiology**

The program provides competencies and knowledge in the field of exercise physiology. Graduates of the program are prepared to pursue further academic training in exercise physiology, physical therapy, medicine, and other allied health careers. A minimum cumulative 2.0 GPA, 32 s.h. foundations curriculum and successful completion of the EXSS majors' fitness test are required for admission. A minimum grade of C is required in BIOL 1100, 1101; CHEM 1150, 1151; ENGL 1100, 1200; MATH 1065. Majors must maintain a minimum cumulative GPA of 2.0 and a minimum grade of C is required in BIOL 2140, 2141, 2150, 2151; CHEM 1160, 1161; and all required EXSS courses. Minimum degree requirement is **126 s.h.** of credit as follows:

1. **Foundations curriculum requirements** (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) including those listed below - 42 s.h.

   - BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
   - CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
   - MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
   - PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)

2. **Core - 42 43 s.h.**

   - EXSS 2000. Introductory Exercise and Sport Science (3) (F,S,SS)
   - EXSS 2850. Structural Kinesiology (1) (F,S,SS)
   - EXSS 3805. Physiology of Exercise (3) (F,S,SS) (P: BIOL 2130 or BIOL 2140, 2150; EXSS 2850)
   - EXSS 3806. Physiology of Exercise Laboratory (1) (F,S) (P: EXSS 3805)
   - EXSS 3850. Introduction to Biomechanics (3) (F,S,SS) (P: BIOL 2140; EXSS 2850; PHYS 1250, 1251; or consent of instructor)
   - EXSS 4805. Exercise Evaluation and Prescription Laboratory (1) (F,S,SS) (C: EXSS 4806)
   - EXSS 4806. Exercise Evaluation and Prescription (3) (WI) (F,S,SS) (P: EXSS 3805: health and human performance major or minor; or consent of instructor; C: EXSS 4805)
   - EXSS 4809. Exercise Prescription for Clinical Populations (3) (F,S,SS) (P: EXSS 4806)
   - **EXSS 4990. Pre-internship Seminar for Exercise Physiology (1) (P: Declared exercise physiology major; cumulative 2.0 GPA; completed senior summary; consent of internship coordinator)**
   - EXSS 4991. Independent Research in Exercise Physiology (3) (WI*) (F,S) (P: EXSS 4806; or consent of exercise physiology degree director)
   - EXSS 4992. Research Internship in Exercise Physiology (12) (F,S) (P: Completion of all other requirements for the exercise physiology degree or consent of internship coordinator; **EXSS 4990**)
EXSS 5020. Exercise Adherence (3) (P: PSYC 1000; P/C: EXSS 4806; health and human performance major or minor; or consent of dept chair)
Choose 6 s.h. approved electives

3. Cognates - 38 s.h.

BIOL 2140, 2150. Human Physiology and Anatomy (3,3) (P: CHEM 1120 or 1150; 2.75 GPA or consent of instructor; P for 2150: BIOL 2140; 2.75 GPA or consent of instructor; C for 2140: BIOL 2141; C for 2150: BIOL 2151)
BIOL 2141, 2151. Human Physiology and Anatomy Laboratory (1,1) (P for 2151: BIOL 2141; C for 2141: BIOL 2140; C for 2151: BIOL 2150)
BIOL 5800. Principles of Biochemistry I (3) (P: BIOL 3310, 3311; or consent of instructor; CHEM 2760, 2763) or BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: CHEM 2650 or 2750 or 2770)
BIOS 1500. Introduction to Biostatistics (3) (F,S) (P: MATH 1065 or equivalent or consent of instructor)
CHEM 1160, 1161. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C: CHEM 2760)
NUTR 1000. Contemporary Nutrition (3) or NUTR 2105. Nutrition Science (3)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: PHYS 1260 or 2260)

4. Electives to complete requirements for graduation - 5 s.h.

**BS in Health Fitness Specialist**

The health fitness specialist program is endorsed by the American College of Sports Medicine (ACSM) as providing all competencies necessary for the ACSM Health Fitness Instructor® certificate exam. This program provides competencies and knowledge for students to develop and conduct health and fitness programs in commercial, corporate, clinical and community settings. A minimum cumulative 2.0 GPA is required for admission as well as successful completion of the EXSS majors' fitness test. Students must have nine semester hours of writing intensive credit from Foundations Curriculum. A minimum grade of C in all required EXSS courses is required to complete the degree. Minimum degree requirement is 125 s.h. of credit as follows:
1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) including those listed below - 42 s.h.

- BIOL 1050. General Biology (3) (F,S,SS) (FC:SC)
- BIOL 1051. General Biology Laboratory (1) (F,S,SS) (FC:SC)
- CHEM 1020. General Descriptive Chemistry (4) (S) (FC:SC)
- COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
- MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
- PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
- PSYC 3206. Developmental Psychology (3) (WI*) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)

2. Core – 40 s.h.

- EXSS 1101. Physical Conditioning (1) (F,S,SS) (P: EXSS 1000 or 1001)
- EXSS 1114. Aerobic Dance (1) (F,S,SS) (P: EXSS 1000 or 1001)
- EXSS 2000. Introductory Exercise and Sport Science (3) (F,S,SS)
- EXSS 2202. Motor Learning and Performance (3) (F,S,SS)
- EXSS 2850. Structural Kinesiology (1) (F,S,SS)
- EXSS 3804. Measurement of Physical Activity and Fitness (3) (F,S,SS) (P: BITE 2112 or MIS 2223 or EXSS 2050; EXSS 2000; or consent of instructor)
- EXSS 3805. Physiology of Exercise (3) (F,S,SS) (P: BIOL 2130 or BIOL 2140, 2150; EXSS 2850)
- EXSS 3850. Introduction to Biomechanics (3) (F,S,SS) (P: BIOL 2130 or BIOL 2140; EXSS 2850; PHYS 1250, 1251; or consent of instructor)
- EXSS 3880. Personal Fitness Training (3) (F,S,SS) (P: Declared major or consent of instructor)

**EXSS 4801. Pre-internship Seminar for Health Fitness Specialist (1) (P: Declared health fitness specialist major; cumulative 2.0 GPA; completed senior summary; consent of internship coordinator)**

EXSS 4805. Exercise Evaluation and Prescription Laboratory (1) (F,S,SS) (C: EXSS 4806)

EXSS 4806. Exercise Evaluation and Prescription (3) (WI) (F,S,SS) (P: EXSS 3805; health and human performance major or minor; or consent of instructor; C: EXSS 4805)

EXSS 4850. Exercise Leadership (3) (F,S) (P: EXSS 1114 or 1214, 3805; declared EXSS major or consent of instructor)

EXSS 5020. Exercise Adherence (3) (P: PSYC 1000; P/C: EXSS 4806; health and human performance major or minor; or consent of dept chair)

EXSS 5800. Physical Activity and Aging (3) (SL)

Choose 3 s.h. of approved EXSS electives at or above the 3000 level.

Choose 3 s.h. from the following:

- ATEP 2800. Medical Nomenclature for Human Performance (2) (F,S,SS)
- ATEP 3350. Concepts in Pharmacology (3) (F,S,SS) (RP: ATEP 2800 or equivalent)
HLTH 3010. Health Problems I (3) (F,S,SS) (P: BIOL 2130 or 2140; HLTH 1000 or 1050; or consent of instructor)
HLTH 4604. Applied Principles of Health Promotion (3) (SL*) (F,S) (P: BIOL 2130 or 2140; NUTR 2105; PSYC 1000; or consent of instructor)
HLTH 5900. Stress Management (3) (S) (P: Undergraduate course in anatomy and physiology; graduate standing; or consent of instructor)

3. Cognates - 21 s.h.

BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (P: BIOL 1050, 1051; or 1100, 1101)
BITE 2112. Introduction to Information Processing Technology (3) (F,S,SS) or MIS 2223. Introduction to Computers (3) (F,S,SS)
CHEM 1021. General Descriptive Chemistry Laboratory (1) (S) (FC: SC)
HLTH 2220, 2221. Basic Athletic Training (3,0) (F,S,SS) (P: HLTH 1000 or 1050); C for 2220: HLTH 2221; C for 2221: HLTH 2220
HLTH 4200. Planning and Evaluation in Worksite Health Promotion (3) (F,S,SS) (P: Completion of core courses)
NUTR 2105. Nutrition Science (3)
PHYS 1250. General Physics (3) (F,S,SS) (FC:SC) (P: MATH 1065)
PHYS 1251. General Physics Laboratory (1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350)

4. Internship - 12 s.h.

EXSS 4800. Internship in Health Fitness (12) (F,S,SS) (P: Declared major and satisfactory completion of all other degree requirements or consent of dept chair; EXSS 4801)

5. Electives to complete requirements for graduation.

**BS in Sports Studies**

The program provides the competencies and knowledge for students to pursue a variety of sport-related careers. A minimum cumulative 2.0 GPA and 32 s.h. of foundations curriculum coursework are required for admission to the program. A minimum grade of C is needed in all required EXSS courses for successful completion of the degree. The degree requires the student to declare an approved minor. Minimum degree requirement is 120 s.h.

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) including those listed below - 42 s.h.
BIOL 1050, 1051. General Biology and Laboratory (3,1) (F,S,SS) (FC:SC) (C for 1051: BIOL 1030 or 1050)
COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT) or MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or approval of department chair)
PHIL 1176. Introduction to Social and Political Philosophy (3) (F,S,SS) (FC:HU)
PHYS 1250, 1251. General Physics and Laboratory (3,1) (F,S,SS) (FC:SC)
PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
RCLS 2601. Leisure in Society (3) (F,S,SS) (FC:SO)

2. Core – 42-43 s.h.

EXSS 2000. Introductory Exercise and Sport Science (3) (F,S,SS)
EXSS 2202. Motor Learning and Performance (3) (F,S,SS)
EXSS 2850. Structural Kinesiology (1) (F,S,SS)
EXSS 3300. Applied Sports Psychology (3) (F) (P: PSYC 1000)
EXSS 3301. Physical Education and Sport in Modern Society (3) (F,SS) (P: Health and human performance major or minor, or consent of instructor)
EXSS 3600. Coaching Theories (2)
EXSS 3805. Physiology of Exercise (3) (F,S,SS) (P: BIOL 2130 or BIOL 2140, 2150; EXSS 2850)
EXSS 3850. Introduction to Biomechanics (3) (F,S,SS) (P: BIOL 2130 or BIOL 2140; EXSS 2850; PHYS 1250, 1251; or consent of instructor)
EXSS 4300. Program Development and Management in Physical Education and Sports (3) (P: Health and human performance major or minor; EXSS 2000 or 2323; or consent of instructor)
EXSS 4301. Comparative Sport and Physical Education: International Aspects (3) (WI) (S,SS) (P: Health and human performance major or minor; EXSS 3301)
EXSS 4333. Sport and Fitness Marketing (3) (S, SS) (P: EXSS 4300; or consent of instructor)
EXSS 4700. Internship in Sports Studies (12) (P: Satisfactory completion of all other degree requirements or consent of dept chair; EXSS 4701)
EXSS 4701. Pre-internship Seminar for Sports Studies (1) (P: Declared sports studies major; cumulative 2.0 GPA; completed senior summary; consent of internship coordinator)

3. Cognates - 10 s.h.

BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (FC:SC) (P: BIOL 1050, 1051; or 1100, 1101)
BITE 2112. Introduction to Information Processing Technology (3) (F,S,SS) or MIS 2223. Introduction to Computers (3) (F,S,SS) or EXSS 2050. Computer Applications in Exercise and Sport Science (3)
COMM 3520. Sports Media Survey (3) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)

4. Approved Minor - 24 s.h.
5. General electives to complete requirements for graduation - 2 s.h.

http://www.ecu.edu/cs-acad/ugcat1213Fixed/CoursesE.cfm#exss

EXSS: Exercise and Sport Science

4700. Internship in Sports Studies (12)
   P: Satisfactory completion of all other degree requirements or consent of dept chair; EXSS 4701. Supervised field experience to develop applied competence in exercise and sport leadership.

4701. Pre-internship Seminar for Sports Studies (1) P: Declared sports studies major; cumulative 2.0 GPA; completed senior summary; consent of internship coordinator. Explores purpose and objectives of internship experience. Utilization of resources to identify and obtain quality internship placements.

4800. Internship in Health Fitness (12) (F,S,SS)
   Supervised field experience. 480 hours per semester. P: Satisfactory completion of all other degree requirements or consent of dept chair; EXSS 4801. Develop applied competence in physical activity and fitness leadership.

4801. Pre-internship Seminar for Health Fitness Specialist (1) P: Declared health fitness specialist major; cumulative 2.0 GPA; completed senior summary; consent of internship coordinator. Explores purpose and objectives of internship experience. Utilization of resources to identify and obtain quality internship placements.

4804. Measurement and Evaluation in Exercise and Sport Science (3) (F,S,SS)
   2 lecture and 2 lab hours per week. P: Upper-division standing; EXSS 2323; MATH 1065; health and human performance major or minor or consent of dept chair. Develop competencies needed for evaluation in exercise and sport science. Emphasis on basic statistics, selection, and administration of standardized tests, test construction, planning for evaluation programs, and appropriate microcomputer applications.

4805. Exercise Evaluation and Prescription Laboratory (1) (F,S,SS)
   1, 2-hour lab per week. C: EXSS 4806. Development of competencies for exercise assessment, evaluation and prescription.

4806. Exercise Evaluation and Prescription (3) (WI) (F,S,SS)
   P: Health and human performance major or minor; EXSS 3805; or consent of instructor; C: EXSS 4805. Methods for assessing fitness and developing training techniques in asymptomatic populations.

4807. Advanced Exercise Physiology (3) (F)
   P: EXSS 4806, CHEM 2750, 2753 (C or better), and consent of instructor. Physiological responses to exercise and health. Emphasis on effects of physical training and other factors that affect physical performance and health.

4808. Cardiopulmonary Physiology (3) (S)
P: EXSS 4806, CHEM 2750, 2753 (C or better), and consent of instructor. Current topics in cardiopulmonary physiology as related to clinical and basic science aspects of exercise science. Topics include cardiopulmonary anatomy and function; cardiovascular pharmacology; metabolic evaluation/assessment/programming during exercise and other issues related to clinical exercise science.

4809. Exercise Prescription for Clinical Populations (3) (F,S)
   P: EXSS 4806. Fundamentals of prescribing aerobic, strength and flexibility exercise for clinical populations to include: cardiovascular disease, pulmonary disease, hypertension, diabetes, obesity, etc.

4850. Exercise Leadership (3) (F,S)
   2 lecture and 2 lab hours per week. P: EXSS 1114 or 1214, 3805; Declared EXSS major or consent of instructor. Leadership experiences in physical activity settings. Knowledge and skills associated with leading others to become physically active. Exercise leadership experiences to develop instructional skills for diverse physical activity settings.

4990. Pre-internship Seminar for Exercise Physiology (1) P: Declared exercise physiology major; cumulative 2.0 GPA; completed senior summary; consent of internship coordinator. Explores purpose and objectives of internship experience. Utilization of resources to identify and obtain quality internship placements.

4991. Independent Research in Exercise Physiology (3) (WI*) (F,S)
   9 lab hours per week. P: EXSS 4806; or consent of exercise physiology coordinator. Plan and execute investigative study in exercise physiology under supervision of faculty mentor.

4992. Research Internship in Exercise Physiology (12) (F,S,SS)
   40 lab hours per week for 15 weeks. P: Completion of all other requirements for the exercise physiology option or consent of internship coordinator; EXSS 4990. Professionally supervised research experience in approved research lab.

Agenda Item V

The Honors College

http://www.ecu.edu/cs-acad/ugcat/HonorsCollege.cfm

The Honors College

Richard R. Eakin, Interim Dean
Kevin Baxter, Associate Dean
Katherine O'Connor, Associate Dean
The Honors College at East Carolina University is a diverse intellectual community for academically talented students of strong character. Honors students engage in stimulating coursework that spans disciplines across campus, providing for a challenging and innovative curricular and co-curricular model. These students are provided with the opportunity to engage in immersive service-learning, undergraduate research, and internship experiences throughout their four years. Students will leave the Honors College with a foundation of skills and experiences designed to make them competitive for graduate programs, scholarships, and careers following graduation.

The Honors College provides students with a supportive living environment through a strong partnership with Campus Living. Honors students live together in Garrett Hall during their first year on campus where the Honors living-learning community allows for the natural formation of study groups, connections to students in similar classes, and a supportive network of academically talented peers.

Within the classroom, Honors students are exposed to experienced faculty from our many schools and colleges at ECU. Faculty interact with Honors students through seminars, colloquia, specially-designated sections of courses, research assistantships, mentoring and advising support. Honors students also have access to a talented and supportive Honors College staff who assist them in working toward completion of their Honors coursework and in securing special internship, research, and study abroad opportunities.

**Admission Requirements**

Admission to the Honors College at East Carolina University is competitive and by invitation. Students wishing to be considered for admission to the Honors College or any of its programs must meet the following minimum eligibility criteria to receive an invitation to apply:

- Apply to East Carolina University (ECU) by the priority deadline (December 1)
- Meet the following minimum criteria within both the standardized test and GPA categories:
  - Minimum math/verbal combined SAT score of 1200 or minimum ACT score of 27
  - Minimum un-weighted GPA of 3.5 or minimum weighted GPA of 4.0

Students who meet the above criteria will receive an invitation by mail to complete the Honors College application. The postmarked deadline for submitting the completed Honors College
application and associated materials is December 15th. Applications are reviewed throughout December and January with a targeted notification date of January 31st for those students who are admitted into the Honors College.

**Program Requirements**

Students will need to earn a final grade of **B- (2.7)** or higher to receive credit for each of the requirements listed below. Students may not use the honors-by-contract option to fulfill any of these requirements. Requirements may be met on a different schedule than listed below, so long as all requirements are fulfilled prior to graduation. Requirements can also be made flexible to allow students to study abroad, graduate in less than four years, or pursue a joint degree. In these cases, students will need to consult the advising team in the Honors College to receive approval.

1. Freshman year: ENGL 1100*; HLTH 1000***; HNRS 2006 2000; Honors Seminar**
2. Sophomore year: HNRS 3002 3000; Honors Seminar**
3. Junior year: HNRS 3004 4000
4. Senior year: Honors elective coursework****; Senior Honors Project HNRS 4500, 4550*****

*Students at ECU may place out of ENGL 1100 with an AP score of 3 or higher in English language or English literature or with a CLEP scaled score of 42 or higher in English composition. In these cases, students will also place out of the Honors requirement for this course.

**Honors seminars may count toward foundations curriculum requirements. Students must complete two honors seminars prior to graduation.

***All ECU students are required to take two semester hours of health coursework. Honors College students take special sections of this course to fulfill both ECU and Honors College requirements.

****Honors elective coursework is defined as additional Honors seminars, study abroad credit, 5,000-level coursework, and 294-299 sections of coursework at ECU. Students may not place out of the six semester hours of Honors elective coursework; however, they may complete these requirements using any of the options referenced.

*****HNRS 4500 and/or HNRS 4550 may be fulfilled using approved courses in other departments.

**For More Information**

The Honors College offices are located in Mamie Jenkins Building and the administration and staff may be reached by e-mail at honorscollege@ecu.edu or by phone at 252-328-6373.
HNRS: HONORS

2000. Honors Leadership and Service Colloquium (2)
P: Enrollment in the Honors College. Introduction to leadership theory and a model for engaged public service. Participation in experiences designed to increase awareness and competence in ethical leadership and service.

2006. Interdisciplinary Honors Seminar (3) (WI)
Interdisciplinary investigation. Examples include “The Grotesque in Art and Literature,” “Poets and Painters,” “The Sixties: Be There Now,” and “The History and Philosophy of Technology.”

2011. Honors Seminar in the Humanities (3) (WI) (FC:HU)
May be repeated for maximum of 6 s.h. with change of topic. Topic varies by semester. Examples include “What it Means to be Human (according to Shakespeare),” “Current Attempts to Resolve Classical Philosophical Problems,” “Banning Books: Censorship in Modern America,” and “Gay Literature: From Marginal to Mainstream.”

2012. Honors Seminar in the Fine Arts (3) (WI) (FC:FA)
May be repeated for maximum of 6 s.h. with change of topic. Topic varies by semester. Examples include “The Arts in Society,” “An Introduction to the Fine Arts,” “Gothic Cathedrals: Their Meaning and Significance,” and “Listening to Music Intelligently.”

2013. Honors Seminar in the Social Sciences (3) (WI) (FC:SO)

2014. Honors Seminar in the Sciences (3) (WI) (FC:SC)
May be repeated for maximum of 6 s.h. with change of topic. Topic varies by semester. Examples include “Subjectivity in Science,” “Scientific Experimentation and Social Acceptance,” “Chemistry and the Environment,” and “The Geology of the National Parks.”

2015. Honors Science Laboratory (1) (WI) (FC:SC)
Accompanies HNRS 2014 when considered appropriate by science department offering the seminar.

2116. Interdisciplinary Honors Seminar (3) (WI)
Interdisciplinary investigation. Examples include “The Grotesque in Art and Literature,” “Poets and Painters,” “The Sixties: Be There Now,” and “The History and Philosophy of Technology.”

2216. Interdisciplinary Honors Seminar (3) (WI)
Interdisciplinary investigation. Examples include “The Grotesque in Art and Literature,” “Poets and Painters,” “The Sixties: Be There Now,” and “The History and Philosophy of Technology.”

2316. Interdisciplinary Honors Seminar (3) (WI)
Interdisciplinary investigation. Examples include “The Grotesque in Art and Literature,” “Poets and Painters,” “The Sixties: Be There Now,” and “The History and Philosophy of Technology.”

2416. Interdisciplinary Honors Seminar (3) (WI)
Interdisciplinary investigation. Examples include “The Grotesque in Art and Literature,” “Poets and Painters,” “The Sixties: Be There Now,” and “The History and Philosophy of Technology.”

3000. Honors Research Colloquium (3)
P/C: HNRS 2000 and enrollment in the Honors College. Introduces and engages students in the research and creative activity process, methodologies and ethical aspects, including protections for participants.

3001, 3002, 3003. Honors Special Topics (1,2,3)
May be repeated for a maximum of 9 s.h. P: Consent of instructor. Selected topics.

3011. Honors Seminar in the Humanities (3) (WI) (FC:HU)
May be repeated for maximum of 6 s.h. with change of topic. Topic varies by semester. Examples include “The Literature of Fyodor Dostoevsky,” “Literature and Medicine,” “A Bi-Gender Reading of Jewish-American Literature,” and “The World as seen by Nobel Prize Winners in Literature.”

3012. Honors Seminar in the Fine Arts (3) (WI) (FC:FA)

3013. Honors Seminar in the Social Sciences (3) (WI) (FC:SO)
May be repeated for maximum of 6 s.h. with change of topic. Topic varies by semester. Examples include “Intimate Violence: Out of the Shadows,” “The Islamic World,” “South Africa: Transition from Apartheid to Democracy,” and “Terrorism and September 11.”

3014. Honors Seminar in the Sciences (3) (WI) (FC:SC)

3015. Honors Science Laboratory (1) (WI) (FC:SC)
Accompanies HNRS 3014 when considered appropriate by science department offering the seminar.

3100. EC Scholars Research Internship (1)
May be repeated up to a maximum of 3 semester hours for credit. P/C: HNRS 3002 and enrollment in the EC Scholars Program. Supervised community-based research internship requiring at least three hours per week for a one semester hour course.

3101, 3102, 3103. Independent Study (1,2,3) (WI) (F,S,SS)
May be repeated in combination with other HNRS independent students courses for a maximum of 6 s.h. P: Consent of program director. Independent research/creative activity project supervised by faculty mentor.

4000. Honors Capstone Colloquium (1)
P/C: HNRS 3000 and enrollment in the Honors College. Introduction to the senior honors project proposal process, graduate and career preparation as well as philanthropy.

4100. EC Scholars Leadership Internship (2)
P/C: HNRS 2006 and enrollment in the EC Scholars Program. Seminar and internship supportive of leadership development in interprofessional organizational context. Required for EC Scholars.

4101, 4102, 4103. Independent Study (1,2,3) (WI) (F,S,SS)
May be repeated in combination with other HNRS independent students courses for a maximum of 6 s.h. P: Consent of program director. Independent research/creative activity project supervised by faculty mentor.

4500. Seniors Honors Project I (3) (WI)
P/C: HNRS 4000 and enrollment in the Honors College. Students will design, plan and implement initial steps of an independent thesis or creative activity endeavor.

4550. Seniors Honors Project II (3) (WI)
P: 4500 and enrollment in the Honors College. Students will submit their original research thesis or creative activity project to the Honors College during their final semester.

Agenda Item VI

College of Technology and Computer Science

Department of Computer Science

http://www.ecu.edu/cs-acad/ugcat/CompScience.cfm

College of Technology and Computer Science

Department of Computer Science

Karl Abrahamson, Interim Chair, Suite C-124 Science and Technology Building

BS in Computer Science

Credit toward a computer science major will not be given for any CSCI course with a grade less than C being used to satisfy the requirements specified in the common core and CSCI electives. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

   See cognates below for courses that fulfill science requirements.
   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   PHIL 2275. Professional Ethics (3) (WI*) (F,S,SS) (FC:HU)

2. Common core - 30-36 s.h.

   CSCI 2310, 2311. Algorithmic Problem Solving and Programming Laboratory (4,0) (P: MATH 1065; C for 2310: CSCI 2311; C for 2311: CSCI 2310)
   CSCI/EENG 2410. Digital Electronics (3) (P: CSCI 2310, 2311; or ENGR 1014 or 1016 and 2050)
   CSCI 3300. Introduction to Algorithms and Data Structures (4) (P: CSCI 2310; C: CSCI 2427)
   CSCI 3310. Advanced Data Structures and Data Abstraction (3) (P: CSCI 2427, 3300) CSCI 3650. Analysis of Algorithms (3) (P: CSCI 3200 or 3300; CSCI 2427)
   CSCI 3675. Organization of Programming Language (3) (P: CSCI 3200 or 3310)
   CSCI 3700. Database Management Systems (3) (P: CSCI 3200 or 3310)
   CSCI 4000. Ethical and Professional Issues in Computer Science (1)
3. Cognates - 25-27 s.h.

CSCI/MATH 2427. Discrete Mathematical Structures (3) (P: MATH 1065 or 1066)  
CSCI/MATH 3584. Computational Linear Algebra (3) (P: Calculus course)  
ENGL 3880. Writing for Business and Industry (3) (WI) (F,S,SS) (P: ENGL 1200)  
ITEC 3290. Technical Writing (3)(WI) (F,S,SS) (P: ENGL 1200)  
MATH 2171. Calculus I (4) (F,S,SS) (FC:MA) (P: MATH 1083 or 1085 or 2122 with a minimum grade of C) or MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS) (FC:MA) (May not receive credit for MATH 2121 after taking MATH 2171) (P: MATH 1065 or 1077 with minimum grade of C)  
MATH 2172. Calculus II (4) (F,S,SS) (FC:MA) (P: MATH 2171 with a minimum grade of C or MATH 2122 with consent of instructor) or MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (May not receive credit for MATH 2122 after taking MATH 2172.) (P: MATH 2121)  
MATH 2228. Elementary Statistical Methods I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or equivalent) or MATH 2283. Statistics for Business (3) (F,S,SS) (FC:MA) (P: MATH 1065 or 1066 or equivalent) or MATH 3307. Mathematical Statistics I (3) (F,S) (P: MATH 2152 or MATH 2172)  
MATH 3229. Elementary Statistical Methods II (3) (P: MATH 2228 or equivalent) or MATH 3308. Mathematical Statistics II (3) (F) (P: MATH 3307) or CSCI 5774. Programming for Research (3) (P: General course in statistics or consent of instructor)  
12 s.h. of science. (Note that 8 of these 12 units count toward foundation curriculum requirements.)

One of the following options must be selected.

Option 1 - Physics:
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: 1260 or 2360)  
PHYS 2350, 2360. University Physics (4,4) (F,S,SS) (FC:SC) (P for 2350: MATH 2121, 2151, or 2171; P for PHYS 2360: PHYS 2350)  
2 s.h. of science that satisfy ECU foundation requirements.

Option 2 – Chemistry:
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)  
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)  
4 s.h. of science that satisfy ECU foundation requirements.

Option 3 - Biology
BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: for 1101: BIOL 1100)
BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C: for 1201: BIOL 1200)
4 s.h. of science that satisfy ECU foundations curriculum requirements.

4. CSCI electives above 2999 (excluding CSCI 3200 and 5774) - 15 s.h.
5. Electives to complete requirements for graduation.

Agenda Item VII

College of Technology and Computer Science
Department of Construction Management

http://www.ecu.edu/cs-acad/ugcat/ConstrMgmt.cfm

College of Technology and Computer Science
Department of Construction Management

Syed Ahmed, Chair, 346 Rawl Building

Admission

Admission requirements are specified based on the entry status of potential students: freshman, transfer students, technical degree transfer students, ECU transfer students, or second degree students. Progression through the major is two-tiered: lower division requirements and upper division requirements. Potential majors should refer to the departmental website for full descriptions of each entry status category and the associated requirements for admission. Admission to the university does not guarantee admission to the construction management degree program.

Students are admitted to the lower division and must apply for admission to the upper division. The complete listing of admission requirements can be found on the departmental website or at the College of Technology and Computer Science Advising Center. Once admitted, successful progression through the major requires a minimum cumulative grade point average of 2.0. Students falling below a 2.0 cumulative grade point average will not be allowed to take construction management classes and will be placed on departmental probation for one semester. Summer sessions are not part of the departmental probation period. Probation status will be allowed for a maximum of one semester; after that time students with a cumulative grade point average below 2.0 will be dropped from the department.
CMGT majors and minors are required to achieve a minimum grade of C in the following courses in order to progress to subsequent courses: CMGT 2210, 2400, 2600, 3500, 3950, 4000, 4100, 4200, 4300, 4310 and 4400. Students earning less than a C in any of these courses must repeat the course before any subsequent CMGT course may be taken. Students required to repeat any CMGT course will not be permitted to register for that course in the semester or summer school immediately following unless a seat is available on the last day of regular registration. Should a student be found in violation of this policy, he/she will be administratively dropped (no matter what point in the semester) from that CMGT course.

The Department of Construction Management requires students to have a laptop computer in order to accomplish academic work. The ACE Student Computer Support Center at www.ecu.edu/ace lists the current computer specifications meting the department's requirements.

**BS in Construction Management**

The construction management program is accredited by the American Council for Construction Education. Minimum degree requirement is **126 s.h.** credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see [Liberal Arts Foundations Curriculum](#)) including those listed below - 42 s.h.

   COMM 2410. Public Speaking (3) (FC:FA) or COMM 2420. Business and Professional Communication (3) (FC:FA) or COMM 2420. Fundamentals of Speech Communication (3) (F,S) (FC:FA)
   ECON 2113. Principles of Microeconomics (3) (FC:SO)
   ECON 2133. Principles of Macroeconomics (3) (FC:SO) (P: ECON 2113)
   GEOL 1500. Dynamic Earth (3) (FC:SC)
   GEOL 1501. Dynamic Earth Laboratory (1) (FC:SC) (C: GEOL 1500)
   MATH 1065. College Algebra (3) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT) or MATH 1066. Applied Mathematics for Decision Making (3) (FC:MA) (P: Appropriate score on math placement test or approval of dept chair)
   PHYS 1250. General Physics (3) (FC:SC) (P: MATH 1065 or 1066)
   PHYS 1251. General Physics Laboratory (1) (FC:SC) (C: PHYS 1250 or 2350)

2. Core - 51 s.h.

   **Lower Division Core Courses:**
   CMGT 2200. [Introduction to the Sustainable Built Environment](#) Construction Industry Overview (3)
   CMGT 2210, 2211. Construction and Civil Materials (3,0) (P: Minimum overall GPA of 2.0: majors and minors only; P/C: MATH 1065 or 1066)
   CMGT 2400, 2401. Building Systems and Codes (4,0) (Formerly CMGT 2660, 2661) P: Minimum grade of C in CMGT 2210; minimum overall GPA of 2.0)
CMGT 2600. Construction Documents and Analysis (3) (Formerly CMGT 3100) (P: Minimum grade of C in CMGT 2400; minimum overall GPA of 2.0)

Upper Division Core Courses:
CMGT 3010. Construction Modeling and Information Technology (3) (Formerly CMGT 2800) (P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; ITEC 2000 or MIS 2223 or equivalent computer-related elective)
CMGT 3400. Structural Analysis (3) (Formerly CMGT 3660) (P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; MATH 1074 or 1075 or equivalent; PHYS 1250, 1251)
CMGT 3500. Construction Contracts and Specifications (3) (Formerly CMGT 3664) (P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; P/C: CMGT 3010)
CMGT 3600. Mechanical and Electrical Construction (3) (Formerly CMGT 3662, 3663) (P: Minimum overall GPA of 2.0; P/C: CMGT 3500)
CMGT 3700, 3701. Construction Surveying (3,0) (Formerly CMGT 3666, 3667) (P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; MATH 1074 or 1075 or equivalent)
CMGT 3800, 3801. Soils and Foundations (3,0) (Formerly CMGT 3766, 3767) (P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; GEOL 1500, 1501; MATH 1074 or 1075 or equivalent; PHYS 1250, 1251)
CMGT 3900. Construction Project Safety Management (3) (Formerly CMGT 3726) (P: Minimum grade of C in CMGT 3500; minimum overall GPA of 2.0)
CMGT 4000. Construction Estimating (3) (Formerly CMGT 4660) (P: Minimum grade of C in CMGT 3500; minimum overall GPA of 2.0; P/C: CMGT 3400)
CMGT 4100. Construction Planning and Scheduling (3) (Formerly CMGT 4662) (P: Minimum overall GPA of 2.0; P/C: CMGT 4000)
CMGT 4200. Construction Cost Control (3) (P: Minimum grade of C in CMGT 4100; minimum overall GPA of 2.0)
CMGT 4300. Construction Quality and Human Resource Management (4) (WI) (Formerly CMGT 4600, 4601) (P: Minimum grade of C in CMGT 4100; P/C: CMGT 4200; minimum overall GPA of 2.0)
CMGT 4400. Construction Capstone (3-4) (Formerly CMGT 4664) (P: Minimum grade of C in CMGT 4300; minimum overall GPA of 2.0)
CMGT 4500. Construction Work Experience and Professional Development (1) (Formerly CMGT 4699) (P: Minimum overall GPA of 2.0; completed senior summary; applied to graduate; P/C: CMGT 4400; graduating semester)

3. Concentration Options - 9 s.h.

General Construction
All lower and upper level CMGT courses
Any three (3) CMGT elective courses.
Residential Construction
All lower and upper level CMGT courses
CMGT 3150. Residential Construction Techniques (3) (Formerly CMGT 2558) (P: Minimum grade of C in CMGT 2400; minimum overall GPA of 2.0)
CMGT 3950. Residential Development (3) (Formerly CMGT 3558) (P: Minimum grade of C in CMGT 3150; minimum overall GPA of 2.0)
CMGT 4320. Construction Sustainability (3) (P: Minimum overall GPA of 2.0; senior standing)
Infrastructure Construction
All lower and upper level CMGT courses
CMGT 3710, 3711. Infrastructure and Highway Materials (3,0) (P: Minimum grade of C in CMGT 3500; minimum overall GPA of 2.0; P/C: CMGT 3800)
CMGT 4310. Infrastructure Construction Techniques (3) (P: Minimum overall GPA of 2.0; P/C CMGT 4200)
CMGT 4380. Equipment Management (3) (Formerly CMGT 4666) (P: Minimum overall GPA of 2.0; CMGT 3400, 3800)

4. Cognates - 24 s.h.

ACCT 2101. Survey of Financial and Managerial Accounting: (3), (P: MATH 1065)
EHST 3060, 3061. Environmental Issues in Construction (4,0) (P: GEOL 1500, 1501)
FINA 2244. Legal Environment of Business (3)
MATH 1074. Applied Trigonometry (2) (P: MATH 1065 or transfer credit for MATH 1075 or equivalent.
MATH 2283. Statistics for Business (3) (P: MATH 1065 or 1066 or equivalent)
MGMT 3202. Fundamentals of Management (3) (P: ECON 2113)
MKTG 3832. Marketing Management (3) (P: ECON 2113)
Choose 3 s.h. computer-related elective from:
ITEC 2000. Industrial Technology Applications of Computer Systems (3)
MIS 2223. Introduction to Computers (3)
Electives to complete requirements for graduation.

5. Electives to complete requirements for graduation.

Construction Management Transfer Option

The construction management option requires 43 s.h. of credit.

Applicable to technical degree transfer students only. Students who hold an associate degree of applied science from an approved technical program must transfer courses and take courses at ECU that meet the competencies of the construction management core listed above. Students may be admitted directly to the upper division upon completion of MATH 1065 and PHYS 1250, 1251 (or equivalent). Students must complete at ECU a minimum of 28 s.h. credit, 19 s.h. from 3000-level or above (must include CMGT 3500, 4000, 4100, 4200, 4300, 4400, and 4500) and 6 s.h. from 2000-level or above. Students must choose one concentration. Additional courses may be necessary to meet required prerequisites. Construction management courses completed at ECU and technical transfer courses must total a minimum of 43 s.h. including the course credits from a concentration area. Courses needed to meet requirements must meet as scheduled classes.

Construction Management Minor
The construction management minor requires 28 s.h. of credit as follows:

1. Required courses. – 28 s.h.

CMGT 2200. Introduction to the Sustainable Built Environment Construction Industry Overview (3)

CMGT 2210, 2211. Construction and Civil Materials (3,0) (P: Minimum overall GPA of 2.0; majors and minors only; P/C: MATH 1065 or 1066)

CMGT 2400, 2401. Building Systems and Codes (4,0) (Formerly CMGT 2660, 2661) (P: Minimum grade of C in CMGT 2210; minimum overall GPA of 2.0)

CMGT 2600. Construction Documents and Analysis (3) (Formerly CMGT 3100) (P: Minimum grade of C in CMGT 2400; minimum overall GPA of 2.0)

CMGT 3010. Construction Modeling and Information Technology (3) (Formerly CMGT 2800) (P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; ITEC 2000 or MIS 2223 or equivalent computer-related elective)

CMGT 3500. Construction Contracts and Specifications (3) (Formerly CMGT 3664) (P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; P/C: CMGT 3010)

CMGT 4000. Construction Estimating (3) (Formerly CMGT 4660) (P: Minimum grade of C in CMGT 3500; minimum overall GPA of 2.0; P/C: CMGT 3400)*

CMGT 4100. Construction Planning and Scheduling (3) (Formerly CMGT 4662) (P: Minimum overall GPA of 2.0; P/C with CMGT 4000)

CMGT 4200. Construction Cost Control (3) (P: Minimum grade of C in CMGT 4100; minimum overall GPA of 2.0)

*For students seeking CMGT minor P/C CMGT 3400 will be waived

http://www.ecu.edu/cs-acad/ugcat/CoursesC.cfm#cmgt

CMGT: Construction Management

2200. Introduction to the Sustainable Built Environment Construction Industry Overview (3)

Historic and current roles of construction management within the residential, commercial, heavy/civil and industrial sectors of construction, with an emphasis on sustainability. History and the role of construction management within residential, commercial, and heavy industries.

2210, 2211. Construction and Civil Materials (3,0)

2 lecture and 2 lab hours per week. P: Minimum overall GPA of 2.0; majors or minors only; P/C: MATH 1065 or 1066. Introduction to construction materials with an emphasis on the physical characteristics, properties, and significance of the materials to the industry.

2400, 2401. Building Systems and Codes (4,0) Formerly CMGT 2660, 2661

3 lecture and 2 lab hours per week. P: Minimum grade of C in CMGT 2210; minimum overall GPA of 2.0. Interpretation of structural and interior and exterior finishing systems in residential and commercial buildings. Introduces major building codes, materials and industry standards, and utilization of manufacturers' catalogs.
2600. Construction Documents and Analysis (3) Formerly CMGT 3100
2 lecture and 2 lab hours per week. P: Minimum grade of C in CMGT 2400; minimum overall GPA of 2.0. Practical exercises in reading and evaluating plans for construction projects to discern project design, construction materials, and construction placement techniques.

3010. Construction Modeling and Information Technology (3) Formerly CMGT 2800
2 lecture and 2 lab hours per week. P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; ITEC 2000 or MIS 2223 or equivalent computer-related elective. Graphical expression of construction and architectural elements through use of 3D and Building Information Modeling (BIM) software including construction document organization and preparation, and specifications.

3150. Residential Construction Techniques (3) Formerly CMGT 2558
P: Minimum grade of C in CMGT 2400; minimum overall GPA of 2.0. Selection criteria and graphical interpretation of materials and techniques of residential buildings. Considers performance, code requirements, maintainability, and cost benefit aspects related to the different sectors of residential construction.

3400. Structural Analysis (3) Formerly CMGT 3660
P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; MATH 1074 or 1075 or equivalent; PHYS 1250, 1251. Introduces statics, strength of materials, and structural analysis as related to stability of building's structural components. Topics include building loads resulting in compressive and tensile forces in columns, beams, and trusses; strength of components to resist such loads; analysis of components under varying load conditions; and basic design considerations of common temporary construction structures such as formwork, bracing of vertical elements, rigging for lifts, and retaining walls.

3500. Construction Contracts and Specifications (3) Formerly CMGT 3664
P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; P/C: CMGT 3010. Practices and principles in use of contract documents and specifications as they apply to construction project. Emphasis on relationship to construction process and project management.

3600. Mechanical and Electrical Construction (3) Formerly CMGT 3662, 3663
2 lecture and 2 lab hours per week. P: Minimum overall GPA of 2.0; P/C: CMGT 3500. Study of mechanical, electrical, and plumbing systems, applicable codes, and effect on the construction process. Coordination with various construction document formats and media.

3700, 3701. Construction Surveying (3,0) Formerly CMGT 3666, 3667
2 lecture and 3 lab hours per week. P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; MATH 1074 or 1075 or equivalent. Construction aspects of surveying with field and classroom exercises in use of transit, level, tape, and related surveying equipment. Problems and exercises in traverse closure and pipeline, grading, street, curve, and building layout.

3710, 3711. Infrastructure and Highway Materials (3,0)
2 lecture and 2 lab hours per week. P: Minimum grade of C in CMGT 3500; minimum overall GPA of 2.0; P/C: CMGT 3800. Physical characteristics and properties of heavy civil, highway, and infrastructure materials. Technical specifications and quality control and assurance procedures emphasized.
3800, 3801. Soils and Foundations (3.0) Formerly CMGT 3766, 3767
2 lecture and 2 lab hours per week. P: Minimum grade of C in CMGT 2600; minimum overall GPA of 2.0; GEOL 1500, 1501; MATH 1074 or 1075 or equivalent; PHYS 1250, 1251. Fundamentals of soil mechanics as related to soil classification and construction of earthwork and foundations.

3900. Construction Project Safety Management (3) Formerly CMGT 3726
P: Minimum grade of C in CMGT 3500; minimum overall GPA of 2.0. Use of safety management as a company profit center with focus on estimating and scheduling of required safety standards as they impact CSI divisions. Includes safety control strategies based on training, programs, and culture.

3950. Residential Development (3) Formerly CMGT 3558
P: Minimum grade of C in CMGT 3150; minimum overall GPA of 2.0. Introduction to the selection criteria for land development, planning principles, codes and regulations, and design approaches for residential construction of small to large units.

4000. Construction Estimating (3) Formerly CMGT 4660
P: Minimum grade of C in CMGT 3500; minimum overall GPA of 2.0; P/C: CMGT 3400. Procedures to quantify materials, labor, and equipment for construction. Emphasis on classification of work, quantity survey techniques, cost estimating and understanding of schedule of values with coordination to construction documents.

4100. Construction Planning and Scheduling (3) Formerly CMGT 4662
P: Minimum overall GPA of 2.0; P/C: CMGT 4000. Applies planning and scheduling techniques to construction projects. Emphasis on bar charts, critical path method (CPM), cost allocation, schedule updating, cash flow, and resource scheduling with coordination to construction documents.

4200. Construction Cost Control (3)
P: Minimum grade of C in CMGT 4100; minimum overall GPA of 2.0. Project-level cost control and construction economics. Emphasizes labor cost control, project cash flow, and analysis of capital expenditures. Other topics are order of magnitude estimating, equipment cost control, material cost control, subcontract cost control, and construction claims.

4300. Construction Quality and Human Resource Management (4) (WI) Formerly CMGT 4600, 4601
P: Minimum grade of C in CMGT 4100, 4200; P/C: CMGT 4200; minimum overall GPA of 2.0. Issues in construction quality and human resource management incorporating safety methods, utilizing group and individual relationships among construction personnel to comply with laws and regulations.

4310. Infrastructure Construction Techniques (3)
P: Minimum overall GPA of 2.0; P/C: CMGT 4200. Plans and specifications of infrastructure systems including construction techniques and processes. Schedule management of infrastructure projects using CPM and linear scheduling.

4320. Construction Sustainability (3)
P: Minimum overall GPA of 2.0; senior standing. Concepts of sustainability and design as applied in construction, including means, methods, and practices associated with sustainability in the built environment.

4340. Construction Economics (3)
P: Minimum overall GPA of 2.0; ECON 2133. Economic and financial factors that influence managerial decisions in the construction industry. Emphasis on decisions involving the time-value of money.

4380. Equipment Management (3) Formerly CMGT 4666
   P: Minimum overall GPA of 2.0; CMGT 3400, 3800. Productivity, performance, and maintenance requirements of construction equipment.

4400. Construction Capstone (4) Formerly CMGT 4664
   P: Minimum grade of C in CMGT 4300; minimum overall GPA of 2.0.; Senior level capstone class that integrates all aspects of the construction management process. Emphasis on team interactions, project management, decision making, and problem solving utilizing current construction documents. Specific course sections designated for program concentration.

4500. Construction Work Experience and Professional Development (1) Formerly CMGT 4699
   P: Minimum overall GPA of 2.0; completed senior summary; applied to graduate; P/C: CMGT 4400; graduating semester. Required of all construction management students. Minimum of 500 documented hours of construction work with state licensed general contractor, subcontractor, construction management company, or other approved employment. Students must pay a fee and sit for the American Institute of Constructors Level I Certification exam during the last semester before graduating.

4501. Laboratory Problems: Construction Management (3)
   6 lab hours per week. P: Minimum overall GPA of 2.0; consent of CMGT instructor. Independent study to gain further expertise in particular area of construction management.

4502, 4503, 4504. Independent Study: Construction (1,2,3)
   P: Minimum overall GPA of 2.0; consent of dept chair. Special topics in selected areas of construction. Exploration and research in personal areas of interest.

4505. Special Projects (1-3) (WI)
   P: Minimum overall GPA of 2.0; consent of dept chair. Develop and submit business and management documents that pertain to varied aspects of construction.

Agenda Item VIII

College of Technology and Computer Science
Department of Engineering

http://www.ecu.edu/cs-acad/ugcat/engineering.cfm

BS in Engineering
Minimum degree requirement for the engineering program is 128 s.h. credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) including those listed below - 42 s.h.

   BIOL 1050. General Biology (3) (F,S,SS) (FC:SC) and BIOL 1051. General Biology Laboratory (1) (F,S,SS) (FC:SC) (C:BIOL 1030 or 1050) or BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
   ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
   MATH 2151. Engineering Calculus I (3) (S) (FC:MA) (May not receive credit for MATH 2151 after receiving credit for MATH 2171) (P: MATH 1083 or 1085 or placement test criteria; or consent of instructor)
   PHIL 2275. Professional Ethics (3) (WI*) (F,S,SS) (FC:HU) or PHIL 2274. Business Ethics (3) (WI*) (F,S,SS) (FC:HU)
   PHYS 2350. University Physics (4) (F,S,SS) (FC:SC) (P for 2350: MATH 2121, 2151, or 2171)

2. Engineering Foundation - 39 s.h.

   ENGR 1000. Introduction to Engineering (1) (P: Engineering major)
   ENGR 1012. Engineering Graphics (2) (C: MATH 1083 or higher 2151 or 2171)
   ENGR 1016. Introduction to Engineering Design (2) (P: ENGR 1000, 1012)
   ENGR 2000. Engineering Design and Project Management I (1) (P: ENGR 1016 or consent of instructor)
   ENGR 2022. Statics (3) (C: PHYS 2350; P: MATH 2152 or 2172)
   ENGR 2050. Computer Applications in Engineering (3) (P: MATH 1083 or higher 2151 or 2171)
   ENGR 2070. Materials and Processes (3) (WI)
   ENGR 2450. Dynamics (3) (Formerly ENGR 3004) (P: ENGR 2022 with minimum grade of C; MATH 2152 or 2172)
   ENGR 2514. Circuit Analysis (4) (P/C: MATH 2154; PHYS 2360)
   ENGR 3000. Engineering Design and Project Management II (2) (WI) (P/C: ENGR 3420; P: ENGR 2000)
   ENGR 3024. Mechanics of Materials (3) (WI) (P: ENGR 2022 with minimum grade of C; ENGR 2070)
   ENGR 3050. Sensors, Measurements and Controls (3) (P: ENGR 2514 or 3014; MATH 2154)
   ENGR 3420. Engineering Economics (2) (P: MATH 2152 or 2172)
   ENGR 3800. Quality Control for Engineers (3) (Formerly ENGR 4000) (P: MATH 3307)
   ENGR 4010. Senior Capstone Design Project I (2) (WI) (P: ENGR 3000, consent of instructor)
   ENGR 4020. Senior Capstone Design Project II (2) (WI) (P: ENGR 4010)

3. Cognates - 21 s.h.
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)

MATH 2152. Engineering Calculus II (3) (S) (FC:MA) (May not receive credit for MATH 2152 after receiving credit for MATH 2172) (P: Minimum grade of C in MATH 2151 or 2171; or consent of instructor)

MATH 2153. Engineering Calculus III (3) (F) (FC:MA) (May not receive credit for MATH 2153 after receiving credit for MATH 2173) (P: MATH 2152 or 2172; or consent of instructor)

MATH 2154. Engineering Linear Algebra and Differential Equations I (4) (S) (P: ENGR 2050; MATH 2153 or MATH 2173)

MATH 3307. Mathematical Statistics I (3) (F) (S) (P: MATH 2152 or MATH 2172)

PHYS 2360. University Physics (4) (F,S,SS) (FC:SC) (P: PHYS 2350)

4. Concentrations (Choose one)

Biomedical Engineering - 26 s.h.

BIME 3000 2080. Foundations of Biomedical Engineering (3 2) (S) (Formerly BIME 3000) (P: ENGR 2050 or consent of instructor)

BIME 4030. Biomechanics and Materials (4) (P: CHEM 2750, 2753; ENGR 2450 with minimum grade of C; ENGR 3024; ENGR 3012 or MENG 4150)

BIME 4040. Physiological Systems and Modeling for Engineering I (3) (F) (P: BIME 30002080 or consent of instructor)

BIME 4050. Physiological Systems and Modeling for Engineering II (3) (S) (P: BIME 4040 or consent of instructor)

BIME 4200. Biomedical Instrumentation (4) (P: BIME 3000 2080; ENGR 3050)

CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)

CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)

CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)

ENGR 3012. Thermal and Fluid Systems (4) (P: ENGR 2450 with minimum grade of C; MATH 2453 2154)

Technical electives, 6 s.h. as approved by the academic advisor.

Bioprocess Engineering - 26 s.h.

BIOE 3016 Engineering Applications in Microbial Systems (2) (P: ENGR 2450 with minimum C; MATH 2154; C: CHEM 2650, 2651)

BIOE 3250. Bioprocess Engineering Systems (3) (Formerly BIOE 3000) (P: CHEM 2650, 2651; BIOE 3016)

BIOE 4006. Bioprocess Validation and Quality (2) (P: MATH 3307; consent of instructor)

BIOE 4010. Bioprocess Separation Engineering (3) (P: BIOE 3250; ENGR 3012)

BIOE 4020. Bioprocess Plant Design, Simulation and Analysis (3) (P: BIOE 4010; MATH 3307)

BIOL 2110, 2111. Fundamentals of Microbiology and Laboratory (3,1) (F,S) (FC:SC) P for 2110: CHEM 1120, 1130 or CHEM 1150, 1160; RP for 2110: BIOL 1050, 1051 or 1100, 1101; P/C for 2111: BIOL 2110)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2650. Organic Chemistry for the Life Sciences (4) (F) (P: CHEM 1160, 1161)
CHEM 2651. Organic Chemistry Lab for the Life Sciences (1) (F) (C: CHEM 2650)
ENGR 3012. Thermal and Fluid Systems (4) (P/C: ENGR 2450 with minimum grade of C; MATH 2153-2154)

Electrical Engineering - 26 s.h.
EENG 2410. Digital Electronics (3) (Same as CSCI 2410) (P: ENGR 1014 or 1016 and 2050; or CSCI 2310, 2311)
EENG 3020. Signals and Systems (3) (P: ENGR 2514; MATH 2154)
EENG 3040. Microprocessors (4) (Same as CSCI 3040) (P: ENGR 2514; CSCI 2410 or EENG 2410; or consent of instructor)
EENG 3530. Electronics (3) (P: ENGR 2514 with minimum grade of 2.0)
EENG 3750. Electric Power Systems (3) (P: ENGR 2514)
EENG 4510. Advanced Controls (3) (P: EENG 3020; ENGR 3050)
ENGR 3012. Thermal and Fluid Systems (4) (S) (P/C: ENGR 2450 with minimum grade of C; MATH 2153-2154)

Technical electives, 3 s.h. as approved by the academic advisor.
Industrial and Systems Engineering - 26 s.h.
ISYS 3010. Principles and Methods of Industrial and Systems Engineering (3) (P: Junior standing in engineering)
ISYS 3060. Systems Optimization (3) (P: MATH 2154, 3307)
ISYS 4010. Work Measurement and Human Factors (3) (P: MATH 3307)
ISYS 4020. Analysis of Production Systems and Facility Design (3) (P: MATH 3307)
ISYS 4065. Discrete System Modeling (3) (P: ENGR 3800)
ENGR 3012. Thermal and Fluid Systems (4) (P/C: ENGR 2450 with minimum grade of C; MATH 2153-2154)

Technical electives, 7 s.h. as approved by the academic advisor.
Mechanical Engineering - 26 s.h.
MENG 3624. Solid Mechanics (3) (P: ENGR 3024)
MENG 3070. Thermodynamics I (3) (P: MATH 2154; ENGR 2450 with minimum grade of C)
MENG 4018. Thermodynamics II (3) (P: MENG 3070)
MENG 4150. Fluid Mechanics (4) (P: ENGR 2450 with minimum grade of C; MATH 2154 MENG 3070)
MENG 4260. Heat and Mass Transfer (3) (P: ENGR 3012 or MENG 3070)
MENG 4650. Machine Design (3) (P: MENG 3624 ENGR 2450, 3024)
Technical electives, 7 s.h. as approved by the academic advisor.

http://www.ecu.edu/cs-acad/ugcat/CoursesE.cfm#engr

ENGR: Engineering Core
1000. Introduction to Engineering (1)
2 lecture hours per week. P: Engineering major. Introduction to the engineering profession, engineering design, and problem solving. Focus on communications, collaborative learning, use of resources, development of engineering study skills, and strategies for student success.

1002. Fundamentals of Engineering Practice (3)
3 lecture hours per week. P: Consent of instructor. Introduction to the engineering profession. Topics include mathematical modeling, functions and graphs, trigonometry, vector geometry, systems of equations and analytical geometry.

1012. Engineering Graphics (2)
1 lecture and 2 lab hours per week. C: MATH 1083 or higher 2151 or 2171. Engineering graphics in a professional engineering context, including sketching and working drawings, multiple views, sections, solid modeling software, drawing standards, tolerancing, and dimensioning.

1014. Introduction to Engineering (3)
1 lecture and 4 lab hours per week. P: ENGR 1012. Engineering profession and basic tools and concepts of engineering, providing immersive and hands-on experience in engineering practice areas, including professional practice, systems thinking, and basics concepts in machinery, controls, digital circuits, and data analysis.

1016. Introduction to Engineering Design (2)
2 two-hour labs per week. P: ENGR 1000, 1012. Engineering design process including developing design requirements and constraints, determining feasible solutions, evaluating alternative solutions and testing implementing the best dilution. Utilizes case studies and hands-on micro-processor and robotic based design problems in a team environment.

2000. Engineering Design and Project Management I (1)
2 lecture hours per week. P: ENGR 1016 or consent of instructor. Continuation of ENGR 1016. Historical engineering achievements, focusing on the design process and project management issues; engineering failures, emphasizing the impacts on the engineering profession and society; and contemporary issues facing society, focusing on the role of engineering solutions.

2022. Statics (3) (S)
3 lecture hours per week. P: MATH 2152 or 2172; C: PHYS 2350. Analysis of equilibrium of particles, addition and resolution of forces, equivalent system of forces, equilibrium of rigid bodies, centroid and moment of inertia, structural analysis, internal forces, friction, and virtual work.

2050. Computer Applications in Engineering (3)
2 lecture and 2 lab hours per week. C: Math 1083 or higher 2151 or 2171. Application of modern programming tools and languages to solve engineering problems.

2070. Materials and Processes (3) (WI)
2 lecture and 2 lab hours per week. P: CHEM 1150. Study of the materials used in engineering and related manufacturing processes. Materials topics include the atomic structure of materials, alloys, phase diagrams, and heat treatment. Manufacturing processes include casting, forming, machining, and joining processes.

2450. Dynamics (3) (S) Formerly ENGR 3004
3 lecture hours per week. P: ENGR 2022 with minimum grade of C; MATH 2152 or 2172. Fundamental topics in particle and rigid body dynamics. Planar kinematics of a particle. Planar kinetics of a particle: force and acceleration, work and energy, and impulse and momentum. Planar kinematics of a rigid body.

2514. Circuit Analysis (4)
3 lecture and 2 lab hours per week. P/C: MATH 2154; PHYS 2360. Fundamental electric circuit concepts and theory. Electronic elements and electric power, DC and AC circuits, and circuit analysis methods in time and frequency domains.

3000. Engineering Design and Project Management II (2) (WI)
1 lecture and 2 lab hours per week. P/C: ENGR 3420; P: ENGR 2000. Integration of engineering design and project management. Employs example project to demonstrate the steps of engineering design, develop a project plan, project presentation, and design report with supporting documents.

3012. Thermal and Fluid Systems (4)
3 lecture and 2 lab hours per week. P/C: ENGR 2450 with minimum grade of C; MATH 2153, 2154. Explores systems approach to design, analysis, and engineering of thermal and fluid systems using mathematical and software tools.

3014. Circuit Analysis (3)
2 lecture and 2 lab hours per week. P: MATH 2153; PHYS 2360. Electrical and electronic engineering concepts, theory, and methods. Includes electric circuit analysis, electro mechanics, and electrical instrumentation systems.

3024. Mechanics of Materials (3) (WI)
2 lecture and 2 lab hours per week. P: ENGR 2022 with minimum grade of C. ENGR 2070. Behavior of deformable bodies subjected to axial loading, torsion, and bending. Includes stress-strain relations, elastic deflections of beams, effects of combined loading, buckling of slender columns, and failure criteria for ductile and brittle materials.

3050. Sensors, Measurements, and Controls (3)
2 lecture and 2 lab hours per week. P: ENGR 2514 or 3014; MATH 2154. Fundamental concepts of measurement and instrumentation at the system level. Measurement systems cover non-electrical parameters measurement, data acquisition, and signal conditioning. Controls systems cover application of mathematical and analytical tools to model, analyze, and design automated feedback control systems for dynamic processes.

3060. System Optimization (3)
P: MATH 3100, 3307. Introduces mathematical tools applied to system optimization, including problem formulation, identification of decision variables, use of graphical methods, linear programming, concepts of duality, and sensitivity analysis. Applications include transportation, network analysis, project management and other engineering areas.

3100. Internship in Engineering (1) (WI)
P: Consent of instructor. Minimum of 150 hours of supervised work or project experience in engineering. May include industry or service learning activities and be repeated for credit as a technical elective.

3400. Engineering Economics (3) (WI)
3 lecture hours per week. P: MATH 2152. Analysis of cash flows including cost, revenue, and benefits that occur at different times. Evaluation of engineering projects using
equivalent worth, benefit-cost, and rate of return including impact of depreciation, taxes, and statistical risk.

3420. Engineering Economics (2)
P: MATH 2152 or 2172. Analysis of cash flows including cost, revenue, and benefits that occur at different times. Evaluation of engineering projects using equivalent worth, benefit-cost, and rate of return including impact of depreciation, and taxes.

3500. Introduction to Engineering Project Management (3) (WI) Formerly ENGR 3300
3 lecture hours per week. P: ENGR 3400; MATH 3307. System needs and analysis identification, functional requirements analysis, project timelines, network analysis, and system development progress metrics.

3800. Quality Control for Engineers (3) Formerly ENGR 4000
3 lecture hours per week. P: MATH 3307. Analytical procedures associated with Statistical Quality and Process Control. Includes design of experiments, and system approaches to maintenance and improvement of process quality.

3901, 3902, 3903. Undergraduate Research in Engineering (1,2,3)
P: Minimum GPA of 2.5 or consent of instructor and chair. Study of an experimental or theoretical area involving engineering analysis and design. Demonstrates depth of analysis and study beyond scope of existing courses. Up to 3 s.h. of undergraduate research may be applied toward degree.

4010. Senior Capstone Design Project I (2) (WI)
1 lecture and 2 lab hours per week P: ENGR 3000; consent of instructor. Senior capstone course involves open-ended design project, exposing students to practice of engineering design and problem solving. Emphasis on real problems and working with real clients. Students required to visit facilities, interact with client employees, determine on-site data measurement strategies, and perform any necessary literature search. Develop proposal for project to be performed in ENGR 4020.

4020. Senior Capstone Design Project II (2) (WI)
1 lecture and 2 lab hours per week. P: ENGR 4010. Open-ended design project, exposing students to practice of engineering design and problem solving. Requires facility visits, interaction with clients, onsite data measurement and literature search. Preparation and completion of Fundamentals of Engineering professions examination.

4501, 4502, 4503. Special Topics in Engineering (1,2,3)
P: Consent of instructor. May be repeated for credit as a technical elective. Course builds upon knowledge gained from the core engineering or specialization curriculum. Topics typically focus on advanced or emerging area, which will equip graduates with specialized knowledge to improve performance in analysis, synthesis, and design.

4510. Practice of Professional Engineering I (1)
2 lab hours per week. C: ENGR 4010, 4020, or consent of instructor. Problem analysis and review of topics related to the fundamentals of engineering exam and professional practice. Covers topics such as statics and dynamics.

http://www.ecu.edu/cs-acad/ugcat/CoursesB.cfm#bime

BIME: Biomedical Engineering
3000 2080. Foundations of Biomedical Engineering (4) (S) (Formerly BIME 3000)
2 lecture and 3 lab hours per week. P: ENGR 2050 or consent of instructor.
Application of fundamental engineering skills to solve problems in medicine and biology.
Introduces students to a wide range of state-of-the-art applications in biomedical engineering and promotes understanding of interdisciplinary nature of the field. Topics may include medical instrumentation and design, biomechanics, biomaterials, mass transport, application of computers in medicine, artificial implants, medical imaging, and medical ethics design, biomechanics, biomaterials, medical imaging, research and medical ethics, and problem solving.

4030. Biomechanics and Materials (4)
3 lecture and 3 lab hours per week. P: CHEM 2750, 2753; ENGR 2450 with minimum grade of C; ENGR 3024; ENGR 3012 or MENG 4150. Concepts of statics, dynamics, mechanics of materials, and fluid mechanics applied to biological systems. Characterization of biological materials, including time-dependent properties.

4040. Physiological Systems and Modeling for Engineering I (3) (F)
3 lecture hours per week. P: BIME 3000 2080 or consent of instructor. Introduction to physiology, emphasizing concepts and systems for engineering, including cell signaling, body signaling and control systems. Quantitative introduction to cardiovascular and renal systems. Example of brain-machine interfaces. Survey of other physiological systems Quantitative approach to human physiology from the biomedical engineering perspective with emphasis on cellular, neural, endocrine and musculoskeletal systems. Introduction to numerical simulation of physiologic processes and simple control/feedback systems.

4050. Physiological Systems and Modeling for Engineering II (3) (S)
P: BIME 4040 or consent of instructor. Quantitative approach to human physiology from the biomedical engineering perspective with emphasis on cardiovascular, pulmonary, renal and gastrointestinal systems. Applied numerical simulation of physiologic processes and control/feedback systems.

4200. Biomedical Instrumentation (4)
3 lecture and 2 lab hours per week. P: BIME 3000 2080; ENGR 3050. Instrumentation and techniques used in acquisition, processing, and presentation of biomedical signals: transducers, sensors, Fourier analysis, flow measurement, medical imaging, biosensors, amplifiers, bridge circuits, and measurement of physical parameters and electrophysiological signals.

http://www.ecu.edu/cs-acad/ugcat/CoursesE.cfm#eeng

EENG: Electrical Engineering

2410. Digital Electronics (3) Same as CSCI 2410
P: ENGR 1014 or 1016 and 2050; or CSCI 2310, 2311. Introduction to digital logic and digital electronics, including Boolean algebra, number systems, logic gates, data structures, and both combinational and sequential logical design and optimization.

3020. Signals and Systems (3)
P: ENGR 2514; MATH 2154. Singularity functions, properties of LTI systems, and differential and difference equation representation of physical systems. Convolution, Fourier series, Fourier Transforms, Laplace transforms, and z-transforms. Applications in
sampling, modulation, filtering, and digital signal processing, with relevant examples in electrical, mechanical, and biomedical engineering.

3040. Microprocessors (4) Same as CSCI 3040
3 lecture and 2 lab hours per week. P: ENGR 2514, EENG 2410 or CSCI 2410; or consent of instructor. Microprocessor architecture and programming, register level logic, input and output, system logic, timing, embedded systems applications, and hardware interfacing.

3530. Electronics (3)
P: ENGR 2514 with minimum grade of 2.0. Fundamentals of operational amplifiers and common topologies; PN junctions, semiconductor physics, the ideal diode, and real diodes; bipolar junction transistors (BJTs) and metal oxidized silicon field-effect transistors (MOSFETs): physical structures, signal models, common configurations, and second-order effects.

3750. Electric Power Systems (3)
P: ENGR 2514. Alternating current (AC) systems, single-phase and three-phase systems, transformers, electric machinery, electric power generation, transmission lines, and power system faults.

4510. Advanced Controls (3)
P: EENG 3020; ENGR 3050. Difference equations and Z-transforms; sampling of continuous-time systems; transfer functions in Z-domain and discrete-time system models; control system performance and stability analysis in Z-domain; digital-controller design and implementation.

http://www.ecu.edu/cs-acad/ugcat/CoursesM.cfm#meng

MENG: Mechanical Engineering

3624. Solid Mechanics (3)
3 lecture hours per week. P: ENGR 3024. Analysis of structures including static and fatigue, failure criteria, column buckling, statically indeterminate structures, impact loading, and the finite element method.

3070. Thermodynamics I (3)
P: MATH 2154; ENGR 2450 with minimum grade of C. Thermodynamic properties and tables. First and second law analysis for open systems and control volumes. Ideal and real gases and mixtures of gases, availability, irreversibility, and exergy.

4018. Thermodynamics II (3) 3 lecture hours per week
P: MENG 3070. Engineering applications involving ideal gas mixtures, psychrometrics, real gas mixtures, power cycles, refrigeration systems, pumps, heat exchangers, boilers, combustion, dissociation and chemical equilibrium.

4150. Fluid Mechanics (4) 3 lecture and 2 lab hours per week
P: ENGR 2450 with minimum grade of C; MATH 2154 MENG 3070. Fluid systems including fluid statics; conservation of mass, momentum, and energy; incompressible inviscid flow; similitude; internal and external incompressible viscous flow; and fluid machinery.

4260. Heat and Mass Transfer (3)
3 lecture hours per week. P: ENGR 3012 or MENG 3070. Three fundamental modes of heat transfer: conduction, convection and radiation, and mass transfer.

4350. Electromechanical Systems Design (3)
2 lecture and 2 lab hours per week. C: ENGR 3050. Application of motion sensors and actuators; real-time closed-loop control of electromechanical/robotic systems; motor control and digital controller design methods.

4650. Machine Design (3)
3 lecture hours per week. P: MENG 3624 ENGR 2450, 3024. Kinematics of mechanisms and machines. Design and analysis of machine components, including shafts, gears, bearings.

Agenda Item IX

Thomas Harriot College of Arts and Sciences

Department of Geography

http://www.ecu.edu/cs-acad/ugcat/geography.cfm

DEPARTMENT OF GEOGRAPHY

Burrell Montz, Chair, A-227 Brewster Building

BA in Geography

Students must complete a minimum of 21 s.h. in geography above 2999. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit, see Liberal Arts Foundations Curriculum).................................42 s.h.
2. Foreign language through level 1004.................................................................12 s.h.
3. Common core.......................................................................................................13 s.h.
   GEOG 2400. Spatial Data Analysis (3) (F, S)
   GEOG 4999. Geography Professional Seminar (1) (F,S) (P: Consent of instructor)
   Choose 9 s.h. electives from:
   GEOG 2410. Fundamentals of GIS (3) (F, S) (Same as PLAN 2410)
   GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or PLAN 2410 or equivalent)
   GEOG 3430. Geographic Information Systems I (3) (F,S) (Same as PLAN 3430) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3450. Introduction to the Global Positioning System (3) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3460. GIS Applications Programming (3) (F) (P: GEOG 2410 or PLAN 2410; BITE 2212 or CSCI 1610 or MIS 2223 or BITE 2212 or consent of instructor)
GEOG 4150. Advanced Spatial Analysis (3) (F) (Formerly GEOG 3400) (P: GEOG 2400; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4410. Advanced Cartographic Design and Production (3) (F,S) (P: GEOG 2410 or PLAN 2410 or equivalent experience)
GEOG 4420. Remote Sensing II (3) (P: GEOG 3420 or consent of instructor)
GEOG 4430. Geographic Information Systems II (3) (S) (Same as PLAN 4430) (P: GEOG 3430 or PLAN 3430 or consent of instructor)
GEOG 4440. Coastal Applications of GIS (3) (F,S) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4450. GIScience, Society, and Technology (3) (S) (P: GEOG 2410; GEOG 3420; GEOG 3430 or PLAN 3430; or consent of instructor)
GEOG 4460. Digital Terrain Analysis (3) (F) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4491, 4492, 4493. Supervised Study in Geographic Techniques (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4801, 4802, 4803. Geographic Internship (1,2,3) (F,S,SS) (P: Consent of GEOG internship director the semester prior to the internship; Consent of director of geography internships, consent should be obtained during the semester prior to internship)
GEOG 4901. Senior Honors Thesis (3) (F,S) (P: GEOG 4900 with a grade of B or higher)
GEOG 4901, 4902, 4903. Supervised Study in Regional Geography (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4901. Senior Honors Thesis (3) (F,S) (P: GEOG 4900 with a grade of B or higher)

4. Concentration area (Choose 15 s.h. in one area, 6 s.h. in the other area.).................. 21 s.h.

**Human:**
GEOG 2003. Geography of the Global Economy (3) (F,S) (FC:SO)
GEOG 2019. Geography of Recreation (3) (F) (FC:SO)
GEOG 2100. World Geography: Developed Regions (3) (F, S, SS) (FC:SO)
GEOG 2110. World Geography: Less Developed Regions (3) (F, S, SS) (FC:SO)
*GEOG 2300. Geography of Environmental Resources (3) (F)
GEOG 3001. Historical Geography of the United States (3)
GEOG 3003. Political Geography (3) (WI) (S) (FC:SO)
GEOG 3004. Urban Geography (3) (F)
GEOG 3049. Latin America (3) (WI) (WI*) (FC:SO)
GEOG 3050. Africa (3) (WI) (FC:SO)
GEOG 3051. Asia (3) (S) (FC:SO)
GEOG 3055. North Carolina (3) (F) (FC:SO)
GEOG 3056. Middle America (3) (FC:SO)
*GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 4140. Research Methods in Human Geography (3) (S) (P: GEOG 2300; 15 s.h. in GEOG; or dept consent)
*GEOG 4191, 4192, 4193. Supervised Study in Regional Geography (1,2,3) (F,S,SS) (P: Consent of instructor)
*GEOG 4270. Water Resources Management and Planning (3) (Same as PLAN 4270) (P: GEOG 1000 or 1250; or PLAN 1900)
GEOG 4310. Geography of Transportation and Trade (3) (S) (P: GEOG 2003)
GEOG 4315. Geographic Images (3) (F) (FC:SO) (Formerly GEOG 3300)
GEOG 4320. Gender, Economy, and Development (3) (S) (P: Consent of instructor)
GEOG 4325. Resources, Population, and Development (3) (WI) (FC:SO) (Formerly GEOG 3000) (P: GEOG 2003 or consent of instructor)
GEOG 4330. Agricultural Geography (3) (WI*) (F) (FC:SO)
GEOG 4335. Geography of Tourism (3) (S) (FC:SO)
*GEOG 4340. Introduction to Medical Geography (3) (S) (P: GEOG 2410 or PLAN 2410 or consent of Instructor)
GEOG 4345. Human Migration and Global Restructuring (3) (F) (FC:SO)
GEOG 4391, 4392, 4393. Supervised Study in Human Geography (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4900. Honors Research (3) (F,S) (P: Admission to GEOG honors program)
GEOG 5391, 5392, 5393. Seminar in Human Geography (1,2,3) (P: Consent of instructor)
*May only count in one area.

Environmental: (In concentration area, a minimum of 3 s.h. must be above 3999.)
GEOG 1300. Weather and Climate (4) (F,S,SS) (FC:SC)
GEOG 2250. Earth Surface Systems (3) (F)
*GEOG 2300. Geography of Environmental Resources (3) (F)
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250)
GEOG 3230. Global Climates (3) (S) (P: GEOG 1300; MATH 1065; or consent of instructor)
GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 3510. Physical Meteorology (3) (F) (P: GEOG 1300; MATH 1065; or consent of instructor)
GEOG 3520. Dynamic Meteorology (3) (S) (P: GEOG 1300; MATH 2172, PHYS 2360; or consent of instructor)
GEOG 3550. Principles of Synoptic Meteorology (3) (F) (P: GEOG 3520 or 1300 or consent of instructor)
GEOG 4210. Fluvial and Hydrological Processes (3) (S) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4220. Coastal Geography (3) (WI) (S) (Formerly GEOG 3002) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4230. Earth Surface Processes (3) (WI) (F) (P: GEOG 1300, 2250; or consent of instructor)
*GEOG 4270. Water Resources Management and Planning (3) (Same as PLAN 4270) (P: GEOG 1000 or 1250; or PLAN 1900)
GEOG 4291, 4292, 4293. Supervised Study in Physical Geography (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4510. Meteorological Instruments and Observation (3) (F) (P: GEOG 1300; MATH 1065; or consent of instructor)
GEOG 4520. Boundary Layer Meteorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4525. Dynamic Meteorology II (3) (F) (P: GEOG 3520; MATH 4331; or consent of instructor)
GEOG 4530. Micrometeorology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4540. Coastal Storms (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4550. Applied Synoptic Meteorology: Analyses and Forecasting (3) (S) (P: GEOG 3550; or consent of instructor)
GEOG 4560. Urban Climatology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4570. Hydrometeorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4580. Radar and Satellite Meteorology (3) (S) (P: GEOG 1300, 3420; or consent of instructor)
GEOG 4590. Tropical Meteorology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4900. Honors Research (3) (F,S) (P: Admission to GEOG honors program)
GEOG 5220. Physical Geography Field Experience (3) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 5281, 5282, 5283. Selected Topic in Physical Geography (1,2,3) (P: Consent of instructor)
*May only count in one area.

5. Minor and general electives to complete requirements for graduation.

BS in Applied Geography

Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (See Section 4, Foundations Curriculum Requirements for all Baccalaureate Degree Programs), including those listed below................................................. 42 s.h.
   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on mathematics placement test)

2. Core (Choose a minimum of 27 s.h. in geography above 2999, including a maximum of 3 s.h. of supervised study in each of the categories below.)..................................................43 s.h.
   ENGL 3820. Scientific Writing (3) (WI) (F,S) (P: ENGL 1200) or ENGL 3860. Introduction to Nonfiction Writing (3) (F,S) (P: ENGL 1200) or ENGL 3880. Writing for Business and Industry (3) (WI) (F,S,SS) (P: ENGL 1200) or ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)
   GEOG 2400. Spatial Data Analysis (3) (F,S)
   GEOG 2410. Fundamentals of GIS (3) (F,S) (Same as PLAN 2410)
   GEOG 4801, 4802, 4803. Geography Internship (1,2,3) (F,S,SS) (P: Consent of GEOG internship director semester prior to internship; consent of director of geography internships; consent should be obtained during the semester prior to internship)
   GEOG 4999. Geography Professional Seminar (1) (F,S) (P: Consent of instructor)

Geographic Information Science (Choose 9 s.h. from the following.):
GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3430. Geographic Information Systems I (3) (F,S) (Same as PLAN 3430) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3450. Introduction to the Global Positioning System (3) (S) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3460. GIS Applications Programming (3) (F) (P: GEOG 2410 or PLAN 2410; BITE 2212 or CSCI 1610 or MIS 2223 or consent of instructor)
GEOG 4150. Advanced Spatial Analysis (3) (F) (Formerly GEOG 3400) (P: GEOG 2400; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4410. Advanced Cartographic Design and Production (3) (F,S) (P: GEOG 2410 or PLAN 2410 or equivalent experience)
GEOG 4420. Remote Sensing II (3) (S) (P: GEOG 3420 or consent of instructor)
GEOG 4430. Geographic Information Systems II (3) (S) Same as PLAN 4430) (P: GEOG 3430 or PLAN 3430 or consent of instructor)
GEOG 4440. Coastal Applications of GIS (3) (F,S) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4450. GIScience, Society, and Technology (3) (S) (P: GEOG 2410 or PLAN 2410; GEOG 3420; GEOG 3430 or PLAN 3430; or consent of instructor)
GEOG 4460. Digital Terrain Analysis (3) (F) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4491, 4492, 4493. Supervised Study in Geographic Techniques (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4900. Honors Research (3) (F,S) (P: Admission to GEOG honors program)

**Human (Choose 9 s.h. from the following.):**
GEOG 2003. Geography of the Global Economy (3) (F,S) (FC:SO)
GEOG 2019. Geography of Recreation (3) (F) (FC:SO)
GEOG 2100. World Geography: Developed Regions (3) (F,S,SS) (FC:SO)
GEOG 2110. World Geography: Less Developed Regions (3) (F,S,SS) (FC:SO)
**GEOG 2300. Geography of Environmental Resources (3) (F)
GEOG 3001. Historical Geography of the United States (3) (F)
GEOG 3003. Political Geography (3) (WI) (S) (FC:SO)
GEOG 3004. Urban Geography (3) (S) (F)
GEOG 3049. Latin America (3) (WI) (WI*) (FC:SO)
GEOG 3050. Africa (3) (WI) (S) (FC:SO)
GEOG 3051. Asia (3) (S) (FC:SO)
GEOG 3055. North Carolina (3) (F) (FC:SO)
GEOG 3056. Middle America (3) (FC:SO)
**GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 4050. Human Migration and Global Restructuring (3) (F) (FC:SO)
GEOG 4140. Research Methods in Human Geography (3) (S) (P: GEOG 2300; 15 s.h. in GEOG; or dept consent)
GEOG 4191, 4192, 4193. Supervised Study in Regional Geography (1,2,3) (F,S,SS) (P: Consent of instructor)
**GEOG 4270. Water Resources Management and Planning (3) (Same as PLAN 4270) (P: GEOG 1000 or 1250; or PLAN 1900)
GEOG 4310. Geography of Transportation and Trade (3) (S) (P: GEOG 2003)
GEOG 4315. Geographic Images (3) (F:SO) (Formerly GEOG 3300)
GEOG 4320. Gender, Economy, and Development (3) (S) (P: Consent of instructor)
GEOG 4325. Resources, Population, and Development (3) (WI) (F:SO) (Formerly GEOG 3000) (P: GEOG 2003 or consent of instructor)
GEOG 4330. Agricultural Geography (3) (WI*) (F:SO)
GEOG 4335. Geography of Tourism (3) (S) (F:SO)
GEOG 4340. Introduction to Medical Geography (3) (S) (P: GEOG 2410 or PLAN 2410 or Consent of Instructor)
GEOG 4391, 4392, 4393. Supervised Study in Human Geography (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4900. Honors Research (3) (F,S) (P: Admission to GEOG honors program)
GEOG 5391, 5392, 5393. Seminar in Human Geography (1,2,3) (P: Consent of instructor)

**May not count as an environmental course.**

Environmental (Choose 9 s.h. from the following.):
GEOG 1300. Weather and Climate (4) (F,S,SS) (F:SC)
GEOG 2250. Earth Surface Systems (3) (F)

***GEOG 2300. Geography of Environmental Resources (3) (F)
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250)
GEOG 3230. Global Climates (3) (S) (P: GEOG 1300; MATH 1065; or consent of instructor)

***GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 3510. Physical Meteorology (3) (F) (P: GEOG 1300; MATH 1065; or consent of instructor)
GEOG 3520. Dynamic Meteorology (3) (S) (P: GEOG 1300; MATH 2172; PHYS 2360; or consent of instructor)
GEOG 3550. Principles of Synoptic Meteorology (3) (F) (P: GEOG 3520 or consent of instructor)
GEOG 4210. Fluvial and Hydrological Processes (3) (S) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4220. Coastal Geography (3) (WI) (S) (Formerly GEOG 3002) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4230. Earth Surface Processes (3) (WI) (F) (P: GEOG 1300, 2250; or consent of instructor)

***GEOG 4270. Water Resources Management and Planning (3) (Same as PLAN 4270) (P: GEOG 1000 or 1250; or PLAN 1900)
GEOG 4291, 4292, 4293. Supervised Study in Physical Geography (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4510. Meteorological Instruments and Observation (3) (F) (P: GEOG 1300; MATH 1065; or consent of instructor)
GEOG 4520. Boundary Layer Meteorology (3) (S) (P: GEOG 1300 or consent of instructor)
GEOG 4525. Dynamic Meteorology II (3) (F) (P: GEOG 3520; MATH 4431; or consent of instructor)
GEOG 4530. Micrometeorology (3) (F) (P: GEOG 1300 or consent of instructor)
GEOG 4540. Coastal Storms (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4550. Applied Synoptic Meteorology: Analyses and Forecasting (3) (S) (P: GEOG 3550; or consent of instructor)
GEOG 4560. Urban Climatology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4570. Hydrometeorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4580. Radar and Satellite Meteorology (3) (S) (P: GEOG 1300, 3420; or consent of instructor)
GEOG 4590. Tropical Meteorology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4900. Honors Research (3) (F,S) (P: Admission to GEOG honors program)
GEOG 5220. Physical Geography Field Experience (3) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 5281, 5282, 5283. Selected Topic in Physical Geography (1,2,3) (P: Consent of instructor)

***May not count as an human course.

Electives (Choose 3 s.h. from the following.):
GEOG 1000. People, Places, and Environments (3) (F,S,SS) (FC:SO)
GEOG 1250. The Water Planet (3) (F,S) (FC:SO)
GEOG 4901. Senior Honors Thesis (3) (F,S) (P: GEOG 4900 with a grade of B or higher)

May choose any GEOG course listed that is not being counted toward the degree.

3. Concentration Area (Choose an additional 6 s.h. in either human or environmental geography, as listed above. If concentration area is environmental geography, a minimum of 3 s.h. must be above 3999)............................. 6 s.h.

4. Minor.....................................................................................................................24 s.h.
Selected from aerospace, biology, business administration, computer science, economics, geology, industrial technology, information processing, leisure systems studies, military science, planning, public administration, statistics, or any other appropriate minor with consent of the dept chair.

5. Electives to complete requirements for graduation.

BS in Applied Atmospheric Science

Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit, see Liberal Arts Foundations Curriculum)................................. 42 s.h.
MATH 1065. College Algebra (3) (F, S, SS) (FC:MA) (P: Appropriate score on mathematics placement test)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F, S, SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: 1260 or 2360)
PHYS 2350, 2360. University Physics (4,4) (F, S, SS) (FC:SC) (P: MATH 2121 or 2171; P for PHYS 2360: PHYS 2350)

2. Core ............................................................................................................... 38 s.h.
GEOG 1300. Weather and Climate (4) (F, S, F, S, SS) (FC:SO)
GEOG 2250. Earth Surface Systems (3) (F)
GEOG 2400. Spatial Data Analysis (3) (F,S)
GEOG 2410. Fundamentals of GIS (3) (F, S)\textit{Formerly GEOG 3410 (Same as PLAN 2410)}
GEOG 3230. Global Climates (3) (S) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or \textit{PLAN 2410 or equivalent})
GEOG 3510. Physical Meteorology (3) (F) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 3520. Dynamic Meteorology (3) (S) (P: GEOG 1300, MATH 2172; PHYS 2360; or consent of instructor)
GEOG 3550. Principles of Synoptic Meteorology (3) (F) (P: GEOG 3520; or consent of instructor)
GEOG 4510. Meteorological Instruments and Observations (3) (F) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 4525. Dynamic Meteorology II (3) (F) (P: GEOG 3520, MATH 4331; or consent of instructor)
GEOG 4550. Applied Synoptic Meteorology: Analyses and Forecasting (3) (S) (P: GEOG 3550; or consent of instructor)
GEOG 4999. Geography Professional Seminar (1) (F,S) (P: Consent of instructor)

3. Math Cognates............................................................................................................................................... 18-20 s.h.
MATH 1083. Introduction to Functions (3) (F,S,SS) (FC:MA) May not be taken by students who have successfully completed MATH 1074 or MATH 1085. (P: MATH 1065 with a minimum grade of C) or MATH 1085. Pre-Calculus Mathematics (5) (F,S,SS) (FC: MA) May not be taken by students who have successfully completed MATH 1074. (P: MATH 1065 with a minimum grade of C)
MATH 2171. Calculus I (4) (F,S,SS) (FC:MA) (P: Minimum grade of C in any of MATH 1083, 1085, or 2122)
MATH 2172. Calculus II (4) (F,S,SS) (FC:MA) (P: MATH 2171)
MATH 2173. Calculus III (4) (F,S,SS) (FC:MA) (P: MATH 2172)
MATH 4331. Introduction to Ordinary Differential Equations (3) (F,S) (P: MATH 2173)

4. Geospatial Technologies Electives: (Choose from the following).................................................. 6 s.h.
GEOG 3430. Geographic Information Systems I (3) (F[S],S) (Same as PLAN 3430) (P: GEOG 2410 or \textit{PLAN 2410 or equivalent})
GEOG 3450. Introduction to the Global Positioning System (3) (F,S) (P: GEOG 2410 or \textit{PLAN 2410 or equivalent})
GEOG 3460. GIS Applications Programming (3) (F) (P: GEOG 2410 or \textit{PLAN 2410; ASIP BITE 2212 or CSCI 1610 or MIS 2223 or consent of instructor})
GEOG 4150. Advanced Spatial Analysis (3) (F) (Formerly GEOG 3400) (P: GEOG 2400 or \textit{PLAN 2410; GEOG 2410 or PLAN 2410; or consent of instructor})
GEOG 4410. Advanced Cartographic Design and Production (3) (F,S) (P: GEOG 2410 or \textit{PLAN 2410 or equivalent experience})
GEOG 4420. Remote Sensing II (3) (S) (P: GEOG 3420 or consent of instructor)
GEOG 4430. Geographic Information Systems II (3) (S) (Same as PLAN 4430) (P: GEOG 3430 or \textit{PLAN 3430 or consent of instructor})
GEOG 4440. Coastal Applications of GIS (3) (F,S) (P: GEOG 2250, GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4450. GIScience, Society, and Technology (3) (S) (P: GEOG 2410, or PLAN 2410; GEOG 3420, GEOG 3430 or PLAN 3430; or consent of instructor)
GEOG 4460. Digital Terrain Analysis (3) (F) (P: GEOG 2250, GEOG 2410 or PLAN 2410; or consent of instructor)

5. Atmospheric Science Electives (Choose from the following)............................................. 6 s.h.
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
GEOG 4520. Boundary Layer Meteorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4530. Micrometeorology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4540. Coastal Storms (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4560. Urban Climatology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4570. Hydrometeorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4580. Radar and Satellite Meteorology (3) (S) (P: GEOG 1300, GEOG 3420; or consent of instructor)
GEOG 4590. Tropical Meteorology (3) (F) (P: GEOG 1300; or consent of instructor)

6. Geography Electives (Choose from the following)........................................................... 6 s.h.
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250)
GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 4210. Fluvial and Hydrological Processes (3) (S) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4220. Coastal Geography (3) (WI) (S) (Formerly GEOG 3002) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4230. Earth Surface Processes (3) (WI) (F) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4270. Water Resources Management and Planning (3) (Same as PLAN 4270) (P: GEOG 1000 or 1250; or PLAN 1900)
GEOG 4801, 4802, 4803. Geography Internship (1,2,3) (F,S,SS) (P: Consent of director of geography internships; consent should be obtained during the semester prior to internship)

7. General electives to complete requirements for graduation.

BS in Geographic Information Science and Technology

Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (See Section 4, Foundations Curriculum Requirements for All Baccalaureate Degree Programs), including those listed below................................. 42 s.h.
COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
2. Common Core......................................................................................................................... 31 s.h.
GEOG 2400. Spatial Data Analysis (3) (F, S)
GEOG 2410. Fundamentals of GIS (3) (F, S) (Formerly GEOG 3410) (Same as PLAN 2410) or PLAN 3051. Introduction to GIS in Planning (3) (F)
GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3430. Geographic Information Systems I (3) (F, S) (Same as PLAN 3430) (P: GEOG 2410 or PLAN 2410)
GEOG 3450. Introduction to the Global Positioning System (3) (S) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3460. GIS Applications Programming (3) (F) (P: GEOG 2410 or PLAN 2410; ASIP BITE 2212 or CSCI 1610 or ITEC 2000 or MIS 2223 or consent of instructor)
GEOG 4410. Advanced Cartographic Design and Production (3) (F, S) (P: GEOG 2410 or PLAN 2410 or equivalent experience)
GEOG 4420. Remote Sensing II (3) (S) (P: GEOG 3420 or consent of instructor)
GEOG 4430. Geographic Information Systems II (3) (S) (Same as PLAN 4430) (P: GEOG 3430 or PLAN 3430 or consent of instructor)
GEOG 4450. GIScience, Society, and Technology (3) (S) (P: GEOG 2410; or PLAN 2410; GEOG 3420; or PLAN 3430; or consent of instructor)
GEOG 4499. Geography Professional Seminar (1) (F, S) (P: Consent of instructor)
3. GIS electives (Choose from the following)........................................................................... 6 s.h.
GEOG 4150. Advanced Spatial Analysis (3) (F) (Formerly GEOG 3400) (P: GEOG 2400; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4440. Coastal Applications of GIS (3) (F, S) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4460. Digital Terrain Analysis (3) (F) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4540. Coastal Storms (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4491, 4492, 4493. Supervised Study in Geographic Techniques (1, 2, 3) (F, S, SS) (P: Consent of instructor)
GEOG 4580. Radar and Satellite Meteorology (3) (F) (P: GEOG 1300, 3420; or consent of instructor)
GEOG 4801, 4802, 4803. Geography Internship (1, 2, 3) (F, S, SS) (P: Consent of director of geography internships; consent should be obtained during the semester prior to the internship) A maximum of 3 s.h. can be used to meet the degree requirement.
PLAN 4021. Advanced GIS Applications in Planning (3) (S) (P: PLAN 3051 or GEOG 2410 or consent of instructor)
4. Environmental and Human Geography (Choose from the following).............................. 15 s.h.
GEOG 1300. Weather and Climate (4) (F, S, SS) (FC: SC)
GEOG 2003. Geography of the Global Economy (3) (F, S) (FC: SO)
GEOG 2019. Geography of Recreation (3) (F) (FC: SO)
GEOG 2250. Earth Surface Systems (3) (F)
GEOG 3001. Historical Geography of the United States (3)
GEOG 3003. Political Geography (3) (WI) (S) (FC:SO)
GEOG 3004. Urban Geography (3) (F)
GEOG 3049. Latin America (3) (WI*) (FC:SO)
GEOG 3050. Africa (3) (WI) (S) (FC:SO)
GEOG 3051. Asia (3) (S) (FC:SO)
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250)
GEOG 3230. Global Climates (3) (S) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 3510. Physical Meteorology (3) (F) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 4210. Fluvial and Hydrological Processes (3) (S) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4220. Coastal Geography (3) (WI) (S) (Formerly GEOG 3002) (P: GEOG 1300, 2250; or consent of instructor)

5. Cognates (Choose from the following)........................................................................................................ 21 s.h.
CSCI 1001. Introduction to Computer Science (3) (F,S)
CSCI 2310, 2311. Algorithmic Problem Solving and Programming Laboratory (4,0) (F,S) (P: MATH 1065; C for 2310: CSCI 2311; C for 2311: CSCI 2310)
CSCI/MATH 2427. Discrete Mathematical Structures (3) (F,S) (P: MATH 1065 or 1066)
CSCI 2600. Introduction to Digital Computation (3) (S) (P: MATH 1065 or 1066)
CSCI 3200. Data Structures and Their Applications (4) (F) (P: CSCI 2310, 2311)
CSCI 3700. Database Management Systems (3) (F,S) (P: CSCI 3200 or 3310)
ICTN 1500, 1501. PC Hardware (3,0) (F,S) (P: MATH 1065 or higher)
ICTN 2000. Introduction to Telecommunications (3) (F)
ICTN 2154, 2155. Digital Communication Systems (3,0) (F,S) (P: ICTN 1500)
ICTN 2158, 2159. Computer Networking Technology (3,0) (F,S) (P: ICTN 2154)
ICTN 2510, 2511. Network Environment I (3,0) (F) (P: ICTN 1500)
ICTN 2530, 2531 Network Environment II (3,0) (F,S) (Formerly ICTN 3530, 3531) (P: ICTN 1500)
ICTN 2900, 2901. Introduction to Network Security (3,0) (F) (P: ICTN 2154)
ICTN 3540, 3541. Network Environment III (3,0) (F) (P: ICTN 2510, 3530)
MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or approval of the dept chair)
MATH 1083. Introduction to Functions (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)
MATH 2119. Elements of Calculus (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)
MATH 2127. Basic Concepts of Mathematics (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test)

6. Electives to complete requirements for graduation................................................................. 11 s.h.
Geography Minor

Minimum requirement for the minor in geography is **24 s.h.** of credit as follows:

Minimum of one course from each of the geography categories listed in the BS in applied geography degree, 2., above
Minimum of 6 s.h. of GEOG electives above 2999

Geography Honors Program

The honors program in geography is designed for outstanding geography majors who wish additional challenge and recognition in pursuing scholarly work in a sub-field of geography. A student wishing to enter the honors program in geography must be a junior majoring in geography, have a minimum cumulative 3.0 GPA, have a minimum 3.3 GPA in geography, and have completed a minimum of 21 s.h. in geography. Exceptions to these requirements may be made at the discretion of the departmental chair. A student in the honors program is encouraged to enroll, as part of her/his regular curriculum, in GEOG 4900 during the second semester of the junior year, and GEOG 4901 in the first semester of the senior year. Each honors student will carry out an extensive program of carefully supervised reading and research in one of the areas of geography, leading to the preparation of a senior honors thesis. To receive honors, a student must complete both GEOG 4900 and GEOG 4901 with at least a B. Further details about the honors program are available in the departmental office, Brewster A-229.

Certificate in Atmospheric Science

This certificate requires a minimum of **16 s.h.** as follows:

1. Core................................................................................................................................................................. **13 s.h.**
   GEOG 1300. Weather and Climate (4) (F,S,SS) (FC:SC)
   GEOG 3230. Global Climates (3) (S) (P: GEOG 1300; MATH 1065; or consent of instructor)
   GEOG 3510. Physical Meteorology (3) (F) (P: GEOG 1300; MATH 1065; or consent of instructor)
   GEOG 4510. Meteorological Instruments and Observations (3) (F) (P: GEOG 1300; MATH 1065; or consent of instructor)

2. Electives.............................................................................................................................................................. **3 s.h.**
   GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
   GEOG 3520. Dynamic Meteorology (3) (S) (P: GEOG 1300; MATH 2172; PHYS 2360; or consent of instructor)
   GEOG 3550. Principles of Synoptic Meteorology (3) (F) (P: GEOG 3520; or consent of instructor)
GEOG 4210. Fluvial and Hydrological Processes (3) (S) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4520. Boundary Layer Meteorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4525. Dynamic Meteorology II (3) (F) (P: GEOG 3520; MATH 4431; or consent of instructor)
GEOG 4530. Micrometeorology (3) (S) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4540. Coastal Storms (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4550. Applied Synoptic Meteorology: Analyses and Forecasting (3) (S) (P: GEOG 3550; or consent of instructor)
GEOG 4560. Urban Climatology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4570. Hydrometeorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4580. Radar and Satellite Meteorology (3) (S) (P: GEOG 1300, 3420; or consent of instructor)
GEOG 4590. Tropical Meteorology (3) (F) (P: GEOG 1300; or consent of instructor)
EHST 3600. Air Pollution (3) (F) (P: EHST 2110 or consent of instructor)

Certificate in Geographic Information Science

The course of study for the geographic information science (GIS) certificate provides theoretical and technological competencies that prepare students to develop and manage geographic information projects and to interpret and implement GIS as a decision support system. The program enhances basic and applied research capacity at the undergraduate level. A minimum cumulative 2.5 GPA is required for admission. The student must maintain a B average in the certificate courses to remain in the program and receive the GIS certificate. The certificate requires a minimum of 15 s.h. as follows:

1. Core ................................................................................................................................. 9 s.h.
   GEOG 2410. Fundamentals of GIS (3) (F,S) (Same as PLAN 2410) or PLAN 3051. Introduction to GIS in Planning (3) (F,S) (P: GEOG 2410 or consent of instructor)
   GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or equivalent)
   GEOG 3430. Geographic Information Systems I (3) (F,S) (Same as PLAN 3430) (P: GEOG 2410 or PLAN 2410 or equivalent)

2. Electives (Choose from the following.) ............................................................................. 6 s.h.
   GEOG 3450. Introduction to the Global Positioning System (3) (S) (P: GEOG 2410 or PLAN 2410 or equivalent)
   GEOG 3460. GIS Applications Programming (3) (F) (P: GEOG 2410 or PLAN 2410; BITE 2212 or CSCI 1610 or MIS 2223 or consent of instructor)
   GEOG 4150. Advanced Spatial Analysis (3) (F) (Formerly GEOG 3400) (P: GEOG 2400; GEOG 2410 or PLAN 2410; or consent of instructor)
   GEOG 4410. Advanced Cartographic Design and Production (3) (F,S) (P: GEOG 2410 or PLAN 2410 or equivalent experience)
   GEOG 4420. Remote Sensing II (3) (S) (P: GEOG 3420 or consent of instructor)
   GEOG 4430. Geographic Information Systems II (3) (F,S) (Same as PLAN 4430) (P: GEOG 3430 or PLAN 3430 or consent of instructor)
GEOG 4440. Coastal Applications of GIS (3) (F,S) (P: GEOG 2250 or GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4450. GISScience, Society, and Technology (3) (S) (P: GEOG 2410, or PLAN 2410; GEOG 3420, GEOG 3430 or PLAN 3430; or consent of instructor)
GEOG 4460. Digital Terrain Analysis (3) (F) (P: GEOG 2250 or GEOG 2410 or PLAN 2410; or consent of instructor)

BS in Urban and Regional Planning

Jerry Weitz, Program Director, A-215 Brewster Building

Students entering the Planning Program are encouraged to declare their major as soon as possible in accordance with university requirements. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum requirements (See Section 4, Foundations Curriculum Requirements for all Baccalaureate Degree Programs), including those listed below..................................................................................................................................................42 s.h.
COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)

2. Core .................................................................................................................................................................33 s.h.
GEOG 2400. Spatial Data Analysis (3) (F,S); or MATH 2228. Elementary Statistical Methods I (3) (F,S,SS) (P: MATH 1065 or equivalent); or MATH 2283. Statistics for Business (3) (F,S,SS) (P: MATH 1065 or MATH 1066 or equivalent)
PLAN 2410. Fundamentals of GIS (3) (F,S) (Formerly PLAN 3051) (Same as GEOG 2410)
PLAN 3020. Environmental Planning (3) (F)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3022. History and Theory of Planning (3) (WI) (F) (S)
PLAN 3030. Urban and Regional Planning (3) (F)
PLAN 3031. Quantitative Analysis in Planning (3) (S) (P: PLAN 3021 or consent of instructor)
PLAN 3032. Planning Legislation and Administration (3) (WI) (S)
PLAN 3051. Introduction to GIS in Planning (3) (F)
PLAN 4003. Urban Form and Design (3) (F) (S)
PLAN 4096. Planning Studio (3) (F,S) (P: PLAN 3022; PLAN 2410 or GEOG 2410 PLAN 3054; or consent of instructor)
PLAN 4099. Practicum in Planning (3) (WI) (F,S) (WI)

3. Area of emphasis (In consultation with the planning advisor, choose one area from the following.)..................................................................................................................................................9 s.h.

Coastal Planning and Development:
PLAN 4015. Emergency Management Planning (3) (F,S)
PLAN 4045. Environmental Resources Planning and Management (3) or PLAN 4065. Land Use Planning (3) (F)
PLAN 4055. Coastal Area Planning and Management (3) (S) (P: Consent of instructor)
PLAN 5025. Coastal Area Planning and Management (3) (P: Consent of instructor)
PLAN 5045. Environmental Resources Planning and Management (3) or PLAN 5065. Land Use Planning (3) (F)

Community Planning and Development:
PLAN 3015. Planning for Circulation (3) (S) or PLAN 5985. Historic Preservation Planning (3) (F)
PLAN 4025. Housing and Neighborhood Planning (3) (F)
PLAN 4040. Community Facilities Planning (3) (P: PLAN 3031 or consent of instructor) or PLAN 4065. Land Use Planning (3) (F)
PLAN 4075. Transportation Planning (3) (S) (Formerly PLAN 3015) or PLAN 5985. Historic Preservation Planning (3) (Same as HIST 5985)
PLAN 5065. Land Use Planning (3) (F)

4. Electives – (Choose any additional 6 s.h. from the following)
PLAN 1900 Planning for the Human Environment (3) (F, S, SS)
PLAN 3015. Planning for Circulation (3) (S)
*PLAN 3018, 3028, 3038. Planning Internship (1,2,3) (F,S,SS) (P: Completion of a minimum of 9 s.h. of planning courses and consent of internship coordinator, based upon student’s submitting written proposal indicating applicability of planning internship to his or her educational and professional objectives)
PLAN 3041. Computer Applications in Planning (3) (F)
PLAN 3430. Geographic Information Systems I (3) (F,S) (Same as GEOG 3430) (P: GEOG 2410 or PLAN 2410 or equivalent)
PLAN 4015. Emergency Management Planning (3) (F,SS)
PLAN 4021. Advanced GIS Applications in Planning (3) (S) P: PLAN 3051 or GEOG 2410 or consent of instructor.
PLAN 4041. GPS Applications in Planning (3) (S,SS) (P: PLAN 3051 or consent of instructor)
PLAN 4025. Housing and Neighborhood Planning (3) (F)
PLAN 4040. Community Facilities Planning (3) (P: PLAN 3031 or consent of instructor)
PLAN 4045. Environmental Resources Planning and Management (3)
PLAN 4046. Planning and Design Studio (3) (F,S)
PLAN 4050. World Architecture and Urbanism (3) (S)
PLAN 4055. Coastal Area Planning and Management (3) (S) (P: Consent of instructor)
PLAN 4065. Land Use Planning (3) (F)
PLAN 4075. Transportation Planning (3) (S) (Formerly PLAN 3015)
PLAN 4121. Problems in Planning (2) (P: Consent of instructor)
PLAN 4131. Problems in Planning (3) (P: Consent of instructor)
PLAN 4270. Water Resources Management and Planning (3) (Same as GEOG 4270) (P: PLAN 1900; or GEOG 1000 or 1250)
PLAN 4305. Ecological Landscape Planning (3) (P: GEOG 2410 or PLAN 3051 2410 or consent of instructor)
PLAN 4430. Geographic Information Systems II (3) (S) (Same as GEOG 4430) (P: GEOG 3430 or PLAN 3430 or consent of instructor).
PLAN 5025 Coastal Area Planning and Management (3) (P: Consent of instructor)
PLAN 5045 Environmental Resources Planning and Management (3)
PLAN 5065 Land Use Planning (3) (F)
*PLAN 5121 Problems in Planning (2) (P: Consent of instructor)
*PLAN 5131 Problems in Planning (3) (WI) (P: Consent of instructor)
PLAN 5985 Historic Preservation Planning (3) (Same as HIST 5985)

*May count a maximum of 3 s.h. from PLAN 3018, 3028, 3038, and a maximum of 3 s.h. from 5121, 5131 toward the degree.

5. Minor or concentration area (In consultation with the planning advisor, choose a minor from another discipline or two concentration areas from below, with a minimum of 9 s.h. chosen from each of the two areas.)........................................................................24 s.h..

Accounting and Public Finance:
ACCT 2101. Survey of Financial and Managerial Accounting (3) (F,S) (P: MATH 1065 or 1066)
ECON 4214. Public Finance (3) (FC:SO) (P: ECON 2133, 3144)
FINA 3004. Survey of Financial Management (3) (F,S) (P: ACCT 2101 or 2401; ECON 2113; MATH 2283)
POLS 3242. Municipal Policy and Administration (3)
POLS 3253. Government Fiscal Administration (3) (S) (RP: POLS 1010)

Coastal Resources:
BIOL 3660. Introduction to Marine Biology (3) (F,S,SS) (P/C: BIOL 2250, 2251)
BIOL 3661. Introduction to Marine Biology Laboratory (1) (F,S) (C: BIOL 3660)
GEOG 3002. Coastal Geography (3) (WI) (S) (P: GEOG 1200 or 3200 or consent of instructor)
GEOL 1550. Oceanography (4) (S) (FC:SC)
HIST 5520. Maritime History of the Western World Since 1815 (3)
SOCI 3410. Introduction to Maritime Sociology (3) (FC:SO) (P: ANTH 1000 or SOCI 2110)

Community Health:
EHST 2110. Introduction to Environmental Health Science (3) (F,S)
EHST 3600. Air Pollution (3) (F: EHST 2110 or consent of instructor)
EHST 5800. Solid and Hazardous Waste Management (3) (P: CHEM 1160, 1161)
HLTH 3001. Principles of Community Health Education (2) (S)
HLTH 3030. Health Behavior (3) (WI) (S) (P: PSYC 1000)
HPRO 4300. Survey of the Allied Health Professions (2)

Decision Science:
MIS 2223. Introduction to Computers (3) (F,S,SS)
MIS 3063. Introduction to Management Information Systems (3) (F,S,SS) (P: MIS 2223)
MIS 4103. Decision Support Systems (3) (F,S) (P: MIS 3063)
OMGT 3123. Operations and Supply Chain Management (3) (F,S,SS) (P: MATH 2228 or 2283; MIS 2223)
OMGT 3223. Business Decision Modeling (3) (F,S,SS) (P: Minimum grade of C in MIS 2223, MATH 1066 or 2119 or 2121 or 2171, 2283)

Economic Development:
ECON 3144. Intermediate Microeconomics (3) (F,S) (FC:SO) (P: ECON 2113)
ECON 3244. Intermediate Macroeconomics (3) (F,S) (FC:SO) (P: ECON 2133)
ECON 3353. Economics of Underdeveloped Countries (3) (FC:SO) (P: ECON 2133)
ECON 4020. Industrial Organization (3) (WI*) (S) (FC:SO) (P: ECON 3144)
ECON 4850. Resource Economics (3) (FC:SO) (P: ECON 2133, 3144)

Environmental Resources:
BIOL 1060. Environmental Biology (4) (F,S,SS) (FC:SC)
ECON 4850. Resource Economics (3) (FC:SO) (P: ECON 2133, 3144)
GEOG 2300. Geography of Environmental Resources (3) (F)
GEOL 1700. Environmental Geology (4) (F,S) (FC:SC)
PHYS 1050. Physics and the Environment (4) (F,S,SS) (FC:SC)
POLS 3256. Environmental Politics (3) (F)

Historic Preservation and Design:
CMGT 2210, 2211. Construction and Civil Materials (3,0) (F,S) (P: Minimum overall GPA of 2.0; majors and minors only; P/C: MATH 1065 or 1066)
HIST 3205. History of American Urban Life (3)
HIST 5920. Techniques of Museum and Historic Site Development (3)
HIST 5985. Historic Preservation Planning (3)
IDSN 2700. Historic Interiors I: 3000 BC Through Mid-Nineteenth Century (3) (WI) (S)
IDSN 2750. Historic Interiors II: Late Nineteenth and Twentieth Centuries (3) (WI) (F)
IDSN 4750. Interior Design for Adaptive Reuse (3) (WI) (S) (P: IDSN 3600, 3700) (Formerly IDMR 4750)

International Development:
ECON 3353. Economics of Underdeveloped Countries (3) (FC:SO) (P: ECON 2133)
ECON 4373. International Trade (3) (S) (FC:SO) (P: ECON 2133, 3144)
GEOG 2003. Geography of the Global Economy (3) (FC:SO)
POLS 4360. Politics of Developing Areas (3) (FC:SO)

Land Use and Real Estate:
ANTH 4260. Cultural Ecology (3) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
FINA 3554. Principles of Real Estate (3) (F,S) (P: ACCT 2401; ECON 2133)
FINA 4564. Real Estate Appraisal (3) (F) (P: FINA 3554)
POLS 3241. Urban Political Systems (2) (S)
SOCI 3225. Urban Sociology (3) (FC:SO) (P: SOCI 2110)

Personnel Management and Administration:
MGMT 3202. Fundamentals of Management (3) (F,S,SS) (P: ECON 2113)
MGMT 4342. Organizational Change and Development (3) (F) (P: MGMT 3202 or 3302)
MGMT 4402. Human Resource Management (3) (F,S) (P: MGMT 3202 or 3302)
POLS 3242. Municipal Policy and Administration (3) (RP: POLS 3241)
POLS 3252. Public Administration (3) (F) (FC:SO)

Recreation:
GEOG 2019. Geography of Recreation (3) (F) (FC:SO)
RCLS 2000. Introduction to Leisure Services (3) (F,S)
RCLS 2601. Leisure in Society (3) (FC:SO)
RCLS 3300. Outdoor Programming (3) (S) (P: Declared RCLS major or minor; RCLS 2000)

Societal Issues and Policies:
ANTH 2005. Environmental Anthropology (3) (FC:SO)
SOCI 2110. Introduction to Sociology (3) (F,S,SS) (FC:SO)
SOCI 2111. Modern Social Problems (3) (F,S,SS) (FC:SO) (P: SOCI 2110)
SOCI 3225. Urban Sociology (3) (FC:SO) (P: SOCI 2110)
SOCI 3289. Community Organization (3) (S) (FC:SO) (P: SOCI 2110)
SOCI 4345. Racial and Cultural Minorities (3) (F) (FC:SO) (P: ANTH 1000 or SOCI 2110)
SOCI 4347. Social Inequality (3) (S) (FC:SO) (P: SOCI 2110)

Coastal Resources:
BIOL 3400, 3401. Biological Field Studies of the Coastal Plain (3,0) (P: BIOL 1100, 1200 or 2 from: GEOL 1500, 1550, 1600 and 1700)
COAS 2025. Survey of Coastal and Marine Resources (3) (F) (P: Basic science course in BIOL, CHEM, GEOL, or PHYS)
COAS 4025. Society and the Sea Seminar (3) (S)
GEOG 4220. Coastal Geography (3) (WI) (S) (Formerly GEOG 3002) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4440. Coastal Applications of GIS (3) (F,S) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4540. Coastal Storms (3) (F) (P: GEOG 1300; or consent of instructor)
GEOL 1550. Oceanography (4) (F,S) (FC:SC)
GEOL 3700. Advanced Oceanography (3) (P: GEOL 1550 or equivalent; or consent of the instructor)
HIST 5520. Maritime History of the Western World Since 1815 (3)
SOCI 3410. Introduction to Maritime Sociology (3) (FC:SO) (P: ANTH 1000 or SOCI 2110)

Community Health:
ANTH 3027. Human Health and Disease Ecology (3) (P: ANTH 2015, 2016; or consent of instructor)
EHST 2110, 2111. Introduction to Environmental Health Sciences and Laboratory (3,1) (F,S)
EHST 3600. Air Pollution (3) (F) (P: EHST 2110 or consent of instructor)
EHST 5800, 5801. Solid and Hazardous Waste Management and Laboratory (3,0) (P: CHEM 1160, 1161 or consent of instructor)
GEOG 4340. Introduction to Medical Geography (3) (S) (P: GEOG 2410 or PLAN 2410 or consent of instructor)
HLTH 2000. Principles of Public Health (3) (P: HLTH 1000)
HLTH 3050. Public Health Systems and Policy (3) (P: HLTH 1000 or 1050)
SOCI 3327. Introductory Medical Sociology (3) (FC:SO) (P: SOCI 2110 or consent of instructor)

Environmental Resources:
ANTH 2005. Environmental Anthropology (3) (FC:SO)
ECON 3855. Environmental Economics (3) (P: ECON 2133)
GEOG 2350. Climate Change: Science and Society (3) (FC:SO)
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250)
GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOL 3500. Hydrogeology and the Environment (3)
POLS 3256. Environmental Politics (3)

**Geographic Information Science:**
GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3430. Geographic Information Systems I (3) (F,S) (Same as PLAN 3430) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3450. Introduction to the Global Positioning System (3) (S) (P: GEOG 2410 or PLAN 2410 or equivalent)
GEOG 3460. GIS Applications Programming (3) (F) (P: GEOG 2410 or PLAN 2410; BITE 2212 or CSCI 1610 or MIS 2223 or consent of instructor)
GEOG 4410. Advanced Cartographic Design and Production (3) (F,S) (P: GEOG 2410 or PLAN 2410 or equivalent experience)
GEOG 4420. Remote Sensing II (3) (S) (P: GEOG 3420 or consent of instructor)
GEOG 4430. Geographic Information Systems II (3) (S) (Same as PLAN 4430) (P: GEOG 3430 or PLAN 3430 or consent of instructor)
GEOG 4440. Coastal Applications of GIS (3) (F,S) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)
GEOG 4450. GIScience, Society, and Technology (3) (S) (P: GEOG 2410 or PLAN 2410; GEOG 3420; GEOG 3430 or PLAN 3430; or consent of instructor)
GEOG 4460. Digital Terrain Analysis (3) (F) (P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of instructor)

**International Development:**
ECON 3353. Development Economics (3) (P: ECON 2133)
ECON 3750. Economics of Poverty and Discrimination (3) (WI*) (P: ECON 2133)
GEOG 2003. Geography in the Global Economy (3) (F,S) (FC:SO)
GEOG 2110. World Geography: Less Developed Regions (3) (F,S,SS) (FC:SO)
GEOG 4325. Resources, Population, and Development (3) (WI) (Formerly GEOG 3000) (P: GEOG 2003 or consent of instructor)
POLS 3140. Politics of Globalization (3)
POLS 3257. International Environmental Policy (3)
POLS 3297. International Political Economy (3) (FC:SO) (P: POLS 2020 or consent of instructor)
POLS 4360. Politics of Developing Areas (3) (FC:SO)

**Recreation:**
GEOG 2019. Geography of Recreation (3) (F) (FC:SO)
GEOG 4335. Geography of Tourism (3)
RCLS 2601. Leisure in Society (3) (F,S, SS) (FC:SO)
RCLS 3104. Public and Non-Profit Recreation (3) (F) (P: RCLS 2000 or consent of instructor)
RCLS 3120. Commercial Recreation and Tourism (3) (S)
RCLS 3300. Outdoor Recreation Programming (3) (S)
RCLS 4111. Recreation and Park Planning (4) (S) (P: RCLS 3003 or 3004 or consent of instructor)

**Rural Development:**
ANTH 4260. Cultural Ecology (3) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ECON 3750. Economics of Poverty and Discrimination (3) (WI*) (P: ECON 2133)
GEOG 3055. North Carolina (3) (F) (FC:SO)
GEOG 4325. Resources, Population, and Development (3) (WI) (Formerly GEOG 3000) (P: GEOG 2003 or consent of instructor)
GEOG 4335. Geography of Tourism (3)
HIST 3100. North Carolina History (3) (F,S) (FC:SO)
HIST 3300. History of American Rural Life (3) (F) (FC:SO)
SOCI 3222. Rural Sociology (3) (FC:SO) (P: SOCI 2110)

**Public Administration:**
ECON 4214. Public Finance (3) (P: ECON 2133, 3144)
MGMT 3202. Fundamentals of Management (3) (F,S,SS) (P: ECON 2113)
POLS 3240. State and Local Government (3) (F,S) (FC:SO) (P: POLS 1010 or consent of instructor)
POLS 3241. Urban Political Systems (3)
POLS 3242. Municipal Policy and Administration (3)
POLS 3252. Public Administration (3) (F,S) (FC:SO)
POLS 3253. Government Fiscal Administration (3) (RP: POLS 1010)

**Urban Studies:**
EHST 3600. Air Pollution (3) (F) (P: EHST 2110 or consent of instructor)
GEOG 3004. Urban Geography (3) (F)
GEOG 4560. Urban Climatology (3) (F) (P: GEOG 1300; or consent of instructor)
HIST 3205. History of American Urban Life (3) (FC:SO)
POLS 3241. Urban Political Systems (3)
POLS 3242. Municipal Policy and Administration (3)
SOCI 3225. Urban Sociology (3) (FC:SO) (P: SOCI 2110)
SOCI 3289. Community Organization (3) (S) (FC:SO) (P: SOCI 2110)

6. Electives to complete degree requirements for graduation.
NOTE: Excluding foundations curriculum requirements, no one course may be used to fulfill two or more degree requirements.

**Planning Minor**

The planning minor requires **24 s.h.** of credit as follows:

1. **Core** ........................................................................................................................................................................... **15 s.h.**
PLAN 1900 Planning for the Human Environment (3) (F, S, SS)
PLAN 3020. Environmental Planning (3) (F)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3030 Urban and Regional Planning (3) (F)
PLAN 3032. Planning Legislation and Administration (3) (WI) (S)

2. PLAN Electives ......................................................................................................................... 9 s.h.

Bachelor’s and Accelerated MBA Program

Planning majors who are interested in careers in private or public sector management, may complete the BS in urban and regional planning, and if qualified, may complete the master of business administration in one additional year. (See the Bachelor’s and Accelerated MBA Program section under the College of Business in the undergraduate catalog for further details)

Certificate in Urban Design

NOTE: Students will not be admitted into this certificate program after spring 2011.
This certificate provides students with specialized competencies in urban design and prepares them to engage effectively in professional practice in the public and the private sectors. The certificate is open to students pursuing an undergraduate degree at ECU. Students gain interdisciplinary knowledge regarding physical, environmental, and social planning issues that confront contemporary cities. The course of study for the certificate enhances the creative, visualization, and graphic abilities required for the design and planning professions. Students engage in real-world design projects that deal with adaptive reuse, streetscapes, urban regeneration, downtown revitalization, historic preservation, public squares, and smart community planning. To qualify for the award, students must maintain a minimum of 3.0 GPA in the certificate courses. The certificate requires a minimum of 15 s.h. of credit as follows:

1. Core Courses:
   PLAN 4003. Urban Form and Design (3) (S)
   PLAN 4046. Planning and Design Studio (3) (F,S)
   PLAN 4050. World Architecture and Urbanism (3) or PLAN 5985. Historic Preservation Planning (3)

2. Elective Courses (two courses from the following):
   ART 4950. Twentieth Century Architecture (3) P: ART 1006, 1007
   DESN 3030, 3031. Architectural Drafting (3.0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
   DESN 3038, 3039. Sustainable Design (3.0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
   GEOG 3004. Urban Geography (3) (F)
   IDSN 4750. Interior Design for Adaptive Reuse (3) (WI) (S) (P: IDSN 3600, 3700)
   PLAN 3020. Environmental Planning (3) (F) (for non-Planning majors and minors)
   PLAN 3051. Introduction to GIS in Planning (3) (F,S) (for non-Planning majors and minors)
PLAN 4021. Advanced GIS Applications in Planning (3)
PLAN 4050. World Architecture and Urbanism (3)
PLAN 5985. Historic Preservation Planning (3)

http://www.ecu.edu/cs-acad/ugcat/CoursesG.cfm#geog

GEOG: Geography

1000. People, Places, and Environments (3) (F,S,SS) (FC:SO) Basic course to field of geography. Major physical and cultural elements of environment and their influence on human activity.

1200. Introduction to Physical Geography (3) (F) May not count toward foundations curriculum social sciences requirement. Fundamental processes that influence weather and climate, land form development, soil formation, water resources, and vegetative regimes with the purpose of better understanding their spatial interrelationships within human physical environment.

1250. The Water Planet (3) (F,S) (FC:SO) Importance of water in natural world. Cultural, economic, and legal issues associated with human uses of water.


2019. Geography of Recreation (3) (F) (FC:SO) Spatial distribution and interaction of selected recreational phenomena. Basic ideas which have emerged over last decade explored for contributions to recreational decision making.

2100. World Geography: Developed Regions (3) (F,S,SS) (FC:SO) Introductory survey of the regions of the US and Canada, Europe, the former Soviet Union, Australia, and Japan. Emphasis on geographic aspects of physical environment, population, economy, resources, and current issues in each region.

2110. World Geography: Less Developed Regions (3) (F,S,SS) (FC:SO) Introductory survey of regions of Latin America, Sub-Saharan Africa, North Africa and the Middle East, South Asia, Southeast Asia, and China. Emphasis on geographic aspects of physical environment, population, economy, resources, and current issues in each region.
2250. **Earth Surface Systems** (3) (F) May not count toward foundations curriculum social sciences requirement. Basic understanding of natural systems operating on earth’s surface that shape the natural environment. Focuses on global distribution of land forms and vegetation. Strong emphasis on hands-on learning.

2300. **Geography of Environmental Resources** (3) (F) May not count toward foundations curriculum social sciences requirement. Location and development of environmental resources at world and national levels.

2350. **Climate Change: Science and Society** (3) (FC:SO) Explores societal aspects of climate change science, relevant social science debates, human adaptation, mitigation strategies, and international policy.

2400. **Spatial Data Analysis** (3) (F,S) May not count toward foundations curriculum social sciences requirement. Foundation for data management and analysis in geographic information science. Introduces quantitative expressions common to geographic information science and descriptive and inferential spatial statistics.

2410. **Fundamentals of GIS** (3) (F,S) Formerly GEOG 3410 Same as PLAN 2410 May not count toward foundations curriculum social sciences requirement. Foundations for understanding and using geographical information systems. Emphasis on creation, visualization, and analysis of geographically referenced data.

2500. **Map and Aerial Photo Interpretation** (3) (F,S,SS) 4 lecture hours per week. May not count toward foundations curriculum social sciences requirement. Principles of map reading and aerial photo interpretation as information sources on natural and manmade environment.

3001. **Historical Geography of the United States** (3) Growth and development of US through analysis of geographic conditions.

3003. **Political Geography** (3) (WI) (S) (FC:SO) Geographic factors in current national and world problems. Internal and external power, frontiers and boundaries, colonialism and neonationalism, and impact of technology.

3004. **Urban Geography** (3) (F) Origin and growth of urban areas. Relationship with one another as well as size, function, and tributary territory.

3046. **United States and Canada** (3) (F) (FC:SO) Intensive study of US and Canada based on analysis and comparison of regions.

3047. **Western Europe** (3) (S) (FC:SO) Brief geographic survey of Europe and detailed regional study of nations located in western Europe.
**3049. Latin America (3) (WI*) (FC:SO)** Geographical analysis of political, social, economic and cultural transformations in contemporary Latin America.

**3050. Africa (3) (WI) (S) (FC:SO)** Physical and human background of Africa. Emphasis on political and economic role of sub-Saharan portion of continent in contemporary world.

**3051. Asia (3) (S) (FC:SO)** Geographic patterns, economy, population, and role of China, Korea, Japan, India, Pakistan, and Southeast Asia in world affairs.

**3055. North Carolina (3) (F) (FC:SO)** Physical and cultural survey of NC. Detailed study of geographic regions.

**3056. Middle America (3) (FC:SO)** Lands and people of Caribbean, Mexico, and Central America.

**3220. Soil Properties, Surveys, and Applications (3) (F)** Saturday field trip may be required. P: GEOG 2250. Physical and chemical properties of soil, soil-water relationships, soil-forming factors, county soil reports, and soil applications that involve land management decisions.

**3230. Global Climates (3) (S)** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300; MATH 1065; or consent of instructor. Variation in global climates as related to atmospheric circulation patterns and processes.

**3250. Environmental Hazards (3) (F)** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300 or 2250. Various ways people and governments respond to natural and human-induced extreme events, human behavior in threatening or actual hazards, and public policies and programs designed to control or alleviate hazards.


**3430. Geographic Information Systems I (3) (F,S) Same as PLAN 3430** May not count toward foundations curriculum social sciences requirement. P: GEOG 2410 or PLAN 2410 or equivalent. Computer-based decision support systems. Involves integration of spatially referenced data in problem-solving context. Concepts and application of GIS include data capture, storage, analysis, and display.

**3450. Introduction to the Global Positioning System (3) (S)** May not count toward foundations curriculum social sciences requirement. P: GEOG 2410 or PLAN 2410 or equivalent. Techniques for spatial referencing via a satellite-based navigation system.

**3460. GIS Applications Programming (3) (F)** May not count toward foundations curriculum social sciences requirement. P: GEOG 2410 or PLAN 2410; ASIP-BITE 2212 or CSCI 1610 or MIS 2223 or consent of instructor. Introduces GIS applications design, development, and
deployment. Focuses on custom mapping user interfaces; programmable solutions for spatial data display, analysis and manipulation; and custom GIS applications development.

**3510. Physical Meteorology (3) (F)** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300; MATH 1065; or consent of instructor. Basic principles of atmospheric hydrostatics, thermodynamics, cloud and precipitation processes, and radiative transfer.

**3520. Dynamic Meteorology (3) (S)** May not count toward foundations curriculum social sciences requirement. 3 lecture hours per week. P: GEOG 1300; MATH 2172, PHYS 2360; or consent of instructor. Basic concepts and techniques of mathematics, thermodynamics, mechanics and fluid dynamics in the study of atmospheric motions and weather systems.

**3550. Principles of Synoptic Meteorology (3) (F)** P: GEOG 3520; or consent of instructor. Basic concepts of synoptic scale atmospheric phenomena, including upper level waves and mid-latitude weather systems.

**4140. Research Methods in Human Geography (3) (S)** May not count toward foundations curriculum social sciences requirement. P: GEOG 2300; 15 s.h. in GEOG; or dept consent. Methods and techniques of field research in human geography.

**4150. Advanced Spatial Analysis (3) (F) Formerly GEOG 3400** P: GEOG 2400, GEOG 2410 or PLAN 2410; or consent of instructor. Multivariate statistical methods applied to spatially referenced data with explicit concern for spatial autocorrelation and heterogeneity.

**4191, 4192, 4193. Supervised Study in Regional Geography (1,2,3) (F,S,SS)** May be repeated for maximum of 6 s.h. May not count toward foundations curriculum social sciences requirement. P: Consent of instructor. Individualized study of selected aspect of regional geography under direct supervision of faculty member.

**4210. Fluvial and Hydrological Processes (3) (S)** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300, 2250; or consent of instructor. Comprehensive examination of principles of surface water hydrology and fluvial geomorphology. Application of principles to environmental problems.

**4220. Coastal Geography (3) (WI) (S) Formerly GEOG 3002** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300, 2250; or consent of instructor. Comprehensive examination of coastal systems, including beaches, dunes, and estuaries. Focuses on processes that form and maintain systems, how landforms respond to those processes, and how human activities affect the system.

**4230. Earth Surface Processes (3) (WI) (F)** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300, 2250; or consent of instructor. Detailed examination of dominant geomorphic processes and sediment dynamics involved in the creation of landforms. Emphasis on laboratory experimentation.
4270. Water Resources Management and Planning (3) Same as PLAN 4270 P: GEOG 1000 or 1250; or PLAN 1900. Spatial and temporal characteristics of water. Consideration of hydrologic, engineering, economic, and institutional aspects of water management.

4291, 4292, 4293. Supervised Study in Physical Geography (1,2,3) (F,S,SS) May be repeated for maximum of 6 s.h. P: Consent of instructor. Individualized study of selected aspect of physical geography under direct supervision of faculty member.

4310. Geography of Transportation and Trade (3) (S) P: GEOG 2003. Forces leading to interaction of people and commodities between places, distribution and characteristics of transport networks, and effects of transportation flows on regions and nations.

4315. Geographic Images (3) (F) (FC:SO) Formerly GEOG 3300 Social and cultural images of space, place, and environment as produced and consumed through various media at a variety of scales.

4320. Gender, Economy, and Development (3) (S) May not count toward foundations curriculum social sciences requirement. P: Consent of instructor. Role of gender in economic and development processes from geographical perspective.

4325. Resources, Population, and Development (3) (WI) (FC:SO) Formerly GEOG 3000 P: GEOG 2003 or consent of instructor. Demographic issues and population policies in relation to resource use and economic development from a geographical perspective.

4330. Agricultural Geography (3) (WI*) (FC:SO) Contemporary trends in global restructuring of agro food systems in both industrialized and developing nations.

4335. Geography of Tourism (3) (FC:SO) Traditional and emerging forms of tourism development as they transform economic, social, cultural, and environmental landscapes inside and outside the US.

4340. Introduction to Medical Geography (3) (S) May not count toward foundations curriculum social sciences requirement. P: GEOG 2410 or PLAN 2410 or consent of instructor. 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.

4345. Human Migration and Global Restructuring (3) (F) Human migration processes associated with political and economic restructuring in different regions of the globe.

4391, 4392, 4393. Supervised Study in Human Geography (1,2,3) (F,S,SS) May be repeated for maximum of 6 s.h. May not count toward foundations curriculum social sciences requirement. P: Consent of instructor. Individualized study of selected aspect of human geography under direct supervision of faculty member.

4410. Advanced Cartographic Design and Production (3) (F,S) May not count toward foundations curriculum social sciences requirement. P: GEOG 2410 or PLAN 2410 or equivalent
experience. Continuation of GEOG 2410 or PLAN 2410 at advanced level. Advanced mapping
techniques such as animation. Internet mapping and production of publication-quality maps.

4420. Remote Sensing II (3) (S) May not count toward foundations curriculum social sciences
requirement. P: GEOG 3420 or consent of instructor. Interpretation of environmental phenomena
remotely sensed data by sensors on board aircraft and satellites. Emphasis on learning digital
image processing from remote sensing perspective.

4430. Geographic Information Systems II (3) (S) Same as PLAN 4430 P: GEOG 3430 or
PLAN 3430 or consent of instructor. Advanced topics. Emphasis on development of GIS
projects.

4440. Coastal Applications of GIS (3) (F,S) May not count toward foundations curriculum
social sciences requirement. P: GEOG 2250; GEOG 2410 or PLAN 2410; or consent of
instructor. Application of geographic information science to coastal resource management.

4450. GIScience, Society, and Technology (3) (S) 3 lecture hours per week. P: GEOG 2410 or
PLAN 2410; GEOG 3420; GEOG 3430 or PLAN 3430; or consent of instructor. Critical
perspectives on the roles and impacts of geospatial technologies in contemporary society.

4460. Digital Terrain Analysis (3) (F) 3 lecture hours per week. P: GEOG 2250; GEOG 2410
or PLAN 2410; or consent of instructor. Overview of digital topographic analyses that focuses
on topographic data acquisition, development of digital elevation models, topographic analyses,
and terrain visualization.

4491, 4492, 4493. Supervised Study in Geographic Techniques (1,2,3) (F,S,SS) May be
repeated for maximum of 6 s.h. May not count toward foundations curriculum social sciences
requirement. P: Consent of instructor. Individualized study of selected geographic technique
under direct supervision of faculty member.

4510. Meteorological Instruments and Observations (3) (F) May not count toward
foundations curriculum social sciences requirement. 2 lecture and 3 lab hours per week. P:
GEOG 1300; MATH 1065; or consent of instructor. Basic principles of meteorological
instruments and measurement techniques; introduction of data logging, processing, and sources
of measurement error; hands-on experience in labs and group field projects.

4520. Boundary Layer Meteorology (3) (S) May not count toward foundations curriculum
social sciences requirement. P: GEOG 1300; or consent of instructor. Structure of atmospheric
boundary layers and turbulence, principles of turbulent transport and diffusion processes, their
measurements and modeling.

4525. Dynamic Meteorology II (3) (F) P: GEOG 3520; MATH 4331; or consent of instructor.
Applications of the governing equations of the atmosphere for the study of atmospheric waves,
extratropical cyclones, and basic concepts in numerical weather prediction.
4530. **Micrometeorology (3) (F)** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300; or consent of instructor. Atmospheric processes at micro and local scales, including exchange processes of momentum, mass and energy, radiation budget and energy balance near the surface, soil temperature and heat transfer, turbulent transport, biosphere-atmosphere interactions, micrometeorological measurement and modeling techniques.

4540. **Coastal Storms (3) (F)** May not count toward foundations curriculum social sciences requirement. P: GEOG 1300; or consent of instructor. Basic dynamics, analysis, and forecasting of extratropical and tropical storms; history of storms in the Carolinas and current mitigation plans.

4550. **Applied Synoptic Meteorology: Analyses and Forecasting (3) (S)** P: GEOG 3550; or consent of instructor. Current techniques in mid-latitude weather analyses and forecasting, including chart analyses, introduction to computer meteorological analyses and visualization, numerical weather prediction, and forecast discussion, development, and evaluation.

4560. **Urban Climatology (3) (F)** P: GEOG 1300; or consent of instructor. Impact of urbanization upon atmospheric processes, including energetic balance, precipitation, atmospheric circulation, and pollution.

4570. **Hydrometeorology (3) (S)** May not count toward foundations curriculum social science requirement. P: GEOG 1300; or consent of instructor. Theory and observation of atmospheric processes as they relate to surface hydrology. Emphasis on measurement, prediction, and climatology of precipitation, evapotranspiration and associated hydrologic events, such as flooding.

4580. **Radar and Satellite Meteorology (3) (S)** P: GEOG 1300, 3420; or consent of instructor. History, theory and applications of radar and satellite meteorology, with a focus on techniques of satellite image interpretation and radar data processing applied to severe weather forecasting and climate analysis.

4590. **Tropical Meteorology (3) (F)** P: GEOG 1300; or consent of instructor. Tropical atmosphere as a key component of global weather and climate and climate prediction. Examination of the El Niño – Southern Oscillation, the Madden Julian Oscillation, tropical cyclones and monsoons and their associated climate predictability.

4801, 4802, 4803. **Geographic Internship (1,2,3) (F,S,SS)** 60 hours of work responsibility for 1 s.h. credit. May be repeated for maximum of 6 s.h. May not count toward foundations curriculum social sciences requirement. P: Consent of director of geography internships; consent should be obtained during the semester prior to internship. Application of geographic principles in industrial, governmental, or business setting.

4900. **Honors Research (3) (F,S)** P: Admission to GEOG honors program. Supervised reading and research in area of geography that leads to preparation of senior honors thesis proposal.
4901. Senior Honors Thesis (3) (F,S) P: GEOG 4900 with a grade of B or higher. Extensive program of supervised research in area of geography that leads to writing of senior honors thesis.

4999. Geography Professional Seminar (1) (F,S) P: Consent of instructor. Design and completion of professional portfolio. Examines transition from undergraduate student status to professional life or continued education.

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. Undergraduates May not count toward foundations curriculum social sciences requirement. P: GEOG 1300, 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. Undergraduates May not count toward foundations curriculum social sciences requirement. P: Consent of instructor. Seminar on selected topic.

5393. Seminar in Human Geography (3) May be repeated for up to 6 s.h. Undergraduates May not count toward foundations curriculum social sciences requirement. P: Consent of instructor. Seminar on selected topic in economic-human geography.

GEOG Banked Courses

1100. World Regional Geography (3)
1201. Introduction to Physical Geography Laboratory (1)
2009. Human Geography (3)
2201. Weather and Climate Laboratory (1)
3008. Evolution of Cartography (3)
3048. Eastern Europe (2)
3201. Land Form Analysis Laboratory (1)
3221, 3222, 3223. Natural Regions of the United States Field Studies (1,2,3)
4072. Intermediate Cartography (3)
5009. Geography of Public and Private Parkland Use (2)
5020. Spatial Efficiency Analysis (3)
5022. Theories of Industrial Location (3)
5024. Regional Development (3)
5050, 5051. Nautical Charts and Navigation (3,0)
5084. Map Compilation and Design (3)
5098. Hydrology and Water Resources (3)
5191, 5192, 5193. Seminar in Regional Geography (1,2,3)
5200. Climatology: Regions and Applications (3)
5210. Terrain Analysis (3)
PLAN: Planning

1900. Planning for the Human Environment (3) (F,S,SS) Theories, concepts, and methodologies used to plan for man and environment. Planning process examined in context of urban, regional, environmental, site, and institutional scenarios.

2410. Fundamentals of GIS (3) (F,S) Formerly PLAN 3051 Same as GEOG 2410 May not count toward foundations curriculum social sciences requirement. Foundations for understanding and using geographical information systems. Emphasis on creation, visualization, and analysis of geographically referenced data.

3015. Planning for Circulation (3) (S) Theories and principles involved in planning for circulatory systems in urban and regional settings. Historical aspects of circulation, overview of planning concerns, and discussion of practice of planning as related to transportation.

3018, 3028, 3038. Planning Internship (1,2,3) (F,S,SS) Minimum of 50 hours of professional work per semester hour of credit. P: Completion of a minimum of 9 s.h. of planning courses and consent of internship coordinator based upon student’s submitting written proposal indicating applicability of planning internship to his or her educational and professional objectives. Supervised experience with professional planning personnel in approved agency or organization.

3020. Environmental Planning (3) (F) Concepts and issues of the environment in relation to planning and management principles and practices.

3021. Introduction to Planning Techniques (3) (F) 2 lecture and 2 lab hours per week. Communication, computation, data analysis, and other analytical techniques for effective urban and regional planning.

3022. History and Theory of Planning (3) (WI) (F) (S) Past and present planning concepts, methods, and theories. In-depth examination of evolution of cities and history of planning in US.

3030. Urban and Regional Planning (3) (F) Philosophy, theories and principles involved in urban and regional planning, including an analysis of problems confronting urban areas, and the development of regions and their resources.

3031. Quantitative Analysis in Planning (3) (S) P: PLAN 3021 or consent of the instructor. Basic application in demographic, economic, land use, and transportation methods in policy context to develop effective community planning.

3032. Planning Legislation and Administration (3) (WI) (S) State enabling acts, zoning ordinances, subdivision regulations, and other legislative bases essential to effective planning. Administrative methods and theory presented in context of planning practice.
3041. Computer Applications in Planning (3) (F) 2 lecture and 2 lab hours per week. Various computer hardware, software, and operating systems for effective planning and design at urban and regional scales.

3051. Introduction to GIS in Planning (3) (F) 2 hours lecture and 2 hours lab per week. Overview of principles and applications of GIS in planning. Focuses on use of GIS to facilitate decision making in planning process.


4003. Urban Form and Design (3) (S) General types, scales, features, and determinants of urban form. Design concepts, problems, and potentials associated with urban development projects of varying scales.


4021. Advanced GIS Applications in Planning (3) (S) 2 lecture and 2 lab hours per week. P: PLAN 3051 or GEOG 2410 or consent of instructor. Overview of advanced principles and applications of GIS in planning using vector, raster, and TIN data models. Focuses on use of GIS to facilitate and support decision making in planning process.

4025. Housing and Neighborhood Planning (3) (F) Substantive and methodological issues related to housing and neighborhood planning. Current local, state, and federal statutory planning requirements in housing and community development examined in relationship to planning process.

4040. Community Facilities Planning (3) P: PLAN 3031 or consent of instructor. Analysis of facilities planning, financial management and decision making essential in the comprehensive planning process.

4041. GPS Applications in Planning (3) (S,SS) 2 lecture and 1 lab hours per week. P: PLAN 3051 or consent of instructor. Provides an in-depth survey of Global Positioning Systems (GPS) technology developments, applications, concepts, and operation. Emphasis is on field data collection, processing, and integration with GIS to provide accurate mapping for many essential decision making and planning applications.

4045. Environmental Resources Planning and Management (3) Framework for studying natural resources for purpose of development.
4046. Planning and Design Studio (3) (F,S) 2 lecture and 2 lab hours per week. Analytical and practical skills involved in real world planning, development, and management.

4050. World Architecture and Urbanism (3) (S) Survey of world architectural styles and urban patterns from antiquity to present time.

4055. Coastal Area Planning and Management (3) (S) 2 lecture and 1 field study hours per week. P: Consent of instructor. Conceptual approach to planning and management problems, policies, and practices in coastal areas.

4065. Land Use Planning (3) (F) Social, economic, physical, and environmental aspects of urban land use and planning.

4075. Transportation Planning (3) (S) Formerly PLAN 3015 Theories and principles involved in planning for circulatory systems in urban and regional settings. Historical aspects of circulation, overview of planning concerns, and discussion of practice of planning as related to transportation.

4096. Planning Studio (3) (F,S) 4 studio hours per week. P: PLAN 3022; PLAN 2410 or GEOG 2410; or consent of instructor. Collaborative studio investigating an advanced issue in planning. Work is conducted in teams, often for a community client.

4099. Practicum in Planning (3) (WI) (F,S) 1 lecture and 2 lab hours per week. Culmination of undergraduate preparation for professional practice. Planning process used to prepare high-quality planning document.

4121, 4131. Problems in Planning (2,3) 1 hour per week per credit hour. P: Consent of instructor. Analysis of specific problem in planning to be approved prior to registration.

4270. Water Resources Management and Planning (3) Same as GEOG 4270 P: PLAN 1900; or GEOG 1000 or 1250. Spatial and temporal characteristics of water. Consideration of hydrologic, engineering, economic, and institutional aspects of water management.

4305. Ecological Landscape Planning (3) P: GEOG 2410 or PLAN 2410 PLAN 3051 or consent of instructor. Theory and methods of landscape planning with a focus on creating sustainable, holistic landscapes.

4430. Geographic Information Systems II (3) (S) Same as GEOG 4430 P: GEOG 3430 or PLAN 3430 or consent of instructor. Advanced topics. Emphasis on development of GIS projects.

5025 Coastal Area Planning and Management (3) (S) 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.
**5045 Environmental Resources Planning and Management (3)** Frame of reference for studying natural resources for purpose of development.

**5065 Land Use Planning (3) (S)** 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.

**PLAN Banked Courses**

<table>
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<tr>
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<td>3010</td>
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<td>Transportation Planning and Transportation Planning Studio (2,1)</td>
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<td>Community Planning for Health Facilities (3)</td>
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<tr>
<td>5111</td>
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**Agenda Item X**

**Thomas Harriot College of Arts and Sciences**

**Department of Foreign Languages and Literatures**

[http://www.ecu.edu/cs-acad/ugcat/CoursesS.cfm#span](http://www.ecu.edu/cs-acad/ugcat/CoursesS.cfm#span)

**SPAN: Spanish**

**4990. Honors (3)**

P: Minimum 3.5 GPA in SPAN. Independent study of selected aspect of Spanish culture under direction of faculty member in student’s major area of interest.
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 dept chair instructor. 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 dept chair instructor. 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 dept chair instructor. 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 dept chair instructor. 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.

SPAN Banked Courses
1060. Spanish for Reading Knowledge (0)
3005. Spanish Business Communication (3)
3006. Spanish for International Business (3)
3290. Spanish Poetry (3)
4319. Teaching Foreign Languages in the Middle Grades (3)
4350. The Spanish Novel (3)
4360. Spanish Theatre (3)
4385. History of the Spanish Language (3)
Interdisciplinary Programs

Neuroscience Studies

*Tuan Tran, Director, 225 Rawl Building*

**Multidisciplinary Studies Major**

A multidisciplinary studies major with a focus in neuroscience is available. Interested students should contact the director of neuroscience studies.

**Minor**

The neuroscience minor is designed to provide students with an introduction to the study of neuroscience at the various structural and functional levels of analysis, including molecular, cellular, integrative, and behavioral. (Students interested in a neuroscience major should see multidisciplinary studies, described above, and contact the neuroscience program director.) The minor requires completion of core courses (20 s.h), a laboratory course (2 or 3 s.h), and an elective course (2-5 s.h.). In the event that courses required for the minor are also required for the student’s major, neuroscience elective courses should be taken so that a minimum of 24 s.h. of unique neuroscience courses are completed for the minor. The major advisor should send a potential minor to the director for advising. The minimum requirements for the minor are 24 s.h. as follows:

1. **Core - 20 s.h.**
   - BIOL 1100, 1101. Principles of Biology I (3,0) (F,S,SS) (FC:SC)
   - CHEM 1160, 1161. General Chemistry and Laboratory I II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
   - NEUR 4900. Cellular and Molecular Neuroscience (3) (F) (P: Senior standing; consent of instructor)
   - NEUR 4901. Behavioral and Integrative Neuroscience (3) (S) (P: Senior standing; consent of instructor)
   - PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO) or PSYC 1060. Honors Introductory Psychology (3) (F,S) (FC:SO)
   - PSYC 3310. Introduction to Neuroscience (3) (F,S,SS) (FC:SO)

2. **Neuroscience Laboratory Course (Choose one.) - 2-3 s.h.**
   - NEUR 4201. Laboratory Methods in Cellular and Molecular Neuroscience (2) (S)
PSYC 4312. Laboratory Methods in Behavioral Neuroscience (3) (P: PSYC 3310, 3311; or consent of instructor)
PSYC 4315. Neuroscience: Literature and Laboratory Experience (3) (P: PSYC 2210; 3310 or 3311; or consent of instructor)

3. Electives - 2-5 s.h.

BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (FC:SC) (P: BIOL 1050, 1051; or 1100, 1101)
BIOL 2131. Survey of Human Physiology and Anatomy Laboratory (1) (F,S,SS) (FC:SC) (P/C: BIOL 2130)
BIOL 2300. Principles of Genetics (3) (F,S,SS) (FC:SC) (P: BIOL 1100, 1200)
BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: CHEM 2650 or 2750 or 2770)
BIOL 3320. Principles of Animal Physiology (3) (F,S,SS) (P: CHEM 2650 or 2750 or 2770)
BIOL 5510, 5511. Transmission Electron Microscopy (4,0) (P for undergraduate students: Senior standing as a BIOL major or consent of instructor)
BIOL 5520, 5521. Scanning Electron Microscopy and X-Ray Analysis (2,0) (P for undergraduate students: Senior standing as a BIOL major or consent of instructor)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C: CHEM 2760)
CHEM 2770. Biological Chemistry (3) (S) (P: CHEM 2650 or 2760)
CHEM 2771. Biological Chemistry Laboratory (1) (S) (C: CHEM 2770)
ITEC 2054, 2055. Electricity/Electronics Fundamentals (3,0) (F,S,SS) (P/C: MATH 1074 or 1083 or 1085)
MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS) (FC:MA)
MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (P: MATH 2121)
NEUR 4200. Literature in Neuroscience (1) (F)
PHIL 1262. Introduction to Philosophical Issues in Biology (3) (F,S) (FC:HU)
PHIL 2261. Introduction to Philosophy of Science (3) (FC:HU)
PSYC 2210. Research Methods in Psychology (4) (WI) (F,S) (FC:SO) (P: MATH 1065 or MATH 1066; PSYC 2101)
PSYC 3225. Psychology of Learning (3) (F,S,SS)
PSYC 3226. Cognitive Psychology (3) (F,S,SS) (P: PSYC 1000 or 1060)
PSYC 3311. Neuropsychology (3) (F,S)
PSYC 4340. Behavioral Pharmacology Seminar (3) (P: PSYC 3310, 3311; or consent of instructor)

Any course listed under 2., above, not used to meet lab requirement may be chosen as an elective.
Thomas Harriot College of Arts and Sciences

Department of Biology

Jeffrey S. McKinnon, Chairperson, BN-108 Howell Science Complex
Jean-Luc Scemama, Director of Undergraduate Studies, BN-105 Howell Science Complex

BS in Biology, General

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum.) - 42 s.h.

   CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
   CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)

2. Core. - 15 s.h.

   BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
   BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C for 1201: BIOL 1200)
   BIOL 2250. Ecology (3) (F,S,SS) (P: BIOL 1100, 1101, 1200, 1201)
   BIOL 2251. Ecology Laboratory (1) (F,S,SS) (P: BIOL 1100, 1101, 1200, 1201; C: BIOL 2250)
   BIOL 2300. Principles of Genetics (3) (F,S,SS) (P: BIOL 1100, 1200)

3. Recommended electives. - 25 s.h.

   The following elective areas are recommended to guide students in choosing biology electives consistent with their academic goals. Students may concentrate in one of the specified areas, below, or choose a more general course of study. A maximum of 6 s.h. of BIOL 3504, 3550, 4504, 4514, 4550, 5995 may count toward biology electives without consent of dept. chair or director of undergraduate studies.

   Ecology/Environmental Biology:
   BIOL 3070, 3071. Survey of Plants and Fungi (4,0) (P: BIOL 1050, 1051 or 1060, 1061 or 1200, 1201)
   BIOL 3230, 3231. Field Botany (4,0) (F,S,SS) (P: BIOL 1050, 1051 or 1100, 1101; C for 3230: 3231; C for 3231: 3230)
   BIOL 3240, 3241. Field Zoology (4,0) (F) (P: BIOL 1060 or 2250)
BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: CHEM 1120 and 1130, or 2650 or 2750 or 2770)
BIOL 3320. Principles of Animal Physiology (3) (F,S,SS) P: CHEM 2650 or 2750 or 2770
BIOL 3321. Principles of Animal Physiology Laboratory (1) (C: BIOL 3320)
BIOL 3660. Introduction to Marine Biology (3) (F,S,SS) (P/C: BIOL 2250, 2251)
BIOL 3661. Introduction to Marine Biology Laboratory (1) (F,S) (C: BIOL 3660)
BIOL 4200, 4201. Population and Community Ecology (4,0) (4200:WI) (S) (P: BIOL 2250, 2251, 2300; CHEM 1150, 1151; RP: CHEM 1160, 1161; MATH 2121 or 1 statistics course)
BIOL 4300, 4301. Ecosystem Ecology (4,0) (WI) (F) (P: BIOL 2250, 2251)
BIOL 4320. Ecological Responses to Global Climate Change (3) (S) (P: BIOL 2250, 2251)
BIOL 4504, 4514. Research Problems in Biology (2,2) (WI, WI) (F,S,SS) (P: Consent of instructor)
BIOL 5070, 5071. Ornithology (4,0) (F) (P: 8 s.h. in BIOL)
BIOL 5150, 5151. Herpetology (4,0) (S) (P: 8 s.h. in BIOL)
BIOL 5200, 5201. Invertebrate Zoology (4,0) (F) (P: 6 s.h. in BIOL)
BIOL 5220, 5221. Limnology (4,0) (S) (P: BIOL 2250, 2251; or consent of instructor)
BIOL 5230, 5231. Phycology (4,0) (P: BIOL 1200, 1201)
BIOL 5260, 5261. Microbial Ecology (4,0) (S) (P: BIOL 2250, 2251, 3220, 3221; or consent of instructor)
BIOL 5270. Marine Community Ecology (3) (S) (P: BIOL 2250, 2251; or consent of instructor)
BIOL 5351. Biological Processes and the Chemistry of Natural Water (2) (S) (P: BIOL 2250, 2251; 2 CHEM courses; or consent of instructor)
BIOL 5550, 5551. Ichthyology (4,0) (F)
BIOL 5640, 5641. Entomology (4,0) (F) (P: 12 s.h. in BIOL)
BIOL 5730, 5731. Animal Physiological Ecology (4,0) (S) (P: BIOL 2250, 2251; 3310, 3311 or 3320, 3321 or 5800; or consent of instructor)
BIOL 5950, 5951. Taxonomy of Vascular Plants (4,0) (F) (P: 12 s.h. in biology or consent of instructor; RP: BIOL 2250, 2251)

Marine Biology:
BIOL 3660. Introduction to Marine Biology (3) (F,S,SS) (P/C: BIOL 2250, 2251)
BIOL 3661. Introduction to Marine Biology Laboratory (1) (F,S) (C: BIOL 3660)
BIOL 4504, 4514. Research Problems in Biology (2,2) (WI, WI) (F,S,SS) (P: Consent of instructor)
BIOL 5200, 5201. Invertebrate Zoology (4,0) (F) (P: 6 s.h. in BIOL)
BIOL 5220, 5221. Limnology (4,0) (S) (P: BIOL 2250, 2251; or consent of instructor)
BIOL 5230, 5231. Phycology (4,0) (P: BIOL 1200, 1201)
BIOL 5270. Marine Community Ecology (3) (S) (P: BIOL 2250, 2251; or consent of instructor)
BIOL 5351. Biological Processes and the Chemistry of Natural Water (2) (S) (P: BIOL 2250, 2251; 2 CHEM courses; or consent of instructor)
BIOL 5550, 5551. Ichthyology (4,0) (F)
BIOL 5600, 5601. Fisheries Techniques (3,0) (F,S) (F) (P: BIOL 2250, 2251; or equivalent)
BIOL 5680. Current Topics in Coastal Biology (2) (S) (P: Consent of instructor)
GEOL 1550. Oceanography (4) (S) (FC:SC)
GEOL 5300. Geology of Coastal Processes and Environments (3) (S) (P: GEOL 1550, 4010, 4011; or consent of instructor)

Microbiology:
BIOL 2100, 2101. Basic Laboratory Methods for Biotechnology (3,0) (F,SS) (Formerly BIOL 3100, 3101) (P: BIOL 1100, 1101; MATH 1065; CHEM 1020, 1021 or 1120, 1121 or 1150, 1151)
BIOL 3220, 3221. Microbiology (4,0) (F) (P: BIOL 1200, 1201; CHEM 2650 or 2750)
BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: CHEM 1120 and 1130, or 2650 or 2750 or 2770)
BIOL 4130. Astrobiology (3) (WI) (F) (P: BIOL 2250, 2300 RP: BIOL 3220)
BIOL 4170. Immunology I (3) (F) (P: BIOL 2300 or consent of instructor)
BIOL 4220. Microbes and Immunity (3) (WI*) (S, SS) (P: BIOL 2110, 2111 or 3220, 3221)
BIOL 4504, 4514. Research Problems in Biology (2,2) (WI, WI) (F,S,SS) (P: Consent of instructor)
BIOL 5260, 5261. Microbial Ecology (4,0) (P: BIOL 2250, 2251, 3220, 3221; or consent of instructor)
BIOL 5800. Principles of Biochemistry I (3) (F,S) (P: CHEM 2760, 2763, BIOL 3310, 3311) or
BIOL 5810. Principles of Biochemistry II (3) (F,S) (P: CHEM 2760, 2763, BIOL 3310, 3311)
BIOL 5821. Principles of Biochemistry Laboratory (1) (F,S) (P/C: BIOL 5800 or 5810)
BIOL 5870. Molecular Biology of the Gene (3) (F) (P: BIOL 2300)
BIOL 5890. Virology (3) (S,SS) (P: BIOL 3220, 3221; or consent of instructor)

Molecular Biology and Biotechnology:
BIOL 2100, 2101. Basic Laboratory Methods for Biotechnology (3,0) (F,SS) (Formerly BIOL 3100, 3101) (P: BIOL 1100, 1101; MATH 1065; CHEM 1020, 1021 or 1120, 1121 or 1150, 1151)
BIOL 3220, 3221. Microbiology (4,0) (F) (P: BIOL 1200, 1201; CHEM 2650 or 2750)
BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: CHEM 1120 and 1130, or 2650 or 2750 or 2770)
BIOL 4170. Immunology I (3) (F) (P: BIOL 2300; or consent of instructor)
BIOL 4240. Genome Evolution (3) (P: BIOL 2300 or consent of instructor)
BIOL 4504, 4514. Research Problems in Biology (2,2) (WI, WI) (F,S,SS) (P: Consent of instructor)
BIOL 5260, 5261. Microbial Ecology (4,0) (S) (P: BIOL 2250, 2251, 3220, 3221; or consent of instructor)
BIOL 5510, 5511. Transmission Electron Microscopy (4) (S) (P: Senior standing as BIOL major or consent of instructor)
BIOL 5520, 5521. Scanning Electron Microscopy and X-Ray Analysis (2,0) (F,SS) (P: Senior standing as BIOL major or consent of instructor)
BIOL 5800, 5810. Principles of Biochemistry I, II (3,3) (F,S) (P: CHEM 2760, 2763, BIOL 3310, 3311)
BIOL 5821. Principles of Biochemistry Laboratory (1) (F,S) (P/C: BIOL 5800 or 5810)
BIOL 5870. Molecular Biology of the Gene (3) (F) (P: BIOL 2300)
BIOL 5890. Virology (3) (S,SS) (P: BIOL 3220, 3221; or consent of instructor)
BIOL 5900, 5901. Biotechniques and Laboratory (2,3) (S) (P: BIOL 2100, 2101, 5870;
consent of instructor; RP: BIOL 5810)
Physiology, Anatomy, and Cell Biology:
BIOL 3220, 3221. Microbiology (4,0) (F) (P: BIOL 1200, 1201; CHEM 2650 or 2750)
BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: CHEM 1120 and 1130, or 2650
or 2750 or 2770)
BIOL 3320. Principles of Animal Physiology (3) (F,S,SS) P: CHEM 2650 or 2750 or
2770)
BIOL 3321. Principles of Animal Physiology Laboratory (1) (F,S,SS) (C: BIOL 3320)
BIOL 4040. Human Genetics (3) (S) (P: BIOL 2300)
BIOL 4050, 4051. Comparative Anatomy (4,0) (F) (P: BIOL 1100, 1200)
BIOL 4060, 4061. Embryology (4,0) (P: BIOL 2300)
BIOL 4170. Immunology I (3) (F) (P: BIOL 2300 or consent of instructor)
BIOL 4504, 4514. Research Problems in Biology (2,2) (WI, WI) (F,S,SS) (P: Consent of
instructor)
BIOL 5450, 5451. Histology (4,0) (F) (P: 4 BIOL courses)
BIOL 5630, 5631. Comparative Animal Physiology (4,0) (S) (P: 2 BIOL and 2 organic
chemistry courses)
BIOL 5870. Molecular Biology of the Gene (3) (F) (P: BIOL 2300)

4. Cognates. - 22 s.h.

CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C:
CHEM 2760)
MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or
1077 with a minimum grade of C)
MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (P: MATH 2121)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or
1066; P for 1260: PHYS 1250)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251:
PHYS 1250 or 2350; C for 1261: 1260 or 2260)

5. Research skills (Choose one area.) - 8-9 s.h.
Students contemplating graduate school should consider admission requirements before
selecting a research skills area.
   1. Foreign language through level 1003.
   2. Quantitative and Communication Skills (1 course each in scientific writing,
      statistics, and computer programming.)
Recommended courses:
ENGL 3820. Scientific Writing (3) (WI) (F,S) (P: ENGL 1200) or ITEC 3290. Technical Writing (3) (WI) (F,S,SS)(P: ENGL 1200) or a course in scientific writing
MATH 2228. Elementary Statistical Methods I (3) (F,S,SS) (P: MATH 1065 or equivalent)
MIS 2223. Introduction to Computers (3) (F,S,SS) or ACCT 2401. Financial Accounting (3) (F,S,SS) (P: MATH 1065 or 1066 or 2119 or 2121 or 2171)

3. Relevant cognate area courses chosen to meet this requirement must be planned through consultation with a faculty advisor and approved in advance by the dept chair and the dept director of undergraduate studies.
4. Recommended for microbiology and molecular biology/biotechnology:

CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI, WI) (F,S) (P: CHEM 1160, 1161; CHEM 2650 or 2750)
MIS 2223. Introduction to Computers (3) (F,S,SS)

6. Electives to complete requirements for graduation.

BS in Biochemistry

Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) - 42 s.h.

CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test test or math section of the SAT/ACT)

2. Core. - 40 s.h.

Biology:
BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C for 1201: BIOL 1200)
BIOL 2300. Principles of Genetics (3) (F,S,SS) (P: BIOL 1100, 1200)
BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: CHEM 1120 and 1130, or 2650 or 2750 or 2770)
BIOL 5800, 5810. Principles of Biochemistry I, II (3,3) (P: CHEM 2760, 2763)
BIOL 5821. Principles of Biochemistry Laboratory I (1) (P/C: BIOL 5800 or 5810)

Chemistry:
CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI, WI) (F,S) (P:
CHEM 1160, 1161; CHEM 2650 or 2750)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C:
CHEM 2760)

CHEM 3950, 3951. Physical Chemistry and Laboratory I (4,1) (WI, WI) (F,S) (P: PHYS
1261, 2360; MATH 2173; CHEM 2250, 2251) or CHEM 3850, 3851. Introduction to
Physical Chemistry (4,1) (WI,WI) (F) (P: CHEM 1160, 1161; MATH 2122 or 2172;
PHYS 1260, 1261; C for 3850: CHEM 3851; C for 3851: CHEM 3850)

3. Cognates. - 25-27 s.h.

MATH 1083. Introduction to Functions (3) (F, S,SS) (FC:MA) (P: MATH 1065 with a
minimum grade of C) or
MATH 1085. Pre-Calculus Mathematics (5) (F,S,SS) (FC:MA) (P: MATH 1065 with a
minimum grade of C)
MATH 2171, 2172, 2173. Calculus I, II, III (4,4,4) (F,S,SS) (FC:MA) (P for 2171:
minimum grade of C in any of MATH 1083, 1085, or 2122; P for 2172: MATH 2171
with minimum grade of C or 2122 with consent of instructor; P for 2173: MATH 2172
with minimum grade of C)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251:
PHYS 1250 or 2350; C for 1261: 1260 or 2260)
PHYS 2350, 2360. University Physics (4,4) (F,S,SS) (FC:SC) (P: for 2350: MATH 2121,
2151, 2171; P for PHYS 2360: PHYS 2350)

4. Electives (Choose from the following.) - 6 s.h.

BIOL 2100, 2101. Basic Laboratory Methods for Biotechnology (3,0) (F,SS) (Formerly
BIOL 3100, 3101) (P: BIOL 1100, 1101; MATH 1065; CHEM 1020, 1021 or 1120, 1121
or 1150, 1151)
BIOL 3220, 3221. Microbiology (4,0) (P: BIOL 1200, 1201; CHEM 2650 or 2750)
BIOL 5510, 5511. Transmission Electron Microscopy (4) (P: Senior standing as a BIOL
major or consent of instructor)
BIOL 5520, 5521. Scanning Electron Microscopy and X-Ray Analysis (2,0) (P: Senior
standing as a BIOL major or consent of instructor)
BIOL 5870. Molecular Biology of the Gene (3) (F) (P: BIOL 2300)
BIOL 5900, 5901. Biotechniques and Laboratory (2,3) (P: BIOL 2100, 2101, 5870;
consent of chair or instructor; RP: BIOL 5810)
CHEM 3960, 3961. Physical Chemistry and Laboratory II (4,1) (WI, WI) (F) (P: CHEM
3950, 3951) or all of the following: BIOL 3550. Biology Honors (1) (WI) (F,S,SS) (P:
Faculty invitation), BIOL 4550. Biology Honors (2) (WI) (F, S, SS) (P: Faculty
invitation) and BIOL 4514. Research Problems in Biology (2) (WI) (F, S, SS) (P: Consent of instructor)
MATH 4331. Introduction to Ordinary Differential Equations (3) (F,S) (P: MATH 2173)

5. Electives to complete requirements for graduation.

http://www.ecu.edu/cs-acad/ugcat/geology.cfm

Thomas Harriot College of Arts and Sciences

Department of Geological Sciences

Stephen J. Culver, Chair, 101 Graham Building

BS in Geology

Geology majors have the opportunity to specialize in one of three concentration areas: coastal and marine, environmental, general geology. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum.) - 42 s.h.
2. Core - 42 s.h.

GEOL 1500. Dynamic Earth (3) (F,S,SS) (FC:SC) and GEOL 1501. Dynamic Earth Laboratory (1) (F,S,SS) (FC:SC)
GEOL 1600. Earth and Life Through Time (4) (F,S) (FC:SC)
GEOL 2000. Quantitative Methods in the Geological Sciences (3) (P: MATH 1065)
GEOL 3050, 3051. Mineralogy and Petrology I (4,0) (F) (P: A 1000-level GEOL course; RP: CHEM 1150, 1151; GEOL 1500, 1501)
GEOL 3150, 3151. Mineralogy and Petrology II (4,0) (S) (P: GEOL 3050, 3051; P/C: CHEM 1150, 1151)
GEOL 3200, 3201. Introduction to Field Methods (2,0) (F) (P: GEOL 1600)
GEOL 3300, 3301. Structural Geology (4,0) (S) (P: GEOL 3200, 3201)
GEOL 4000. Summer Field Course in Geology (6) (SS) (P: GEOL 3050, 3051, 3300, 3301)
GEOL 4010, 4011. Sedimentology (4,0) (WI) (F) (P: GEOL 1600, 3050, 3051)
GEOL 4020, 4021. Stratigraphy (3,0) (WI) (S) (P: GEOL 1600)
GEOL 4200, 4201. Paleontology (4,0) (4200:WI) (S) (P: GEOL 1600)

3. Concentration areas (Choose one.) - 7 s.h.

Coastal and Marine Geology (Choose 7 s.h. from the following.):
GEOL 1550. Oceanography (4) (F,S) (FC:SC)
GEOL 5300. Geology of Coastal Processes and Environments (3) (P: GEOL 1550, 4010, 4011; or consent of instructor)
GEOL 5350. Marine Geology (3) (P: GEOL 1550, 4010, 4011; or consent of instructor)
Or other approved GEOL courses
Environmental Geology (Choose 7 s.h. from the following.):
GEOL 1700. Environmental Geology (4) (F,S) (FC:SC)
GEOL 5150. The Geologic Component of Environmental Science (3) (P: Introductory GEOL course or consent of instructor)
GEOL 5450. Introduction to Aqueous Geochemistry (3) (P: CHEM 1150, 1151, 1160, 1161)
GEOL 5710, 5711. Ground-Water Hydrology (3,0) (P: GEOL 1500, 1501; or consent of instructor.
Or other approved GEOL courses
General Geology:
Choose 7 s.h. from any combination of GEOL courses. At least one course must be above 2999.

4. Cognates - 25 s.h.

CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
Choose 6 s.h. of approved courses in calculus, statistics, and/or computer applications
Choose 8 s.h. of approved BIOL, CHEM, and/or PHYS courses

5. Electives to complete requirements for graduation.

http://www.ecu.edu/cs-acad/ugcat/math.cfm

Thomas Harriot College of Arts and Sciences

Department of Mathematics

Johannes H. Hattingh, Chair, 124 Austin Building

BS in Mathematics
Credit toward a mathematics major will not be given in any MATH course with a grade less than C- (1.7). Minimum degree requirement is **126 s.h.** of credit as follows:

1. **Foundations curriculum** (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) - 42 s.h.

2. **Common mathematics core** - 37 s.h.

   MATH 2171, 2172, 2173. Calculus I, II, III (4,4,4) (F,S,SS) (FC:MA) (P for 2171: MATH 1083, 1085, 2122 with minimum grade of C; P for 2172: MATH 2171 or 2122 with consent of instructor; P for 2173: MATH 2172)

   MATH 2300. Transition to Advanced Mathematics (3) (WI) (P: MATH 2171)

   MATH 3256. Linear Algebra (3) (F,S,SS) (P: MATH 2172)

   MATH 3263. Introduction to Modern Algebra (3) (F,S) (P: MATH 2300, 3256)

   MATH 3307. Mathematical Statistics I (3) (F,S) (P: MATH 2152 or MATH 2172)

   MATH 3308. Mathematical Statistics II (3) (F) (P: MATH 3307)

   MATH 4101. Advanced Calculus I (3) (P: MATH 2173, 2300, or consent of instructor)

   MATH 4331. Introduction to Ordinary Differential Equations (3) (F,S) (P: MATH 2173)

3. **Concentration area** (Choose one area.) - 13-33 s.h.

   Mathematics (27-33 s.h.):

   MATH 4110. Elementary Complex Variables (3) (S) (P: MATH 2173)

   Minor (24-30 s.h.)

   Science (27-28 s.h.)

   CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)

   CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 *with a minimum grade of C*, 1151; C for 1160, CHEM 1161; C for 1161: CHEM 1160; R/C: MATH 1083 or 1085)

   MATH 4110. Elementary Complex Variables (3) (S) (P: MATH 2173)

   PHYS 2350, 2360. University Physics (4,4) (F,S,SS) (FC:SC) (P for 2350: MATH 2121, 2151, 2171; P for PHYS 2360: PHYS 2350)

   Choose one of the following:

   BIOL 1100, 1101. Principles of Biology I (4,0) (F,S,SS) (FC:SC) and BIOL 1200, 1201. Principles of Biology II (4,0)(F,S,SS) (FC:SC)

   A combination of any 3 courses numbered above 1999 in Chemistry or numbered above 3999 in Physics.

   Statistics (21 s.h.)

   ENGL 3880. Writing for Business and Industry (3) (WI) (F,S,SS) (P: ENGL 1200)

   MATH 4031. Applied Statistical Analysis (3) (WI) (P: MATH 2228 or 2283 or 3308; MATH 3256 or MATH/CSCI 3584; or equivalent; or consent of instructor)

   MATH 4201. Introduction to Stochastic Processes (3) (P: MATH 3307 or equivalent or consent of instructor) or MATH 5000. Introduction to Sampling Design (3) (F) (P: MATH 3308 or 3229 or consent of instructor)
MATH 4774. Programming for Research (3) (P: MATH 2228 or MATH 2283 or equivalent)
MATH 4801. Probability Theory (3) (P: MATH 2173 or 3307)
MATH 4999. Capstone and Statistical Consulting (3) (P: MATH 4031)
PHIL 2274. Business Ethics (3) (F,S,SS) (FC:HU)

Computer Science (13 s.h.)
CSCI/EENG 2410. Digital Electronics (3) (Same as EENG 2410) (P: ENGR 1014 or 1016, and 2050; or CSCI 2310, 2311) or CSCI 3675. Organization of Programming Language (3) (P: CSCI 3200 or 3310) or MATH 4110. Elementary Complex Variables (S) (P: MATH 2173)
CSCI 3300. Introduction to Algorithms and Data Structures (4) (P: CSCI 2300, 2310, 2427)
CSCI 3310. Advanced Data Structures and Data Abstraction (3) (P: CSCI 3300)
CSCI 3650. Analysis of Algorithms (3) (P: CSCI 3200 or 3300; CSCI 2427)

4. Specified electives

Mathematics (9 s.h.):
Choose 9 additional s.h. in consultation with advisor from MATH 3174, 3233, 3273, 3301, 3573, 4201, 4264, 4801, 5000, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322, or 5551.

Science (3 s.h.)
Choose 3 additional s.h. in consultation with advisor from MATH 3174, 3233, 3273, 3301, 3573, 4201, 4264, 4801, 5000, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322, or 5551.

Statistics (9 s.h.)
Choose 3 additional s.h. from MATH 4201, 5000, 5132; OMGT 4493; ECON 3343, 4430.
Choose 6 additional s.h. from MATH 3174, 3233, 3273, 3301, 3573, 4110, 4264, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322 or 5551.

Computer Science (15 s.h.)
Choose 3 s.h. from MATH 3174, 3233, 3273, 3301, 3573, 4201, 4264, 4801, 5000, 5002, 5021, 5102, 5121, 5122, 5131, 5132, 5311, 5322 or 5551.
Choose 12 s.h. of CSCI electives numbered above 1999, 2310/2311, 2610, 2611, 3300, 3310, 3510, 3584, 3601, 3650.

5. Electives to complete requirements for graduation.

http://www.ecu.edu/cs-acad/ugcat/physics.cfm

Thomas Harriot College of Arts and Sciences

Department of Physics
BS in Physics

The BS is a traditional physics program designed for students interested in graduate study in physics or engineering. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

   - CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
   - CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
   - MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT) or equivalent

2. Core - 40 s.h.

   - PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: PHYS 1260 or 2360)
   - PHYS 2350, 2360. University Physics (4,4) (FC:SC) (P for 2350: MATH 2121, 2151 or 2171; P for 2360: PHYS 2350)
   - PHYS 3700, 3701. Advanced Laboratory (3,0) (3700:WI) (F) (P: PHYS 2360)
   - PHYS 4120. Thermodynamics (3) (S-OY) (P: PHYS 2360)
   - PHYS 4226. Mechanics I (3) (F) (P: MATH 2173; PHYS 2360)
   - PHYS 4310. Modern Optics (3) (F-EY) (P: PHYS 2360)
   - PHYS 4326. Electricity and Magnetism I (3) (F) (P: PHYS 2360)
   - PHYS 4416. Modern Physics I (3) (F) (P: PHYS 2360)
   - PHYS 4417. Modern Physics II (3) (S) (P: PHYS 4416)
   - PHYS 4560. Mathematical Methods for Physics (3) (S) (P: MATH 2173; PHYS 2360)
   - PHYS 4610. Electronics (3) (F-OY) (P: PHYS 2021, 2360)
   - Choose 3 s.h. of PHYS electives above 2999

3. Cognates - 18 s.h.

   - MATH 1083. Introduction to Functions (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)
   - MATH 2171, 2172, 2173. Calculus I, II, III (4,4,4) (F,S,SS) (FC:MA) (P for 2171: minimum grade of C in any of MATH 1083, 1085, 2122; P for 2172: MATH 2171 with a minimum grade of C or 2122 with consent of instructor; P for 2173: MATH 2172 with a minimum grade of C)
   - MATH 4331. Introduction to Ordinary Differential Equations (3) (F,S) (P: MATH 2173)

4. Electives to complete requirements for graduation.
BSAP (BS in Applied Physics)

The BSAP is designed for students interested in employment in technical fields or in graduate study in engineering, business, public health, medicine, environmental science, and related technical fields depending on elective choices. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

   CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
   CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT) or equivalent

2. Core - 28 s.h.

   PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: PHYS 1260 or 2360)
   PHYS 2350, 2360. University Physics (4,4) (FC:SC) (P for 2350: MATH 2121, 2151 or 2171; P for 2360: PHYS 2350)
   PHYS 3700, 3701. Advanced Laboratory (3,0) (3700:WI) (F) (P: PHYS 2360)
   PHYS 4310. Modern Optics (3) (P: PHYS 2360)
   PHYS 4416. Modern Physics I (3) (F) (P: PHYS 2360)
   PHYS 4417. Modern Physics II (3) (S) (P: PHYS 4416)
   PHYS 4610. Electronics (3) (F-OY) (P: PHYS 2021, 2360)
   Choose 3 s.h. of PHYS electives above 2999

3. Cognates - 18 s.h.

   MATH 1083. Introduction to Functions (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)
   MATH 2171, 2172, 2173. Calculus I, II, III (4,4,4) (F,S,SS) (FC:MA) (P for 2171: minimum grade of C in any of MATH 1083, 1085, 2122; P for 2172: MATH 2171 with a minimum grade of C or 2122 with consent of instructor; P for 2173: MATH 2172 with a minimum grade of C)
   MATH 4331. Introduction to Ordinary Differential Equations (3) (F,S) (P: MATH 2173)

4. Electives to complete requirements for graduation.
College of Allied Health Sciences

Department of Clinical Laboratory Science

Kathleen M. Schulman, Interim Chair, 3410E, Health Sciences Building

BS in Clinical Laboratory Science

A minimum cumulative 2.0 GPA in biology and chemistry courses is required for admission into the professional phase of the curriculum. Majors must maintain a minimum cumulative 2.0 GPA in all clinical laboratory science (CLSC) courses during the professional phase of the curriculum. A student earning a D (1.0) in any of the CLSC courses must petition the Department of Clinical Laboratory Science for probationary continuation. Minimum degree requirement is 131 s.h. of credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below. - 42 s.h.

   CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
   CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
   MATH 1065. College Algebra (3) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
   Recommended:
   PSYC 1000. Introductory Psychology (3) (FC:SO)
   PSYC 2101. Psychological Statistics (4) (FC:SO) (P: MATH 1065 or MATH 1066)

2. Core - 67 s.h.

   CLSC 3410. Hematology I (3) (P: CLSC major)
   CLSC 3411. Hematology I Laboratory (1) (P: CLSC major; C: CLSC 3410)
   CLSC 3420. Hematology II (3) (S) (P: CLSC major; CLSC 3410, 3411; or consent of instructor)
   CLSC 3421. Hematology II Laboratory (1) (S) (P: CLSC major; CLSC 3410, 3411; or consent of instructor)
   CLSC 3430. Clinical Immunology (2) (P: Consent of instructor)
   CLSC 3440, 3441. Clinical Microscopy and Serology Lecture and Laboratory (2,1) (SS) (P: CLSC 3430)
   CLSC 4210, 4211. Immunohematology Lecture and Laboratory (3,1) (SS) (P: CLSC 3430; consent of instructor)
CLSC 4430, 4431. Clinical Chemistry I (2,1) (F) (P: 4 courses in CHEM; PSYC 2101 or other statistics course; P for nonmajor: consent of instructor)
CLSC 4440, 4441. Clinical Chemistry II (4,2) (S) (P: CLSC 4430, 4431; P for nonmajor: consent of instructor)
CLSC 4460, 4461. Clinical Microbiology I (4,2) (F) (P: BIOL 2110, 2111; or 3220, 3221; or consent of instructor)
CLSC 4470, 4471. Clinical Microbiology II (3,2) (S) (P: CLSC 4460, 4461; or consent of instructor)
CLSC 4480, 4481. Clinical Microbiology III (2,1) (SS) (P: Consent of instructor)
CLSC 4491. Molecular Diagnostics in Clinical Laboratory Science I (1) (F) (P: Consent of instructor)
CLSC 4492. Molecular Diagnostics in Clinical Laboratory Science II (1) (S) (P: CLSC 4491; consent of instructor)
CLSC 4801. Professional Practice Issues I (3) (WI) (F) 3 lecture hours per week. P: CLSC major.
CLSC 4802. Professional Practice Issues II (4) (S) 4 lecture hours per week. P: CLSC major.
CLSC 4803. Introduction to Clinical Laboratory Information Systems (2) (S) (P: CLSC major or consent of instructor)
**CLSC 4992. Clinical Education—Hematology, Coagulation, Urinalysis (4) (F,S) (P: CLSC 3420, 3421)
**CLSC 4993. Clinical Education—Chemistry (4) (F,S) (P: CLSC 4440, 4441)
**CLSC 4994. Clinical Education—Blood Bank and Serology (4) (F,S) (P: CLSC 4210, 4211)
**CLSC 4997. Clinical Education—Microbiology (4) (F,S) (P: CLSC 4470, 4471)

3. Cognates - 22 s.h.

BIOL 1150, 1151. Principles of Biology: A Human Approach (4,0) (FC:SC)(3 lecture and 2 discussion hours per week)
BIOL 2110, 2111. Fundamentals of Microbiology and Laboratory (3,1) (F,S) (FC:SC) P for 2110: CHEM 1120, 1130 or BIOL 1100 and CHEM 1150; 2.75 GPA or consent of instructor; RP for 2110; BIOL 1050, 1051 or 1100, 1101; P/C for 2111: BIOL 2110) BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (FC:SC) (P: BIOL 1050, 1051; or 1100, 1101)
CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI) (F,S) (P: CHEM 1160, 1161; CHEM 2650 or 2750)
CHEM 2650. Organic Chemistry for the Life Sciences (4) (F) (P: CHEM 1160, 1161)
CHEM 2651. Organic Chemistry Lab for the Life Sciences (1) (F) (C: CHEM 2650)

*Students must complete CLSC 4801, 4802 to satisfy the 3 s.h. requirement of writing intensive courses in the major.

**Affiliated hospitals for CLSC 4992, 4993, 4994, 4997 include Cape Fear Valley Medical Center, Fayetteville; CarolinaEast Medical Center, New Bern; Lenoir Memorial Hospital, Kinston; Nash Health Care System, Rocky Mount; Pitt County Memorial Hospital, Greenville;
Wayne Memorial Hospital, Goldsboro; Wilson Medical Center, Wilson; and Federal Medical Center at Federal Correction Complex, Butner, NC.

http://www.ecu.edu/cs-acad/ugcat/education.cfm

College of Education

Linda A. Patriarca, Dean, 154 Speight Building
John A. Swope, Associate Dean, 154 Speight Building
Vivian M. Covington, Director of Teacher Education, 105 Speight Building

Academic Concentrations

Chemistry (44 s.h.)
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI, WI) (F,S) (P: CHEM 1160, 1161; CHEM 2650 or 2750)
CHEM 2650. Organic Chemistry for the Life Sciences (4) (F) (P: CHEM 1160, 1161)
CHEM 2651. Organic Chemistry Lab for the Life Sciences (1) (F) (C: CHEM 2650)
CHEM 3450. Elementary Inorganic Chemistry (3) (F,S) (P: CHEM 2250, 2251; C: CHEM 3451)
CHEM 3451. Elementary Inorganic Chemistry Laboratory (1) (WI) (F,S) (P: CHEM 2250, 2251; C: CHEM 3450 or 5550)
CHEM 3850, 3851. Introduction to Physical Chemistry (4,1) (WI, WI) (F,S) (P: CHEM 1160, 1161; MATH 2122 or 2172; PHYS 1260, 1261)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or 1077 with a minimum grade of C)
MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (P: MATH 2121)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: PHYS 1260 or 2260)
Choose recommended electives above 2999
College of Education

Department of Mathematics, Science, and Instructional Technology Education

Susan Ganter, Chair, 342-A Flanagan Building

BS in Science Education

The science education degree prepares and develops professionals in science education by offering classroom instruction and research opportunities in programs for students whose career goals are teaching science in the elementary, middle, and secondary schools, and in higher education. Undergraduate areas of preparation include the methods and processes of teaching the biological, physical, and earth sciences. Minimum degree requirement is 128 s.h. of credit as follows:

1. Foundations curriculum and special requirements for certification (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

   BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
   GEOL 1500. Dynamic Earth (3) (F,S,SS) (FC:SC)
   GEOL 1501. Dynamic Earth Laboratory (1) (F,S,SS) (FC:SC) (C: GEOL 1500)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
   PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
   Council for Teacher Education Approved Diversity Course
   Choose a literature course (FC:HU)

2. Teaching area concentration (Choose one from the following.) - 55 s.h.

   Biology
   BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C for 1201: BIOL 1200)
   BIOL 2100, 2101. Basic Laboratory Methods for Biotechnology (3,0) (F,SS) (FC:SC) (Formerly BIOL 3100, 3101) (P: BIOL 1100, 1101; MATH 1065; CHEM 1020, 1021 or 1120, 1121 or 1150, 1151)
   BIOL 2110, 2111. Fundamentals of Microbiology and Laboratory (3,1) (F,S) (FC:SC) (P: for 2110: CHEM 1120, 1130 or CHEM 1150, 1160; RP for 2110: BIOL 1050, 1051 or 1100, 1101; P/C for 2111: BIOL 2110)
   BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (FC:SC) (P: BIOL 1050, 1051; or 1100, 1101) and BIOL 2131. Survey of Human Physiology and Anatomy Laboratory (1) (F,S SS) (FC:SC) (P/C: BIOL 2130) or BIOL 4050, 4051. Comparative Anatomy (4,0) (F) (P: 6 s.h. in BIOL)
BIOL 2250. Ecology (3) (F,S,SS) (P: BIOL 1100, 1101, 1200, 1201)
BIOL 2251. Ecology Laboratory (1) (F,S,SS) (P: BIOL 1100, 1101, 1200, 1201; C: BIOL 2250)
BIOL 2300. Principles of Genetics (3) (F,S,SS) (P: BIOL 1100, 1200)
BIOL 3230, 3231. Field Botany (4,0) (F,S,SS) (P: 3 s.h. of general BIOL with a lab) or
BIOL 3150. Plant Biology (3) (S) (P: 2000-level BIOL course or consent of instructor)
BIOL 3310, 3311. Cellular Physiology (4,0) (F,S,SS) (P: Organic chemistry or
biochemistry course)
BIOL 3620. Biological Evolution (3) (F) (P: MATH 1065 or equivalent; BIOL 2300 or
consent of instructor)
CHEM 1120. Introduction to Chemistry for the Allied Health Sciences (3,0) (F,S,SS)
(FC:SC)
CHEM 1121. Basic General, Organic, and Biochemistry Laboratory I (1) (F,S) (FC:SC)
(C: CHEM 1120)
CHEM 1130. Organic and Biochemistry for the Allied Health Sciences (4,0) (F,S,SS)
(FC:SC) (P: CHEM 1120)
MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or
1077 with a minimum grade of C)
MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (P: MATH 2121)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or
1066; P for 1260: PHYS 1250)
PHYS 1251. General Physics Laboratory (1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250
or 2350)
SCIE 3604. Investigations in Life and Environmental Science (4) (F,S,SS)
Chemistry
BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C
for 1201: BIOL 1200)
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C:
MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P:
CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161:
CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2250, 2251. Quantitative and Instrumental Analysis (3,2) (WI) (F,S) (P: CHEM
1160, 1161; CHEM 2650 or 2750)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C:
CHEM 2760)
CHEM 3450. Elementary Inorganic Chemistry (3) (F,S) (P: CHEM 2250, 2251; C:
CHEM 3451)
CHEM 3451. Elementary Inorganic Chemistry Laboratory (1) (WI) (F,S) (P: CHEM
2250, 2251; C: CHEM 3450 or 5550)
CHEM 3850, 3851. Introduction to Physical Chemistry (4,1) (WI) (F,S) (P: CHEM 1160,
1161; MATH 2122 or 2172; PHYS 1260)
MATH 2171. Calculus I (4) (F,S,SS) (FC:MA) (P: Minimum grade of C in any of MATH 1083, 1085, or 2122)
MATH 2172. Calculus II (4) (F,S,SS) (FC:MA) (P: MATH 2171 with a minimum grade of C or MATH 2122 with consent of instructor)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
SCIE 3350, 3351. Descriptive Astronomy (4,0) (S) or SCIE 3360, 3361. Physical Meteorology (4,0) (S)
SCIE 3602. Investigations in Physical and Earth Science (4) (F,S,SS)

Earth Science
BIOL 1200. Principles of Biology (3) (F,S,SS) (FC:SC) (P/C for 1201: BIOL 1200)
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1115; C for 1151: CHEM 1150)
CHEM 1160. General Chemistry II (3) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
GEOL 1550. Oceanography (4) (S) (FC:SC) GEOL 1700. Environmental Geology (4) (F,S) (FC:SC)
GEOL 1600. Earth and Life Through Time (4) (S) (FC:SC)
GEOL 3050, 3051. Mineralogy and Petrology I (4,0) (F) (P: A 1000-level GEOL course) 3 lecture and 3 lab hours per week.
GEOL 3200. Introduction to Field Methods (2,0) (P: GEOL 1600)
GEOL 3250, 3251, Geomorphology (3,0) (F-0Y) (P: GEOL 1600)
GEOL Elective over 3000 (3)
MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or 1077 with a minimum grade of C)
MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (P: MATH 2121)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
PHYS 1251. General Physics Laboratory (1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350)
SCIE 3350, 3351. Descriptive Astronomy (4,0) (S)
SCIE 3360, 3361. Physical Meteorology (4,0) (S)
SCIE 3602. Investigations in Physical and Earth Science (4) (F,S,SS)

Physics
BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P for 1201: BIOL 1200)
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
MATH 2171. Calculus I (4) (F,S,SS) (FC:MA) (P: Minimum grade of C in any of MATH 1083, 1085, or 2122)
MATH 2172. Calculus II (4) (F,S,SS) (FC:MA) (P: MATH 2171 with a minimum grade of C or MATH 2122 with consent of instructor)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: 1260 or 2360)
PHYS 2350, 2360. University Physics (4,4) (F,S,SS) (FC:SC) (P for 2350: MATH 2121, 2151, 2171; P for PHYS 2360: PHYS 2350)
PHYS 3716. Advanced Physics Laboratory (1) P: Consent of instructor and dept chair.
PHYS 4120. Thermodynamics (3) (S-OY) (P: PHYS 2360)
PHYS 4310. Modern Optics (3) (F-EY) (P: PHYS 2360)
PHYS 4416. Modern Physics I (3) (F) (P: PHYS 2360)
PHYS 4417. Modern Physics II (3) (S) (P: PHYS 4416)
SCIE 3350, 3351. Descriptive Astronomy (4,0) (S)
SCIE 3360, 3361. Physical Meteorology (4,0) (S)
SCIE 3602. Investigations in Physical and Earth Science (4) (F,S,SS)

3. Specialty Area - 6 s.h.

SCIE 3323. Introduction to Teaching in the High School Science Classroom (3) (S) (P: SCIE 2123)
SCIE 4323. The Teaching of Science in High School (3) (WI) (F) (P: Admission to upper division)

4. Professional studies - 24-25 s.h.

EDUC 3200. Foundations of American Education (3) (WI*) (F,S,SS) (P: Early experience course or consent of instructor)
EDUC 4400. Foundations of School Learning, Motivation, and Assessment (3) (F,S) (P: Admission to upper division; C: Senior I semester) or PSYC 4305. Educational Psychology (3) (F,S,SS) (P: PSYC 2201 or 2240 or 3206 or 3240 or equivalent)
READ 3990. Teaching Reading in the Content Areas in the Secondary School (2) (F,S,SS) or READ 5317. Reading in the Junior and Senior High School (3)
SCIE 2123. Early Experiences for the Prospective Teacher (1) (F,S)
SCIE 4030. Technology in Science Teaching (3) (F) (P: Admission to upper division; SCIE 3323)
SCIE 4324. Internship in Science Education (10) (S) (P: Admission to upper division; SCIE 4323; C: SCIE 4325)
SCIE 4325. Internship Seminar: Issues in Science Education (1) (S) (P: Admission to upper division; C: SCIE 4324)
SPED 4010. Effective Instruction in Inclusive Classrooms (2) (F,S) (RP: SPED 2000)

5. Electives to complete requirements for graduation.

Science Minor

Minimum requirement for the science minor is 24 s.h. of credit as follows:

BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C for 1201: BIOL 1200)
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: PHYS 1260 or 2260)

http://www.ecu.edu/cs-acad/ugcat/ExerSport.cfm

College of Health and Human Performance

Department of Kinesiology

Stacey R. Altman, Chair, 176 Minges Coliseum

BS in Exercise Physiology

The program provides competencies and knowledge in the field of exercise physiology. Graduates of the program are prepared to pursue further academic training in exercise physiology, physical therapy, medicine, and other allied health careers. A minimum cumulative 2.75 GPA and 32 s.h. foundations curriculum are required for admission. A minimum grade of C (2.0) is required in BIOL 1150, 1151; CHEM 1150, 1151; ENGL 1100, 1200; MATH 1065. Majors must maintain a minimum cumulative GPA of 2.5 and a minimum grade of C (2.0) is required in BIOL 2140, 2141, 2150, 2151; CHEM 1160, 1161; and all required EXSS courses. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

   BIOL 1150, 1151. Principles of Biology: A Human Approach (4,0) (FC:SC)
   CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
   PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)

2. Core - 42 s.h.
EXSS 2000. Introductory Exercise and Sport Science (3) (F,S,SS)
EXSS 2850. Structural Kinesiology (1) (F,S,SS)
EXSS 3805. Physiology of Exercise (3) (F,S,SS) (P: BIOL 2130 or BIOL 2140, 2150; EXSS 2850)
EXSS 3806. Physiology of Exercise Laboratory (1) (F,S,SS) One 2-hour lab per week. (P/C: EXSS 3805)
EXSS 3850. Introduction to Biomechanics (3) (F,S,SS) (P: BIOL 2140; EXSS 2850; PHYS 1250, 1251; or consent of instructor)
EXSS 4805. Exercise Evaluation and Prescription Laboratory (1) (F,S,SS) (C: EXSS 4806)
EXSS 4806. Exercise Evaluation and Prescription (3) (WI) (F,S,SS) (P: EXSS 3805; health and human performance major or minor; or consent of instructor; C: EXSS 4805)
EXSS 4809. Exercise Prescription for Clinical Populations (3) (F,S,SS) (P: EXSS 4806)
EXSS 4991. Independent Research in Exercise Physiology (3) (WI*) (F,S) (P: EXSS 4806; or consent of exercise physiology degree director)
EXSS 4992. Research Internship in Exercise Physiology (12) (F,S) (P: Completion of all other requirements for the exercise physiology degree or consent of internship coordinator)
EXSS 5020. Exercise Adherence (3) (P: PSYC 1000; P/C: EXSS 4806; health and human performance major or minor; or consent of dept chair)
Choose 6 s.h. approved electives

3. Cognates - 38 s.h.

BIOL 2140, 2150. Human Physiology and Anatomy (3,3) (P: CHEM 1120 or 1150; 2.75 GPA or consent of instructor; P for 2150: BIOL 2140; 2.75 GPA or consent of instructor; C for 2140: BIOL 2141; C for 2150: BIOL 2151)
BIOL 2141, 2151. Human Physiology and Anatomy Laboratory (1,1) (P for 2151: BIOL 2141; C for 2141: BIOL 2140; C for 2151: BIOL 2150)
BIOS 1500. Introduction to Biostatistics (3) (F,S) (P: MATH 1065 or equivalent or consent of instructor) or MATH 2228. Elementary Statistical Methods I (3) (F,S,SS) (FC:MA) (For students with limited mathematical training) (May receive credit for one of MATH 2228, 2283) (P: MATH 1065 or equivalent) or MATH 2283. Statistics for Business (3) (F,S,SS) (FC:MA) (May receive credit for one of MATH 2228, 2283) (P: MATH 1065 or 1066 or equivalent)
CHEM 1160, 1161. General Chemistry and Laboratory I II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
CHEM 2760. Organic Chemistry II (3) (F,S,SS) (P: CHEM 2750; C: CHEM 2763)
CHEM 2763. Organic Chemistry Laboratory II (1) (F,S,SS) (P: CHEM 2750, 2753; C: CHEM 2760)
NUTR 1000. Contemporary Nutrition (3) or NUTR 2105. Nutrition Science (3)
PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
4. Electives to complete requirements for graduation - 5 s.h.

http://www.ecu.edu/cs-acad/ugcat/HealthEd.cfm

College of Health and Human Performance

Department of Health Education and Promotion

W. Michael Felts, Interim Chair, 2201 Carol G. Belk

BS in Environmental Health

A minimum GPA of 2.0 in all 1000 level basic science and math courses, a minimum cumulative GPA of 2.0 on at least 30 s.h., and completion of EHST 2110 are required for admission to the professional phase of the environmental health sciences curriculum. Environmental health majors must pass all environmental health courses with a minimum grade of C- (1.7). A student earning a D (1.0 or lower) in any of these courses must petition the environmental health sciences faculty for probationary continuation. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations Curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

Required:
BIOL 1050, 1051. General Biology and Laboratory (3,1) (F,S,SS) (FC:SC)
BIOL 2130. Survey of Human Anatomy (4) (F,S,SS) (P: BIOL 1050, 1051; or 1100, 1101)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
Recommended
COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
HIST 1051. American History Since 1877 (WI*) (3) (F,S,SS) (FC:SO)
PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
RCLS 2601. Leisure in Society (3) (F,S,SS) (FC:SO)
SOCI 2110. Introduction to Sociology (3) (F,S,SS) (FC:SO)

2. Common Core - 42 s.h.

Select from the following with advisor approval:
EHST 2110, 2111. Introduction to Environmental Health Sciences and Laboratory (3, 0) (F,S)
EHST 3003. Environmental Epidemiology (3) (F)
EHST 3200. Food Sanitation Principles (3) (S) (P: Consent of instructor; C: EHST 3201)
EHST 3201. Food Sanitation Principles Laboratory (1) (S) (P: Consent of instructor; C: EHST 3200)
EHST 3350. Safe Water (4) (F) (P: BIOL 2110, 2111; CHEM 1160, 1161, C: EHST 3351)
EHST 3351. Safe Water Laboratory (1) (F) (P: BIOL 2110, 2111; CHEM 1160, 1161, C: EHST 3350)
EHST 3370. Waste Water Management (3) (S) (P: EHST 3350, 3351; C: EHST 3371)
EHST 3371. Waste Water Management Laboratory (1) (S) (P: EHST 3350, 3351; C: EHST 3370)
EHST 3600. Air Pollution (3) (F) (P: EHST 2110 or consent of instructor)
EHST 3700. Industrial Hygiene (3) (S) (P: 8 s.h. of general science lab courses or consent of program directors; C: EHST 3701)
EHST 3701. Industrial Hygiene Laboratory (1) (S) (P: Consent of instructor; C: EHST 3700)
EHST 4010. Toxicological Foundations of Risk Assessment (3) (S) (P: BIOL 2130; CHEM 2650, 2651)
EHST 4200. Environmental Health Management and Law (3) (WI) (F) (P: EHST major or minor)
EHST 4300, 4301. Institutional and Recreational Sanitation and Laboratory (3,0) (F) (P: EHST 2110, 3003, 3200, 3201, 3350, 3351, 3370, 3371; or consent of instructor)
EHST 4350, 4351. Vector Borne Disease Ecology and Laboratory (3,0) (F) (P: EHST 2110, 3003, 3350, 3351, 3370, 3371; or consent of instructor)
EHST 4990. Environmental Health Internship (3) (P: EHST major; 13 s.h. in EHST or consent of program director)
EHST 5001. Environmental Health Seminar (1) (May be taken more than once)
EHST 5800, 5801. Solid and Hazardous Waste Management and Laboratory (3,0) (P: CHEM 1160, 1161 or consent of instructor)

3. Cognates - 30 s.h.

Required Cognates (24 s.h.):
BIOL 2110, 2111. Fundamentals of Microbiology and Laboratory (3,1) (F,S) (FC:SC) (P for 2110: CHEM 1120, 1130 or BIOL 1100 and CHEM 1150; 2.75 GPA or consent of instructor; RP for 2110; BIOL 1050, 1051 or 1100, 1101; P/C for 2111: BIOL 2110)
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2650, 2651. Organic Chemistry for the Life Sciences (4,1) (F) (P: CHEM 1160, 1161)
PHYS 1250, 1251. General Physics and Laboratory (3,1) (F,S,SS) (FC:SC) (P: MATH 1065)
MATH 2228. Elementary Statistical Analysis (3) (F,S,SS) (P: MATH 1065 or equivalent) or BIOS 1500. Introduction to Biostatistics (3) (P: MATH 1065 or equivalent or consent of instructor)
Recommended Cognates (select at least 6 s.h.)
MIS 2223. Introduction to Computers (3) (F,S,SS)
PHYS 1260, 1261. General Physics and Laboratory (3,1) (P: PHYS 1250)
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250) or GEOL 5710, 5711. Ground Water Hydrology (3,0) (P: GEOL 1500, 1501 or consent of instructor)
MATH 2119. Elements of Calculus (3) (F,S,SS) (FC:MA) (P: Minimum grade of C in MATH 1065 or MATH 1066)
MATH 2121. Calculus for the Life Sciences (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)

4. Electives to complete requirements for graduation

Choose at least 6 s.h. of EHST electives from the 3000 level and above.

**BS in Public Health Studies**

Students entering the public health studies degree program choose one of three concentrations: community health, prehealth professions, or worksite health promotion. The community health concentration requires a minimum cumulative GPA of 2.5 for entry and thereafter the student must maintain a minimum 2.0 GPA in the required cognates and pass all health education core courses with a minimum grade of C- (1.7). A student earning a D (1.0 or lower) in any of these courses must petition the Department of Health Education and Promotion for probationary continuation. No student on probation may enroll for HLTH 4991, Health Education and Promotion Internship. Students entering the worksite health promotion concentration must have a minimum cumulative 2.0 GPA and a minimum 2.5 GPA calculated on three courses: ECON 2113; HLTH 2000; PSYC 3241. Students entering the prehealth professions concentration must have a minimum cumulative 2.0 GPA and a minimum 2.75 GPA calculated on the following courses: BIOL 1100, 1101, 1200, 1201; CHEM 1150, 1151, 1160, 1161. Minimum degree requirement is **126 s.h.** as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) including those listed below for all options as well as additional foundations curriculum requirements for each option - 42 s.h.

All concentrations:
HLTH 1000. Health in Modern Society (2) (F,S,SS) (FC:HL)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
Community Health:
BIOL 1050. General Biology (3) (F,S,SS) (FC:SC)
BIOL 1051. General Biology Laboratory (1) (F,S,SS) (FC:SC)
BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (FC:SC) (P: BIOL 1050, 1051; or 1100, 1101)
COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
SOCI 2110. Introduction to Sociology (3) (F,S,SS) (FC:SO)

Prehealth Professions:
BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C for 1201: BIOL 1200)

Worksite Health Promotion:
BIOL 1050. General Biology (3) (F,S,SS) (FC:SC)
BIOL 1051. General Biology Laboratory (1) (F,S,SS) (FC:SC)
BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (P: BIOL 1050, 1051; or 1100, 1101)
PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO)

2. Common core - 24 s.h.

BIOS 1500. Introduction to Biostatistics (3) (F,S) (P: MATH 1065 with a grade of C or better or equivalent or consent of instructor) or MATH 2228. Elementary Statistical Methods I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or equivalent)
EHST 2110, 2111. Introduction to Environmental Health Sciences and Laboratory (3,0) (F,S)
HLTH 2000. Principles of Public Health (3) (P: HLTH 1000)
HLTH 3010. Health Problems I (3) (F,S,SS) (P: BIOL 2130 or 2140; HLTH 1000 or 1050; or consent of instructor)
HLTH 3011. Introduction to Epidemiology in Health Education and Promotion (3) (F,S,SS)
HLTH 3020. Health Disparities (3) (F,S,SS) (P: HLTH 1000 or 1050; 3010 or consent of instructor)
HLTH 3030. Health Behavior (3) (WI) (F,S,SS) (P: HLTH 1000 or 1050; PSYC 1000)
HLTH 3050. Public Health Systems and Policy (3) (F,S) (P: HLTH 1000 or 1050)

3. Concentration (Choose one option.) - 37-49 s.h.

Community Health (37 s.h.):
BIOL 2131. Survey of Human Physiology and Anatomy Laboratory (1) (F,S,SS) (FC:SC) (P/C: BIOL 2130)
HLTH 3000. Theory and Practice in Community Health Education (3) (F,S)
HLTH 3002. Women’s Health Across the Lifespan (3) (P: HLTH 3010)
HLTH 3520. Introduction to Global Health (3) (F,S) (P: HLTH 1000 or 1050; or consent of instructor)
HLTH 4605. Community Strategies for Health Education (3) (F,S,SS) (WI*) (P: HLTH 3000 or consent of instructor)
HLTH 4609. Needs Assessment and Program Planning (3) (F,S) (P: BIOS 1500 or MATH 2228; EHST 2110, 2111; HLTH 2000, 3010, 3011, 3020, 3030, 3050; or consent of instructor)
HLTH 4611. Program Evaluation (3) (F,S) (P: HLTH 4609)
HLTH 4880. Capstone: Applied Principles of Health Education and Promotion (3) (F,S) (P: BIOS 1500 or MATH 2228; EHST 2110, 2111; HLTH 2000, 3010, 3011, 3020, 3030, 3050, 4609, 4611; or consent of instructor)
HLTH 4991. Health Education and Promotion Internship (12) (F,S,SS) (P: Completion of all other major requirements; at least a 2.0 overall GPA and permission of instructor)
NUTR 1000. Contemporary Nutrition (3) or NUTR 2105. Nutrition Science (3)

Prehealth Professions (41-49 s.h.)

Basic Science Requirements:
BIOL 2140, 2141. Human Physiology and Anatomy (3,1) (P: CHEM 1120 or 1150; 2.75 GPA or consent of instructor; C for 2140: BIOL 2141; C for 2141: BIOL 2140)
BIOL 2150, 2151. Human Physiology and Anatomy (3,1) (P: BIOL 2140; 2.75 GPA or consent of instructor; C for 2150: BIOL 2151; P for 2151: BIOL 2141; C for 2151: BIOL 2150)
CHEM 1150, 1151. General Chemistry and Laboratory (3,1) (F,S,SS) (FC:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
HIMA 3000. Medical Terminology for Health Professionals (3) (F,S,SS) or ATEP 2800. Medical Nomenclature for Human Performance (2) (F,S,SS)

Choose either:
CHEM 2750, 2753. Organic Chemistry I and Laboratory (3,1) (F,S,SS) (P: CHEM 1160, 1161) and CHEM 2760, 2763. Organic Chemistry II and Laboratory (3,1) (F,S,SS) (P: CHEM 2750) and/or PHYS 1250, 1251. General Physics and Laboratory (3,1) (F,S,SS) (FC:SC) (P: MATH 1065) and PHYS 1260, 1261. General Physics II and Laboratory (3,1) (F,S,SS) (FC:SC)

Health Education Requirements:
HLTH 3300. Introduction to Patient Education (3) (P: HLTH 3010 or consent of instructor)

Choose 12 s.h. from the following:
ANTH 3252. Medical Anthropology (3) (P: ANTH 1000 or 2010 or 2200)
BIOL 2110, 2111. Fundamentals of Microbiology and Laboratory (3,1) (F,S) (FC:SC) (P for 2110: CHEM 1120, 1130 or BIOL 1100 and CHEM 1150; 2.75 GPA or consent of instructor; RP for 2110; BIOL 1050, 1051 or 1100, 1101; P/C for 2111: BIOL 2110)
BIOL 2300. Genetics (3) (P: BIOL 1100, 1200)
BIOS 5010. Epidemiology for Health Professionals (3) (P: BIOS 1500 or consent of instructor)
BIOL 5800, 5821. Principles of Biochemistry and Laboratory (3,1) (P: for 5800: BIOL 3310, 3311; or consent of instructor; CHEM 2760, 2763; P/C for 5821 for undergraduate students: BIOL 5800 or 5810)
BIOL 5810. Principles of Biochemistry II (3) (P: BIOL 3310, 3311; or consent of instructor; CHEM 2760, 2763)
CHEM 2770, 2771. Biological Chemistry and Lab (3,1) (S) (P: CHEM 2650 or 2760)
EXSS 3805. Physiology of Exercise (3) (P: BIOL 2130 or 2140, 2150; EXSS 2805)
HLTH 3515. AIDS HIV Disease in Modern Society (3) (P: HLTH 1000 or 1050 or consent of instructor)
HLTH 4001. Stress Management: Principles and Practices (3) (S)
HLTH 4901, 4902. Prehealth Professions Clinical Field Experience (3,3) (F,S,SS) (P: HLTH 3010, 3020 and consent of instructor)
HLTH 4910. Prehealth Professions Internship (6) (F,S,SS) (P: Completion of all major requirements and consent of instructor)
HLTH 5310. Education for Human Sexuality (3) (P: Health education major or consent of instructor)
HPRO 2100. Perspectives in Health Care (2)
HPRO 5000. Seminar in Human Sexual Dysfunctions (3)
PHIL 3281. Introduction to Philosophical Ethics in the Health Care Profession (3) (WI*) (FC:HU)
SOCI 3327. Introductory Medical Sociology (3) (FC:SO) (P: SOCI 2110 or consent of instructor)
SOCI 5200. Seminar in Sociology of Health (3) (P: SOCI 2110 or consent of instructor)
Worksite Health Promotion (48 s.h.):
BIOL 2131. Survey of Human Physiology and Anatomy Laboratory (1) (F,S,SS) (FC:SC) (P/C: BIOL 2130)
EHST 3900. Introduction to Occupational Health (3) (F) (P: 6 s.h. in BIOL, including BIOL 2130; 8 s.h. of general CHEM; or consent of instructor) or ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
EXSS 2805. Structural Kinesiology (1) (F,S,SS)
EXSS 3805. Physiology of Exercise (3) (F,S,SS) (P: BIOL 2130 or BIOL 2140, 2150; EXSS 2805)
EXSS 4805. Exercise Evaluation and Prescription Laboratory (1) (F,S,SS) (C: EXSS 4806)
EXSS 4806. Exercise Evaluation and Prescription (3) (WI) (F,S,SS) (P: Health and human performance major or minor; EXSS 3805; or consent of instructor; C: EXSS 4805)
FINA 2244. Legal Environment of Business (3) (F,S,SS)
HLTH 4006. Health Promotion in the Workplace (3) (F,S)
HLTH 4609. Needs Assessment and Program Planning (3) (F,S) (P: BIOS 1500 or MATH 2228; EHST 2110, 2111; HLTH 2000, 3010, 3011, 3020, 3030, 3050; or consent of instructor)
HLTH 4611. Program Evaluation (3) (F,S) (P: HLTH 4609)
HLTH 4700. Practicum Seminar in Worksite Health Education (3) (F,S) (P: HLTH 4006 and consent of instructor)
HLTH 4880. Capstone: Applied Principles of Health Education and Promotion (3) (F,S) (P: BIOS 1500 or MATH 2228; EHST 2110, 2111; HLTH 2000, 3010, 3011, 3020, 3030, 3050, 4609, 4611; or consent of instructor)
HLTH 4991. Health Education and Promotion Internship (12) (F,S,SS) (P: Completion of all other major requirements; at least a 2.0 overall GPA and permission of instructor)  
MGMT 3202. Fundamentals of Management (3) (F,S,SS) (P: ECON 2113)  
NUTR 1000. Contemporary Nutrition (3) or NUTR 2105. Nutrition Science (3)  

4. Electives: It is recommended that courses be taken which reinforce content in the physical, social, and behavioral sciences, or provide the student with a community health specialty area such as gerontology, environmental health, or health promotion. Number of elective hours varies by concentration.

http://www.ecu.edu/cs-acad/ugcat/NutrDiet.cfm

**College of Human Ecology**

**Department of Nutrition Science**

*William Forsythe, Chair, 148 Rivers Building*

**BS in Nutrition and Dietetics**

Each NUTR course must be completed with a minimum grade of C (2.0). Minimum degree requirement is **126 s.h.** of credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) including those listed below - 42 s.h.

   CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,C:SC) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)  
   CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,C:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)  
   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA) or COMM 2420. Fundamentals of Speech Communication (3) (F,S) (FC:FA)  
   ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)  
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section or the SAT/ACT)  
   PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)  
   SOCI 2110. Introduction to Sociology (3) (F,S,SS) (FC:SO)  

2. Core - 60 s.h.

   NUTR 1010. Cultural Foods (3)  
   NUTR 1300. Introduction to Dietetics Profession (3)
NUTR 1330. Food Safety and Sanitation (1)
NUTR 2105. Nutrition Science (3)
NUTR 2330. Food Science (3) (P: NUTR 1330; C: NUTR 2331)
NUTR 2331. Food Science Laboratory (1) (P: NUTR 1330; C: NUTR 2330)
NUTR 2400. Nutrition Assessment (3) (P: NUTR 2105)
NUTR 3104. Advanced Vitamins and Minerals (3) (P: BIOL 2130, 2131; NUTR 2105)
NUTR 3105. Nutritional Biochemistry and Metabolism (3) (WI) (P: NUTR 2105; P or C: CHEM 2650, 2651; or equivalent)
NUTR 3311. Life Cycle Nutrition (4) (P: NUTR 2105, 2400 or permission of instructor)
NUTR 3330. Financial Management in Dietetics (4) (P: NUTR 2330; nutrition major)
NUTR 3500. Nutrition Research Methodology (3) (WI) (P: NUTR 2105, 3105; C: NUTR 3501; nutrition major)
NUTR 3501. Nutrition Research Methodology Laboratory (1) (P: NUTR 2105, 3105; C: NUTR 3500; nutrition major)
NUTR 3535. Nutrition Education and Counseling (3) (P: NUTR 2400)
NUTR 4300. Professional Preparation in Dietetics (1) (P: Senior standing; nutrition major
NUTR 4312. Medical Nutrition Therapy I (4) (P: NUTR 3105; nutrition major)
NUTR 4313. Medical Nutrition Therapy II (4) (P: NUTR 4312; nutrition major)
NUTR 4330. Food Production Principles of Dietetics (4) (P: NUTR 3330; nutrition major)
NUTR 4331. Food Production in Dietetics Lab (3) (P: NUTR 4330: nutrition major)
NUTR 4500. Community Nutrition (3) (P: NUTR 3535; nutrition major)
NUTR 4600. Senior Seminar (3) (P: Senior standing)

3. Cognates - 21 s.h.

BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC)
BIOL 2110, 2111. Fundamentals of Microbiology and Laboratory (3,1) (F,S) (FC:SC) (P for 2110: CHEM 1120, 1130 or BIOL 1100 and CHEM 1150; 2.75 GPA or consent of instructor; RP for 2110; BIOL 1050, 1051 or 1100, 1101; P/C for 2111: BIOL 2110)
BIOL 2130. Survey of Human Physiology and Anatomy (4) (F,S,SS) (FC:SC) (P: BIOL 1050, 1051; or 1100, 1101)
BIOL 2131. Survey of Human Physiology and Anatomy Laboratory (1) (F,S,SS) (FC:SC) (P/C: BIOL 2130)
CHEM 2650. Organic Chemistry for the Life Sciences (4) (F) (P: CHEM 1160, 1161)
CHEM 2651. Organic Chemistry Lab for the Life Sciences (1) (F) (C: CHEM 2650)
Choose a 3 s.h. statistics course

4. Electives to complete requirements for graduation.
College of Technology and Computer Science

Department of Computer Science

Karl Abrahamson, Interim Chair, Suite C-124 Science and Technology Building

BS in Computer Science

Credit toward a computer science major will not be given for any CSCI course with a grade less than C (2.0) being used to satisfy the requirements specified in the common core and CSCI electives. Minimum degree requirement is **126 s.h.** of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see [Liberal Arts Foundations Curriculum](http://www.ecu.edu/cs-acad/ugcat/CompScience.cfm)) including those listed below - 42 s.h.

   See cognates below for courses that fulfill science requirements.

   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)

   PHIL 2275. Professional Ethics (3) (WI*) (F,S,SS) (FC:HU)

2. Common core - 30 s.h.

   CSCI 2310, 2311. Algorithmic Problem Solving and Programming Laboratory (4,0) (P: MATH 1065; C for 2310: CSCI 2311; C for 2311: CSCI 2310)

   CSCI/EENG 2410. Digital Electronics (3) (P: CSCI 2310, 2311; or ENGR 1014 or 1016 and 2050)

   CSCI 3300. Introduction to Algorithms and Data Structures (4) (P: CSCI 2310; C: CSCI 2427)

   CSCI 3310. Advanced Data Structures and Data Abstraction (3) (P: CSCI 2427, 3300)

   CSCI 3675. Organization of Programming Language (3) (P: CSCI 3200 or 3310)

   CSCI 4000. Ethical and Professional Issues in Computer Science (1)

   CSCI 4200. Software Engineering I (3) (WI) (P: CSCI 3200 or 3310 and CSCI major)

   CSCI 4230. Software Engineering II (3) (P: CSCI 4200 or consent of the instructor)

   CSCI 4602. Theory of Automata and Linguistics (3) (P: CSCI major; CSCI 2427)

   CSCI 4630. Operating Systems I (3) (P: CSCI 3200 or 3300; CSCI major)

3. Cognates - 25-27 s.h.

   CSCI/MATH 2427. Discrete Mathematical Structures (3) (P: MATH 1065 or 1066)

   CSCI/MATH 3584. Computational Linear Algebra (3) (P: Calculus course)

   ENGL 3880. Writing for Business and Industry (3) (WI) (F,S,SS) (P: ENGL 1200) or ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)

   MATH 2171. Calculus I (4) (F,S,SS) (FC:MA) (P: MATH 1083 or 1085 or 2122 with a minimum grade of C) or MATH 2121. Calculus for the Life Sciences I (3) (F,S,SS)
(FC:MA) (May not receive credit for MATH 2121 after taking MATH 2171) (P: MATH 1065 or 1077 with minimum grade of C)

MATH 2172. Calculus II (4) (F,S,SS) (FC:MA) (P: MATH 2171 with a minimum grade of C or MATH 2122 with consent of instructor) or MATH 2122. Calculus for the Life Sciences II (3) (F,S,SS) (May not receive credit for MATH 2122 after taking MATH 2172.) (P: MATH 2121)

MATH 2228. Elementary Statistical Methods I (3) (F,S,SS) (FC:MA) (P: MATH 1065 or equivalent) or MATH 2283. Statistics for Business (3) (F,S,SS) (FC:MA) (P: MATH 1065 or 1066 or equivalent) or MATH 3307. Mathematical Statistics I (3) (F,S) (P: MATH 2152 or MATH 2172)

MATH 3229. Elementary Statistical Methods II (3) (P: MATH 2228 or equivalent) or MATH 3308. Mathematical Statistics II (3) (F) (P: MATH 3307) or CSCI 5774. Programming for Research (3) (P: General course in statistics or consent of instructor)

12 s.h. of science. (Note that 8 of these 12 units count toward foundation curriculum requirements.)

One of the following options must be selected.

Option 1 - Physics:
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: 1260 or 2360)
PHYS 2350, 2360. University Physics (4,4) (F,S,SS) (FC:SC) (P for 2350: MATH 2121, 2151, or 2171; P for PHYS 2360: PHYS 2350)
2 s.h. of science that satisfy ECU foundation requirements.

Option 2 – Chemistry:
CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: for 1150: CHEM 1151; C for 1151: CHEM 1150)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
4 s.h. of science that satisfy ECU foundation requirements.

Option 3 - Biology
BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C: for 1101: BIOL 1100)
BIOL 1200, 1201. Principles of Biology and Laboratory II (3,1) (F,S,SS) (FC:SC) (P/C: for 1201: BIOL 1200)
4 s.h. of science that satisfy ECU foundations curriculum requirements.

4. CSCI electives above 2999 (excluding CSCI 3200 and 5774) - 15 s.h.
5. Electives to complete requirements for graduation.

*Requirements for 5 above, may be met by satisfying the requirements for a minor.
http://www.ecu.edu/cs-acad/ugcat/engineering.cfm

College of Technology and Computer Science

Department of Engineering

O. Hayden Griffin, Chair, 214 Slay Building

BS in Engineering

Minimum degree requirement for the engineering program is 128 s.h. credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.
   
   BIOL 1050. General Biology (3) (F,S,SS) (FC:SC) and BIOL 1051. General Biology Laboratory (1) (F,S,SS) (FC:SC) (C:BIOL 1030 or 1050) or BIOL 1100, 1101. Principles of Biology and Laboratory I (3,1) (F,S,SS) (FC:SC) (P/C for 1101: BIOL 1100)
   
   ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
   
   MATH 2151. Engineering Calculus I (3) (S) (FC:MA) (May not receive credit for MATH 2151 after receiving credit for MATH 2171) (P: MATH 1083 or 1085 or placement test criteria; or consent of instructor)
   
   PHIL 2275. Professional Ethics (3) (WI*) (F,S,SS) (FC:HU) or PHIL 2274. Business Ethics (3) (WI*) (F,S,SS) (FC:HU)
   
   PHYS 2350. University Physics (4) (F,S,SS) (FC:SC) (P for 2350: MATH 2121, 2151, or 2171)

2. Engineering Foundation - 39 s.h.

   ENGR 1000. Introduction to Engineering (1) (P: Engineering major)
   
   ENGR 1012. Engineering Graphics (2) (C: MATH 1083 or higher)
   
   ENGR 1016. Introduction to Engineering Design (2) (P: ENGR 1000, 1012)
   
   ENGR 2000. Engineering Design and Project Management I (1) (P: ENGR 1016 or consent of instructor)
   
   ENGR 2022. Statics (3) (C: PHYS 2350; P: MATH 2152)
   
   ENGR 2050. Computer Applications in Engineering (3) (P: MATH 1083 or higher)
   
   ENGR 2070. Materials and Processes (3) (WI)
   
   ENGR 2450. Dynamics (3) (Formerly ENGR 3004) (P: ENGR 2022 with minimum grade of C; MATH 2152)
   
   ENGR 2514. Circuit Analysis (4) (P/C: MATH 2154; PHYS 2360)
   
   ENGR 3000. Engineering Design and Project Management II (2) (WI) (P/C: ENGR 3420; P: ENGR 2000)
   
   ENGR 3024. Mechanics of Materials (3) (WI) (P: ENGR 2022 with minimum grade of C; ENGR 2070)
ENGR 3050. Sensors, Measurements and Controls (3) (P: ENGR 3014; MATH 2154)
ENGR 3420. Engineering Economics (2) (P: MATH 2152)
ENGR 3800. Quality Control for Engineers (3) (Formerly ENGR 4000) (P: MATH 3307)
ENGR 4010. Senior Capstone Design Project I (2) (WI) (P: ENGR 3000, consent of instructor)
ENGR 4020. Senior Capstone Design Project II (2) (WI) (P: ENGR 4010)

3. Cognates - 21 s.h.

CHEM 1150, 1151. General Chemistry and Laboratory I (3,1) (F,S,SS) (P/C: MATH 1065; C for 1150: CHEM 1151; C for 1151: CHEM 1150)
MATH 2152. Engineering Calculus II (3) (S) (FC:MA) (May not receive credit for MATH 2152 after receiving credit for MATH 2172) (P: Minimum grade of C in MATH 2151 or 2171; or consent of instructor)
MATH 2153. Engineering Calculus III (3) (F) (FC:MA) (May not receive credit for MATH 2153 after receiving credit for MATH 2173) (P: MATH 2152 or 2172; or consent of instructor)
MATH 2154. Engineering Linear Algebra and Differential Equations I (4) (S) (P: ENGR 2050; MATH 2153 or MATH 2173)
MATH 3307. Mathematical Statistics I (3) (F,S) (P: MATH 2152 or MATH 2172)
PHYS 2360. University Physics (4) (F,S,SS) (FC:SC) (P: PHYS 2350)

4. Concentrations (Choose one)

Biomedical Engineering - 26 s.h.
BIME 3000. Foundations of Biomedical Engineering (3) (P: Consent of instructor)
BIME 4030. Biomechanics and Materials (4) (P: CHEM 2750, 2753; ENGR 2450 with minimum grade of C, ENGR 3024)
BIME 4040. Physiological Systems and Modeling for Engineering (3) (P: BIME 3000)
BIME 4200. Biomedical Instrumentation (4) (P: BIME 3000; ENGR 3050)
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2750. Organic Chemistry I (3) (F,S,SS) (P: CHEM 1160, 1161; C: CHEM 2753)
CHEM 2753. Organic Chemistry Laboratory I (1) (F,S,SS) (C: CHEM 2750)
ENGR 3012. Thermal and Fluid Systems (4) (P: ENGR 2450 with minimum grade of C; MATH 2153)
Bioprocess Engineering - 26 s.h.
BIOE 3016 Engineering Applications in Microbial Systems (2) (P: ENGR 2450 with minimum C; MATH 2154; C: CHEM 2650, 2651)
BIOE 3250. Bioprocess Engineering Systems (3) (Formerly BIOE 3000) (P: CHEM 2650, 2651; BIOE 3016)
BIOE 4006. Bioprocess Validation and Quality (2) (P: MATH 3307; consent of instructor)
BIOE 4010. Bioprocess Separation Engineering (3) (P: BIOE 3250; ENGR 3012)
BIOE 4020. Bioprocess Plant Design, Simulation and Analysis (3) (P: BIOE 4010; MATH 3307)
BIOL 2110, 2111. Fundamentals of Microbiology and Laboratory (3,1) (F,S) (FC:SC) P for 2110: CHEM 1120, 1130 or CHEM 1150, 1160; RP for 2110: BIOI 1050, 1051 or 1100, 1101; P/C for 2111: BIOL 2110
CHEM 1160, 1161. General Chemistry and Laboratory II (3,1) (F,S,SS) (FC:SC) (P: CHEM 1150 with a minimum grade of C, 1151; C for 1160: CHEM 1161; C for 1161: CHEM 1160; RC: MATH 1083 or 1085)
CHEM 2650. Organic Chemistry for the Life Sciences (4) (F) (P: CHEM 1160, 1161)
CHEM 2651. Organic Chemistry Lab for the Life Sciences (1) (F) (C: CHEM 2650)
ENGR 3012. Thermal and Fluid Systems (4) (P: ENGR 2450 with minimum grade of C; MATH 2153)

Electrical Engineering - 26 s.h.
EENG 2410. Digital Electronics (3) (Same as CSCI 2410) (P: ENGR 1014 or 1016 and 2050; or CSCI 2310, 2311)
EENG 3020. Signals and Systems (3) (P: ENGR 2514; MATH 2154)
EENG 3040. Microprocessors (4) (Same as CSCI 3040) (P: ENGR 2514; CSCI 2410 or EENG 2410; or consent of instructor)
EENG 3530. Electronics (3) (P: ENGR 2514)
EENG 3750. Electric Power Systems (3) (P: ENGR 2514)
EENG 4510. Advanced Controls (3) (P: EENG 3020; ENGR 3050)
ENGR 3012. Thermal and Fluid Systems (4) (S) (P: ENGR 2450 with minimum grade of C: MATH 2153)
Technical electives, 3 s.h. as approved by the academic advisor.

Industrial and Systems Engineering - 26 s.h.
ISYS 3010. Principles and Methods of Industrial and Systems Engineering (3) (P: Junior standing in engineering)
ISYS 3060. Systems Optimization (3) (P: MATH 2154, 3307)
ISYS 4010. Work Measurement and Human Factors (3) (P: MATH 3307)
ISYS 4020. Analysis of Production Systems and Facility Design (3) (P: MATH 3307)
ISYS 4065. Discrete System Modeling (3) (P: ENGR 3800)
ENGR 3012. Thermal and Fluid Systems (4) (P: ENGR 2450 with minimum grade of C: MATH 2153)
Technical electives, 7 s.h. as approved by the academic advisor.

Mechanical Engineering - 26 s.h.
MENG 3624. Solid Mechanics (3) (P: ENGR 3024)
MENG 3070. Thermodynamics I (3) (P: MATH 2154; ENGR 2450 with minimum grade of C)
MENG 4018. Thermodynamics II (3) (P: MENG 3070)
MENG 4150. Fluid Mechanics (4) (P: ENGR 2450 with minimum grade of C; MATH 2154)
MENG 4260. Heat and Mass Transfer (3) (P: MENG 3070)
MENG 4650. Machine Design (3) (P: MENG 3624)
Technical electives, 7 s.h. as approved by the academic advisor.
Thomas Harriot College of Arts and Sciences

Interdisciplinary Programs

Coastal and Marine Studies

The coastal and marine studies minor requires a minimum of 24 s.h. and is designed to provide students with an overview of coastal and marine resources. Considerable attention is devoted to the biological, physical, social, and historical aspects of coastal and marine resources. Whenever possible, information from North Carolina and other US coastal and marine environments is used to illustrate or emphasize important concepts. A maximum of 6 s.h. may be used to satisfy foundations curriculum requirements and requirements for the coastal and marine studies minor. A course may not count toward the student’s major and the coastal and marine studies minor.

1. Core - 10 s.h.

   COAS 2025. Survey of Coastal and Marine Resources (3) (F) (P: Basic science course in BIOL, CHEM, GEOL, or PHYS)
   COAS 4025. Society and the Sea Seminar (3) (S) (P: COAS 2025)
   GEOL 1550. Oceanography (4) (S) (FC:SC)

2. Electives (Choose at least 3 s.h. from 3 of the 4 areas below in consultation with the director) - 14 s.h.

   (COAS 5001, 5002 and other courses may be counted toward the minor; however, the director must approve the course substitution.)

   Biological Science:
   BIOL 1010. Diversity of Coastal North Carolina (3) (F,S)
   BIOL 1060. Environmental Biology (4) (F,S,SS) (FC:SC)
   BIOL 2250, 2251. Ecology and Laboratory (3,1) (F,S,SS) (P: BIOL 1100, 1101, 1200, 1201; C for BIOL 2251: BIOL 2250)
   BIOL 3230, 3231. Field Botany (4,0) (F,S,SS) (P: BIOL 1050, 1051 or 1100, 1101)
   BIOL 3240, 3241. Field Zoology (4,0) (F) (P: BIOL 1060 or 2250)
   BIOL 3400, 3401. Biological Field Studies of the Coastal Plain (3,0) (P: BIOL 1100, 1200 or 2 from: GEOL 1500, 1550, 1600 and 1700)
   BIOL 3660. Introduction to Marine Biology (3) (F,S,SS) (P/C: BIOL 2250, 2251)
   BIOL 5680. Current Topics in Coastal Biology (3) (P: Consent of instructor)
   BIOL 5270. Marine Community Ecology (3) (P: BIOL 2250, 2251; or consent of instructor)
   BIOL 5750, 5751. Introduction to Regional Field Ecology (2,0) (5750: WI)

   Maritime History:
   HIST 5505. Maritime History of the Western World to 1415 (3)
   HIST 5515. Maritime History of the Western World from 1415-1815 (3)
   HIST 5520. Maritime History of the Western World Since 1815 (3)
HIST 5530. Field School in Maritime History and Underwater Research (2) (P: Consent of instructor)
HIST 5920, 5921. Techniques of Museum and Historic Site Development (3,0)

Physical Science:
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250)
GEOG 4210. Fluvial and Hydrological Processes (P: GEOG 2200, 2250; or consent of instructor)
GEOG 4220. Coastal Geography (3) (WI) (S) (P: GEOG 2200, 2250; or consent of instructor)
GEOG 4230. Land Form Analysis (3) (F) (P: GEOG 2200, 2250; or consent of instructor)
GEOG 4540. Coastal Storms (3) (S) (P: GEOG 2200, 2250)
GEOL 1500. Dynamic Earth (3,1) (F,S,SS) (FC:SC)
GEOL 1501. Dynamic Earth Laboratory (1) (F,S,SS) (FC:SC)
GEOL 1700. Environmental Geology (4) (F) (S) (FC:SC)
GEOL 5300. Geology of Coastal Processes and Environments (3) (P: GEOL 1550, 4010, 4011; or consent of instructor)
GEOL 5350. Marine Geology (3) (P: GEOL 1550, 4010, 4011; or consent of instructor)
PHYS 1050. Physics and the Environment (4) (F,S,SS) (FC:SC)

Social Science:
ANTH 2005. Environmental Anthropology (3) (S) (FC:SO)
ANTH 3004. Cultures of the South Pacific (3) (EY) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3016. Cultures of the Caribbean (3) (S) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 4260. Cultural Ecology (3) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 5065. Maritime Anthropology (3) (P: ANTH 2200 or consent of instructor)
ECON 3855. Environmental Economics (3) (P: ECON 2133)
GEOG 4335. Geography of Tourism (3)
GEOG 4440. Coastal Applications of GIS (3) (S) (P: GEOG 2250, 3410; GEOG 2410 or PLAN 2410; or consent of instructor)
PLAN 4015. Emergency Management Planning (3)
PLAN 5025. Coastal Area Planning and Management (3) (P: Consent of instructor)
POLS 3256. The Politics of Energy and Environment (3) (F)
POLS 3257. International Environmental Policy (3)
SOCI 3410. Introduction to Maritime Sociology (3) (FC:SO) (P: ANTH 1000 or SOCI 2110)

http://www.ecu.edu/cs-acad/ugcat/sociology.cfm

Thomas Harriot College of Arts and Sciences

Department of Sociology
Marieke Van Willigen, Interim Chair, A-415 Brewster Building

BS in Applied Sociology

Credit toward the sociology major will not be given in any SOCI course with a grade of less than C. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   PHIL 1180. Introduction to Critical Reasoning (3) (WI*) (S) (FC:HU) or PHIL 2261. Introduction to Philosophy of Science (3) (FC:HU)

2. Common core - 33 s.h.

   SOCI 2110. Introduction to Sociology (3) (F,S,SS)
   SOCI 2111. Modern Social Problems (3) (F,S,SS) (P: SOCI 2110)
   SOCI 3213. Methods of Research (3) (F,S) (P: SOCI 2110)
   SOCI 3216. Introduction to Social Statistics (3) (F,S) (P for SOCI major: SOCI 3213; P for all other students: MATH 3228 or equivalent approved by the instructor or PSYC 2101 or SOCI 3213)
   SOCI 4385. Theoretical Perspectives and Applications (3) (WI) (F,S) (P: SOCI 2110)
   SOCI 4800. Senior Seminar (3) (WI) (F,S) (P: SOCI major; SOCI 3216; 3385 or 4385)
   Choose 15 s.h. of SOCI electives (at least 9 s.h. must be above the 1999 level)

3. Minor or concentration area - 24 s.h.

   Students may elect to take a minor in another discipline or one of the four areas of concentration listed below. The minor or area of concentration is to be a program of study appropriate for applied sociology and the long-term objectives of the student. A course cannot simultaneously count for the area of concentration and for the required sociology courses.
   Applied Social Research:
   SOCI 4200. Advanced Techniques in Quantitative Sociology (3) (P: MIS 2223; SOCI 3213)
   SOCI 4201. Advanced Techniques in Applied Research (3) (P: SOCI 3216)
   Choose one from:
   SOCI 3215. Introduction to Qualitative Sociology (3) (P: SOCI 2110 or consent of instructor)
   SOCI 4202. Special Topics in Applied Social Research (3) (P: SOCI 2110; a statistics or research design course)
   SOCI 4950. Practicum in Sociology (3) (F,S) (P: SOCI major; 27 s.h. in SOCI with a minimum grade of C in each course; consent of dept chair, practicum coordinator, and faculty member who will supervise the practicum)
Choose 15 s.h., including at least two disciplines other than sociology from:
ANTH 3050. Ethnographic Field Methods (3) (S) (P: ANTH 2010 or 2200 or consent of instructor)
COMM 2030. Communication Research (3) (F,S) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)
COMM 3110. Persuasion Theories (3) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)
COMM 3180. Intercultural Communication (3) (SL*) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)
ECON 2113. Principles of Microeconomics (3) (F,S,SS)
ECON 2133. Principles of Macroeconomics (3) (F,S,SS) (P: ECON 2113)
GEOG 2003. Geography of the Global Economy (3) (F,S)
GEOG 3430. Geographic Information Systems I (3) (F,S) (Same as PLAN 3430) (P: GEOG 2410 or PLAN 2410 or equivalent)
MKTG 3832. Marketing Management (3) (F,S,SS) (P: ECON 2113)
MKTG 4662. Marketing Research (3) (WI) (F,S,SS) (P: MKTG 3832; MATH 2283)
MKTG 4732. Consumer Behavior (3) (F,S,SS) (P: MKTG 3832)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3022. History and Theory of Planning (3) (WI) (F,S)
PLAN 5025. Coastal Area Planning and Management (3) (P: Consent of instructor)
POLS 3242. Municipal Policy and Administration (3)
POLS 3252. Public Administration (3) (F)
POLS 3253. Government Fiscal Administration (3) (S) (RP: POLS 1010)
POLS 3255. Domestic Public Policy (3) (S)
PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS)
PSYC 5343. Psychology of Organizational Behavior (3) (P: Graduate standing; PSYC 3241; or consent of instructor)
SOCI 3235. Population Trends and Problems (3) (P: SOCI 2110)
SOCI 3410. Introduction to Maritime Sociology (3) (P: ANTH 1000 or SOCI 2110)
SOCI 5500. Seminar in Population (3) (P: SOCI 2110; consent of instructor)

Law and Society:
SOCI 4320. Sociology of Law (3) (P: SOCI 2110)
SOCI 4322. Law and Social Change (3) (P: SOCI 2110)
Choose 18 s.h., including at least two disciplines other than sociology from:
ECON 3030. Antitrust and Regulation (3) (WI) (F) (P: ECON 2113)
FINA 2244. Legal Environment of Business (3) (F,S,SS)
FINA 3244. Commercial Law (3) (F,S) (P: FINA 2244 or consent of instructor)
JUST 1000. The Criminal Justice System (3) (F,S,SS)
JUST 3500. Principles of Criminal Law (3) (F,S) (P: JUST 1000, 2000)
PHIL 1175. Introduction to Ethics (3) (WI*) (F,S,SS)
PHIL 1180. Introduction to Critical Reasoning (3) (WI*) (S)
PHIL 1500. Introduction to Logic (3) (F,S,SS)
PHIL 2275. Professional Ethics (3) (WI*) (F,S,SS)
PHIL 2282. Philosophy of Law (3) (F,S) (P: PHIL 1175, 2275)
POLS 3204. The American Judiciary (3) (F) (P: POLS 1010 or consent of instructor)
POLS 3223. Constitutional Powers (3) (S) (P: POLS 1010 or consent of instructor)
POLS 3224. Civil Liberties (3) (P: POLS 1010 or consent of instructor)
POLS 3252. Public Administration (3) (F)
SOCI 4330. Criminology (3) (P: SOCI 2110)
SOCI 4950. Practicum in Sociology (3) (F, S) (P: SOCI major; 27 s.h. in SOCI with a minimum grade of C in each course; consent of dept chair, practicum coordinator, and faculty member who will supervise the practicum)
SOCI 5300. Seminar in Juvenile Delinquency (3) (P: SOCI 2110; consent of instructor)
SOCW 4305. Social Work Policy III (3) (Formerly SOCW 3302) (P: SOC W 3301, 3305; C: SOCW 4102, 4203)
Marriage and Family:
SOCI 4325. Marriage and the Family (3) (F, S, SS) (P: SOCI 2110)
Choose 21 s.h. including at least two disciplines other than sociology from:
ANTH 3200. Women’s Roles in Cross-Cultural Perspective (3) (EY) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
CDFR 2000. Child Development I – Prenatal Through Early Childhood (3) (F, S, SS)
CDFR 3002. Child in the Family (3) (F, S, SS)
CDFR 4303. Families and Cultural Diversity (3) (F, S) (P: CDFR 1103)
CDFR 4313. Trends and Issues in Family Studies (3) (F, SS) (P: CDFR 1103)
COMM 4130. Conflict and Communication (3) (P: COMM 1001, 1002)
COMM 4135. Gender and Communication (3) (F) (P: COMM 1001, 1002; or WOST 2000 or 2400)
GERO 2400. Introduction to Gerontology (3)
HIST 3140. Women in American History (3) (F, S)
PSYC 2201. Psychology of Childhood (3) (F, S, SS) (P: PSYC 1000 or 1060 or equivalent)
PSYC 3206. Developmental Psychology (3) (WI*) (F, S, SS) (P: PSYC 1000 or 1060)
SOCI 3235. Population Trends and Problems (3) (P: SOCI 2110)
SOCI 3325. Sociology of Human Sexuality (3) (F) (P: SOCI 2110 or consent of instructor)
SOCI 4950. Practicum in Sociology (3) (F, S) (P: SOCI major; 27 s.h. in SOCI with a minimum grade of C in each course; consent of dept chair, practicum coordinator, and faculty member who will supervise the practicum)
SOCI 5335. Sociology of Marriage Problems (3) (P: SOCI 2110; consent of instructor)
SOCI 5400. Seminar in Gender Roles (3) (P: SOCI 2110; consent of instructor)
SOCI 5600. Seminar in Aging (3) (P: SOCI 2110; consent of instructor)
SOCI 5800. Seminar in the Family (3) (P: SOCI 2110; consent of instructor)
SOCW 2400. Introduction to Gerontology (3) (F, S)
SOCW 4501. Crisis Intervention (3) (F)
Social Diversity:
Choose 6 s.h. from:
SOCI 3400. Introduction to Gender and Society (3) (P: SOCI 2110)
SOCI 4345. Race and Cultural Minorities (3) (S) (P: SOCI 2110 or ANTH 1000)
SOCI 4347. Social Inequality (3) (F) (P: SOCI 2110 or ANTH 1000)
Choose 3 s.h. from:
SOCI 3100. Sociology of Aging (3) (P: SOCI 2110)
SOCI 3325. Sociology of Human Sexuality (3) (F) (P: SOCI 2110 or consent of instructor)
SOCI 4341. Sociology of Religion (3) (S) (P: SOCI 2110)
Choose 15 s.h. electives, including at least two disciplines other than sociology from the following. Any of the six courses listed above under social diversity that are not used to fulfill those hours may be used as electives.
ANTH 3002. Cultures of East Asia (3) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3003. Cultures of Africa (3) (OY) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3004. Cultures of the South Pacific (3) (EY) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3005. North American Indians (3) (EY) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3016. Cultures of the Caribbean (3) (S) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3017. Cultures of Mexico and Guatemala (3) (OY) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3018. Cultures of South and Central America (3) (EY) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3200. Women’s Roles in Cross-Cultural Perspective (3) (EY) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ETHN 2002. Introduction to Ethnic Studies (3)
GEOG 4320. Gender, Economy and Development (3) (S) (P: consent of instructor)
GERO 2400. Introduction to Gerontology (3)
GERO 5400. Seminar in Aging Studies (3) (P: consent of instructor)
INTL 1000. Introduction to International Studies (3) (F, SS)
INTL 2003. Introduction to Chinese Culture (3) (P: ENGL 1200)
INTL 2004. Introduction to Japanese Cultures (3)
POLS 3039. Black Politics in America (3)
POLS 3040. Women in Politics (3) (S)
POLS 3041. Women and Public Policy (3) (S)
PSYC 2777. Ethno-cultural Psychology (3) (FC: SO) (Formerly PSYC 3777) (P: PSYC 1000 or 1060)
PSYC 4335. Psychology of Women (3) (P: PSYC 1000 or 1060)
SOCI 3500. Economy and Society (3) (P: SOCI 2110)
SOCI 3600. Power and Politics in Society (3) (P: SOCI 2110)
SOCI 5100. Social Inequality (3) (P: SOCI 2110 or consent of instructor)
SOCI 5400. Gender Roles (3) (P: SOCI 2110 or consent of instructor)
WOST 2400. Introduction to Women’s Studies (3) (FC: SO)
WOST 4200. Feminist Theory (3) (WI) (F) (P: WOST 2000 or 2200 or 2400)

4. Cognates - 6 s.h.
ENGL 3810. Advanced Composition (3) (WI) (F,S) (P: ENGL 1200) or ENGL 3820. Scientific Writing (3) (F,S) (P: ENGL 1200) or ENGL 3880. Writing for Business and Industry (3) (WI) (F,S,SS) (P: ENGL 1200)
MIS 2223. Introduction to Computers (3) (F,S,SS)

5. Electives to complete requirements for graduation.

http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm

College of Technology and Computer Science

Department of Technology Systems

Tijjani (TJ) Mohammed, Interim Chair, Suite 202 Science and Technology Building

BS in Design

Robert A. Chin, Coordinator, 207 Science and Technology Building

The design program is accredited by the Association of Technology, Management, and Applied Engineering. Minimum degree requirement is 126 s.h. credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below - 42 s.h.

All concentrations:
COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
PHIL 2274. Business Ethics (3) (WI*) (F,S,SS) (FC:HU) or PHIL 2275. Professional Ethics (3) (WI*) (F,S,SS) (FC:HU)
PHYS 1250. General Physics (3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066)
PHYS 1251. General Physics Laboratory (1) (F,S,SS) (FC:SC) (C: PHYS 1250 or 2350)
PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)
Architectural Technology:
GEOL 1700. Environmental Geology (4) (F,S) (FC:SC)
Mechanical Technology:
PHYS 1260. General Physics (3) (F,S,SS) (FC:SC) (P PHYS 1250)
PHYS 1261. General Physics Laboratory (1) (F,S,SS) (FC:SC) (C PHYS 1260 or 2260)

2. Core - 53 s.h.

DESN 2034, 2035. Engineering Graphics I (3,0) (F,S) (P: ITEC 2000 or MIS 2223)
DESN 2036, 2037. Computer-Aided Design and Drafting (3,0) (F,S) (P: DESN 2034)
DESN 3032, 3033. Engineering Graphics II (3,0) (S) (P: DESN 2036; ITEC 2080; PHYS 1250; C: ITEC 2090; or program coordinator approval)
DESN 4030, 4031. Descriptive Geometry (3,0) (S) (P: DESN 3032; MATH 1074)
FINA 2244. Legal Environment of Business (3) (F,S,SS)
IENG 2020, 2021. Materials and Processes Technology (3,0) (WI*) (F,S) (P/C: ITEC 2000 or MIS 2223)
ITEC 2000. Industrial Technology Applications of Computer Systems (3) (F,S) or MIS 2223 Introduction to Computers (3) (F,S,SS)
ITEC 2054, 2055. Electricity/Electronics Fundamentals (3,0) (F,S) (P/C: MATH 1074 or 1083 or 1085)
ITEC 2080, 2081. Thermal and Fluid Systems (3,0) (F,S) (P: IENG 2020)
ITEC 2090, 2091. Electromechanical Systems (3,0) (F,S) (P: ITEC 2054)
ITEC 3200. Introduction to Statistical Process Control (3) (F,S) (P: MATH 1065 or 1066; ITEC 2000 or 3000 or MIS 2223) or MATH 2283. Statistics for Business (3) (F,S,SS) (FC:MA)
ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)
ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
ITEC 3300. Technology Project Management (3) (F,S) (WI) (P: ENGL 1200; ITEC 2000 or MIS 2223)
ITEC 3800. Cost and Capital Project Analysis (3) (F,S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223) or FINA 3004. Survey of Financial Management (3) (F,S)
ITEC 4293. Industrial Supervision (3) (WI) (F,S) (P: Senior standing or consent of instructor) or MGMT 3202. Fundamentals of Management (3) (F,S,SS)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
MATH 1074. Applied Trigonometry (2) (F,S,SS) (P: MATH 1065)

3. Concentration area (Choose one) - 23 s.h.

Architectural Technology:
BIOL 1060. Environmental Biology (4) (F,S,SS) (FC:SC)
BIOL 1061. Environmental Biology Laboratory (1) (F,S) (FC:SC)
DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
DESN 3036, 3037. Architectural Design and Drafting (3,0) (F) (P: DESN 3030, 3032; or program coordinator approval)
DESN 3038, 3039. Sustainable Design (3,0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
PLAN 2410. Fundamentals of GIS (3) (F,S) (Formerly PLAN 3051) (Same as GEOG 2410)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3051. Introduction to GIS in Planning (3) (F)
PLAN 4003. Urban Form and Design (3) (S)

Mechanical Technology:
CHEM 1020. General Descriptive Chemistry (4) (S) (FC:SC)
CHEM 1021. General Descriptive Chemistry Laboratory (1) (S) (FC:SC)
DESN 3230, 3231. Rapid Prototyping (3,0) (S) (P: DESN 3032; IENG 2076)
DESN 3234, 3235. Jig and Fixture Design (3,0) (F) (P: DESN 3032; ITEC 2090; IENG 2076)
DESN 3236, 3237. Geometric Dimensioning and Tolerancing (3,0) (F) (P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)
IENG 2076, 2077. Introduction to Computer Numerical Control (CNC) (3,0) (F,S) (P: DESN 2034)
IENG 3020, 3021. Robotics in Computer Integrated Manufacturing (3,0) (S) (P: IENG 2076, ITEC 2090)
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290; P: IENG 2020)

4. Approved electives to complete requirements for graduation. - 8 s.h.

http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm

College of Technology and Computer Science

Department of Technology Systems

Tijjani (TJ) Mohammed, Interim Chair, Suite 202 Science and Technology Building

BS in Industrial Technology

David L. Batts, Coordinator, 230 Slay Building

The industrial technology program is accredited by the Association of Technology, Management, and Applied Engineering.

Student must have an associate of applied science degree from an approved technical program. Minimum degree requirement is 126 s.h. of credit as follows. Students must complete at ECU a minimum of 42 s.h. credit of upper division core and concentration courses. Industrial technology courses completed at ECU and transfer courses must total at least 66 s.h. All students pursuing a bachelor of science in industrial technology through distance education (online) are required to complete ITEC 3000 in their initial semester of enrollment at East Carolina University. For distance education (online) students only, ITEC 3000 will fulfill 3 s.h. of the required 27 s.h. in their chosen concentration area. ITEC 3100, 4100 or any course that does not meet as a class may not be used as upper division core or concentration courses.
1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below.42 s.h.

COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math sections of the SAT/ACT) or MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or approval of dept chair)
PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)

2. Lower Division Core - 24 s.h.

Transfer technical courses up to 24 s.h. or approved technical courses.

3. Upper Division Core - 15 s.h.

ITEC 3200. Introduction to Statistical Process Control (3) (F,S) (P: MATH 1065 or 1066; ITEC 2000 or 3000 or MIS 2223)
ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)
ITEC 3300. Technology Project Management (3) (WI) (F,S) (P: ENGL 1200; ITEC 2000 or MIS 2223)
ITEC 3800. Cost and Capital Project Analysis (3) (F,S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223)
ITEC 4293. Industrial Supervision (3) (WI) (F,S) (P: Senior standing or approval of instructor)

4. Concentrations (choose one) - 27 s.h.

Architectural Technology
DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
DESN 3032, 3033. Engineering Graphics II (3,0) (S) (P: DESN 2036: ITEC 2080; PHYS 1250; C: ITEC 2090; or program coordinator approval)
DESN 3036, 3037. Architectural Design and Drafting (3,0) (F) (P: DESN 3030, 3032; or program coordinator approval)
DESN 3038, 3039. Sustainable Design (3,0) (S) (P:BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
PLAN 2410. Fundamentals of GIS (3) (F,S) (Formerly PLAN 3051) (Same as GEOG 2410)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3051. Introduction to GIS in Planning (3) (F)
PLAN 4003. Urban Form and Design (3) (S)
Approved technical electives (6 s.h.)
Bioprocess Manufacturing
ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
ITEC 4150. Microbiology for Industrial Processing (3) (S EY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4250. Engineering for Food Safety and Sanitation (3) (F OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
ITEC 4350. Separation Techniques for Industrial Processing (3) (S OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4450. Waste Treatment Techniques for Industrial Processing (3) (S OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4550. Quality in Regulatory Environments (3) (F, EY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
Approved technical electives (6 s.h.)
Distribution and Logistics
IDIS 2771. Introduction to Distribution and Logistics (3)
IDIS 2830. ERP Systems for Distributors (3) (Formerly IDIS 3830)
IDIS 3700. Transportation Logistics (3) (Formerly IDIS 3800) (P: IDIS 2771)
IDIS 3815. Supply Chain Logistics (3) (P: IDIS 2771, 2830)
IDIS 3820. Purchasing Logistics (3) (Formerly IDIS 3805) (P: IDIS 2830, 3815)
IDIS 3835. Security and Risk Analysis for Distributors (3) (P: IDIS 3700)
IDIS 4785. Strategic Pricing for Distributors (3) (Formerly IDIS 3825) (P: IDIS 3820)
IDIS 4790. Global Logistics (3) (Formerly IDIS 3785) (P: IDIS 3700, 3815)
Approved technical electives (3 s.h.)
Health Information Technologies
HIMA 3000. Medical Terminology for Health Professionals (3) (F, S, SS)  
HIMA 3120. Health Care Delivery Systems (3) (F) (P: HSMA 2000; P/C: HSMA 3030 or consent of instructor)
HIMA 4030. Quality Management in Health Care (3) (S) (P: HIMA 3113, 3120; or consent of instructor)
HSMA 2000. Professional Roles and Environments in Health Care (3) (SL*) (F,S,SS)
HSMA 3020. Health Care Payment Systems (3) (S) (P: HSMA 2000; P/C: HIMA 3120; HSMA 3035; HSMA 3030 or consent of instructor)
HSMA 3025. Professional Ethical Codes and Law in Health Care (3) (F) (P: HSMA 2000; P/C: HSMA 3030; or consent of instructor)
HSMA 3035. Interpersonal Team Skills for Health Care Supervisors and Practitioners (3) (S) (P: HSMA 2000; P/C: HSMA 3030 or consent of instructor)
HSMA 4010. Health Information Management (3) (F) (P: HIMA 3120; HSMA 3035)
Approved technical electives (3 s.h.)
Industrial Supervision
IDIS 2771. Introduction to Distribution and Logistics (3) (F,S)
IDIS 3790. Technical Presentations for Industry (3) (F,S) (P: ITEC 2000 or MIS 2223)
IDIS 3815. Supply Chain Logistics (3) (F,S) (P: IDIS 2771)
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C ITEC 3290; P: IENG 2020)
IENG 4023. Advanced Manufacturing Systems (3) (S) (P: IENG 3300)
ITEC 3292. Industrial Safety (3) (S) (P: Junior standing)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
Approved technical electives (6 s.h.)
Information and Computer Technology
Choose 27 hours from below:
ICTN 2530, 2531. Network Environment II (3,0) (F,S) (P: ICTN 1500)
ICTN 2900, 2901. Fundamental Network Security (3,0) (F) (P: ICTN 2150)
ICTN 3250, 3251. Internetwork Routing Technology (3,0) (F) (P: Current CCNA certification)
ICTN 3540, 3541. Network Environment III (3,0) (F) (P: ICTN 2510, 2530)
ICTN 3900, 3901. Web Services Management (3,0) (F) (P: ICTN 2530)
ICTN 4010, 4011. User Application Management and Emerging Technologies (3,0) (F)
(P: ICTN 2510, 2530)
ICTN 4040. Enterprise Information Security (3) (S) (P: ICTN 2530, 2900)
ICTN 4064. Regulations and Policies (3) (S) (P: ICTN 2150; P/C; FINA 2244)
ICTN 4150, 4151. Switching Network Technology (3,0) (F) (P: Current CCNA certification)
ICTN 4200, 4201. Intrusion Detection Technologies (3,0) (F) (P: ICTN 2530, 2900)
ICTN 4250, 4251. Enterprise Network Security Technology (3,0) (S) (P: Current CCNA certification)
ICTN 4310. Digital Forensics (3) (P: ICTN 2530, 2900)
ICTN 4402, 4404, 4406, 4408. Special Topics (1,2,3,4) (P: Consent of instructor)
ICTN 4590, 4591. Network Maintenance and Troubleshooting (3,0) (S) (P: Current CCNA certification; ICTN 3250, 4150)
ICTN 4600, 4601. Enterprise Information Technology Management (3,0) (S) (P: ICTN 2154, 2530)
ICTN 4700, 4701. Virtualization Technologies (3,0) (P: ICTN 2530)
ICTN 4750. Enterprise Data Storage Technologies (3) (P: ICTN 2530)
ICTN 4800, 4801. Information Assurance Technologies (3,0) (F) (P: ICTN 2530, 2900)
Manufacturing Systems
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290, P: IENG 2020)
IENG 4020. Manufacturing System Planning (3) (F) (P: ITEC 3200)
IENG 4023. Advanced Manufacturing Systems (3) (S) (P: IENG 3300)
IENG 4200. Work Methods and Ergonomic Analysis (3) (S) (P: ITEC 3200 or MATH 2283)
ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
Approved technical electives (9 s.h.)
Mechanical Technology
DESN 3032, 3033. Engineering Graphics II (3,0) (S) (P: DESN 2036; ITEC 2080; PHYS 1250; C: ITEC 2090; or program coordinator approval)
DESN 3230, 3231. Rapid Prototyping (3,0) (S) (P: DESN 3032; IENG 2076)
DESN 3234, 3235. Jig and Fixture Design (3,0) (F) (P: DESN 3032; ITEC 2090; IENG 2076)
DESN 3236, 3237. Geometric Dimensioning and Tolerancing (3,0) (F) (P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)
IENG 2076, 2077. Introduction to Computer Numerical Control (CNC) (3,0) (F) (P: DESN 2034)
IENG 3020, 3021. Robotics in Computer Integrated Manufacturing (3,0) (S) (P: IENG 2076; ITEC 2090)
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290; P: IENG 2020)
Approved technical electives (6 s.h.)

5. Cognates - 5 s.h.

FINA 2244. Legal Environment of Business (3) (F,S,SS)
MATH 1074. Applied Trigonometry (2) (F,S,SS) (P: MATH 1065)

6. Approved electives to complete requirements for graduation.

http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm

College of Technology and Computer Science
Department of Technology Systems

Tijjani (TJ) Mohammed, Interim Chair, Suite 202 Science and Technology Building

Architectural Design Technology Minor

The architectural design technology design minor requires a minimum of 30 s.h. of credit:
DESN 2034, 2035. Engineering Graphics I (3,0) (F,S) (P: ITEC 2000 or MIS 2223)
DESN 2036, 2037. Computer-Aided Design and Drafting (3,0) (F,S) (P: DESN 2034)
DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
DESN 3032, 3033. Engineering Graphics II (3,0) (F,S) (P: DESN 2036; ITEC 2080; PHYS 1250; C: ITEC 2090; or program coordinator approval)
DESN 3036, 3037. Architectural Design and Drafting (3,0) (F) (P: DESN 3030, 3032; or program coordinator approval)
DESN 3038, 3039. Sustainable Design (3,0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
ITEC 2000. Industrial Technology Applications of Computer Systems (3) (F,S) or MIS 2223. Introduction to Computers (3) (F,S,SS)
And 9 s.h. from the following:
PLAN 1900. Planning for the Human Environment (3) (F,S,SS)
PLAN 2410. Fundamentals of GIS (3) (F,S) (Formerly PLAN 3051) (Same as GEOG 2410)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3051. Introduction to GIS in Planning (3) (F) (P: PLAN 3410 or consent of instructor)
PLAN 4003. Urban Form and Design (3) (S)
PLAN 4021. Advanced GIS Applications in Planning (3) (S) (P: PLAN 3051 or GEOG 2410 or consent of instructor)
PLAN 4046. Planning and Design Studio (3) (F,S)
PLAN 5985. Historic Preservation Planning (3)

http://www.ecu.edu/cs-acad/ugcat/Security.cfm

Thomas Harriot College of Arts and Sciences

Interdisciplinary Programs

Security Studies

Alethia H. Cook, Director, A-134 Brewster Building

The security studies minor is designed to provide an interdisciplinary overview of security-related issues, policies, and infrastructure that has developed in response to security challenges. The program is designed to accommodate students from a broad spectrum of degree programs within the university who have a desire to apply their majors to the growing security community, whether it be at local, state, and federal governments, or in the private or non-profit sectors.

The minor program, coordinated through the Thomas Harriot College of Arts and Science, requires 24 s.h. credit.

1. Core - 15 s.h.

SECS 1000. Introduction to Security Studies (3) (F) (FC:SO)
SECS 4000. Senior Seminar in Security Studies (3) (S) (P: SECS 1000 and consent of the instructor)
Choose three of the following:
POLS 3155. National Security Policy (3) (F,S)
POLS 4382. Politics of Terrorism (3) (F,S)
EHST 2110. Introduction to Environmental Health Science (3) (F,S)
PLAN 4015. Emergency Planning Management (3) (F,SS)
2. Electives - 9 s.h.
Choose 3 of the following. POLS majors may not choose POLS electives. Courses used for the core may not be used for electives. Other appropriate courses may be considered for inclusion as electives change or review by the director.

EHST 2110. Introduction to Environmental Health Science (3) (F,S)
GEOG 3003. Political Geography (3) (WI) (S) (FC:SO)
GEOG 2410. Fundamentals of GIS (3) (F,S)
HIST 3260. U.S. and the Middle East, 1783 to the Present (3)
ICTN 2900, 2901. Fundamental Network Security (3,0) (P: ICTN 2150)
JUST 1000. Criminal Justice Systems (3) (F,S,SS)
ITEC 3800. Cost and Capital Project Analysis (3) (S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223)
PLAN 1900. Planning for the Human Environment (3) (F,S,SS)
PLAN 2410. Fundamentals of GIS (3) (F,S) (Formerly PLAN 3051) (Same as GEOG 2410)
PLAN 3051. Introduction to GIS in Planning (3) (F,S) (P: GEOG 2410 or consent of Instructor)
PLAN 4015. Emergency Planning (3) (F,SS)
POLS 3144. American Foreign Policy (3) (S) (RP: POLS 2020)
POLS 3155. National Security Policy (3) (F,S)
POLS 3290. Conflict and Peace in the Post Cold War Age (3) (S)
POLS 3293. International Organizations (3)
POLS 4380. Topics in International Politics (3) (P: POLS 2020 or Consent of Instructor)
POLS 4382. Politics of Terrorism (3) (S)
POLS 4383. War in the Modern Age (3)

http://www.ecu.edu/cs-acad/ugcat/polscience.cfm

Thomas Harriot College of Arts and Sciences

Department of Political Science

Brad E. Lockerbie, Chairperson, A-124 Brewster Building

Public Administration Minor

Minimum requirement for public administration minor is 24 s.h. credit. Courses counted toward this minor may not count toward the requirements for a major in political science.

1. Core - 9 s.h.
MATH 2228. Elementary Statistical Methods I (3) (F,S,SS) (P: MATH 1065 or equivalent) or ENGL 3880. Writing for Business and Industry (3) (WI) (F,S,SS) (P: ENGL 1200)
MIS 2223. Introduction to Computers (3) (F,S,SS) (Formerly DSCI 2223)
POLS 3252. Public Administration (3) (FC:SO)

2. Electives (Choose from the following.) - 15 s.h.

GEOG 2410. Fundamentals of GIS (3)
GEOG 3430. Geographic Information Systems I (3) (F,S) (Same as PLAN 3430) (P: GEOG 3410 or PLAN 2410 or equivalent)
PLAN 2410. Fundamentals of GIS (3) (F,S) (Formerly PLAN 3051) (Same as GEOG 2410)
PLAN 3032. Planning Legislation and Administration (3) (WI) (S)
GEOG 3430 - Introduction to GIS in Planning (3) (F)
POLS 3031. Research Design for Political Science (3) (F)
POLS 3041. Women and Public Policy (3) (FC:SO) (P: POLS 1010 or consent of instructor)
POLS 3240. State and Local Government (3) (FC:SO) (P: POLS 1010 or consent of instructor)
POLS 3241. Urban Political Systems (3) (S)
POLS 3242. Municipal Policy and Administration (3)
POLS 3253. Government Fiscal Administration (3) (S) (RP: POLS 1010)
POLS 3255. Domestic Public Policy (3) (S)
POLS 3256. Environmental Politics (3) (F)
POLS 3257. International Environmental Policy (3) (S)
POLS 4310. Public Policy and the Media (3) (S) (FC:SO)
POLS 4991. Internship in Public Administration (1) (F,S,SS) (P: Consent of instructor)
POLS 4992. Internship in Public Administration (2) (F,S,SS) (P: Consent of instructor)
PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO)

http://www.ecu.edu/cs-acad/ugcat/IntDesign.cfm

College of Human Ecology

Department of Interior Design and Merchandising

Katherine L. Swank, Chair, 249A Rivers Building

BS in Interior Design
The interior design major is accredited by the Council for Interior Design Accreditation (CIDA), the National Association of Schools of Art and Design (NASAD), and the National Kitchen and Bath Association (NKBA).

To declare the interior design major, students must have a C (2.0) or higher in IDSN 1180, 1181, 1281, 1500, 2800; ART 1905; and have a cumulative GPA of at least 2.5. Admission into professional-level courses requires being declared into the major and an acceptable level of proficiency in studio work as shown in the sophomore portfolio review.

**Sophomore Portfolio Review:** During the sophomore year, students submit portfolios which contain representative work from: IDSN 1181, 1281, 1500, and 2800. This work is evaluated by the interior design faculty, who recommend whether students are prepared to enter the professional-level interior design courses. Students who do not meet the level of proficiency needed for the professional-level courses have the opportunity to resubmit a portfolio a maximum of two additional times. Meeting the minimum standards does not guarantee entry into the professional level. Admission to professional-level courses is competitive and limited.

**Policy on Student Projects:** The IDMR department reserves the right to retain, exhibit, and reproduce design projects submitted by students for class assignments for the purpose of complying with accreditation and program requirements. Work submitted for grades is the property of the department until it is returned to the students. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see [Liberal Arts Foundations Curriculum](#)) including those listed below - 42 s.h.
   
   ART 1905. The Dimensions of Art (3) (F,S) (FC:FA) (P: Art major)
   ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section or the SAT/ACT)
   PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
   PSYC 3221. Social Psychology (3) (F,S,SS) (FC:SO)

2. Core - 53 s.h.

   IDSN 1180. Interior Design Fundamentals (3)
   IDSN 1181. Interior Design Fundamentals Laboratory (3) (C: IDSN 1180)
   IDSN 1281. Interior Design Graphics (3) (P: IDSN 1180, 1181)
   IDSN 1500. Color and Light in Interior Design (3) (P: IDSN 1180, 1181)
   IDSN 2040. Textiles for Interiors (3)
   IDSN 2281. Computer-Aided Design in Interior Design (3) (P: IDSN 2800; interior design major)
   IDSN 2700. Historic Interiors I: 3000 BC Through Mid-Nineteenth Century (3) (WI)
   IDSN 2750. Historic Interiors II: Late Nineteenth and Twentieth Centuries (3) (WI)
   IDSN 2800. Interior Design I: Residential Design (3) (P: IDSN 1281, 1500)
IDSN 2850. Interior Design II: Commercial Design (3) (P: IDSN 2800; interior design major)
IDSN 3550. Materials and Specifications for Interior Design (3) (P: IDSN 2040; junior standing; IDMR major)
IDSN 3600. Interior Design III: Systems (3) (P: Junior standing; interior design major)
IDSN 3999. Professional Procedures in Interior Design (2) (P/C: IDSN 3550, 3600)
IDSN 4500. Interior Design IV: Universal Design (3) (P: IDSN 3600)
IDSN 4600. Interior Design V: Commercial Design (3) (P: IDSN 3600)
IDSN 4700. Problems in Interiors (3) (P: IDSN 3600)
IDSN 4880. Interior Design Internship (3) (P: IDSN 3999; senior interior design major; consent of instructor)
Choose an additional 3 s.h. elective from:
IDSN 3650. Kitchen and Bath Design (3) (P: IDSN 3550, 3600)
IDSN 4750. Interior Design for Adaptive Reuse (3) (WI) (P: IDSN 3600)

3. Cognates - 12 s.h.

ACCT 2101. Survey of Financial Management Accounting or ACCT 2401. Financial Accounting (3) (F,S,SS) (P: MATH 1065 or 1066)
MKTG 3832. Marketing Management (3) (F,S,SS) (P: ECON 2113)
Choose 6 s.h. from:
MKTG 4362. Marketing Strategy (3) (F,S) (P: MKTG 3832)
MKTG 4752. Advertising and Promotion Management (3) (F,S) (P: MKTG 3832)
MKTG 4790. Distribution Management (3) (F,S) (P: MKTG 3832)
MKTG 4975. Electronic Commerce (3) (SS) (P: MKTG 3832)
MKTG 4992. International Marketing (3) (WI) (F) (P: MKTG 3832)

4. Restricted electives - 12 s.h.

Choose 6 s.h. (See Certificate in Urban Design):
PLAN 4003. Urban Form and Design (3) (S)
PLAN 4046. Planning and Design Studio (3) (F,S)
PLAN 4050. World Architecture and Urbanism (3) (S)
PLAN 5985. Historic Preservation Planning (3) (Same as HIST 5985)
Choose 3 s.h. elective from:
ART 1005. Design I (3) (F,S,SS) (FC:FA) (P: ART major or administrative approval)
ART 1015. Design II (3) (F,S,SS) (P: ART 1005, 1020 with a minimum grade of C (2.0); ART 1905; or administrative approval)
ART 1020. Drawing (3) (WI*) (F,S,SS) (FC:FA) (P: ART major or administrative approval)
ART 1030. Figure Drawing (3) (F,S,SS) (P: ART 1005, 1020 with a minimum grade of C (2.0); ART 1905; or administrative approval)
Choose 3 s.h. elective from:
ART 1906. Art History Survey (3) (F,S) (FC:FA) (P: ART 1905 or 1910)
ART 1907. Art History Survey (3) (F,S) (FC:FA) (P: ART 1905 or 1910)
ART 3950. Architectural History of the Middle East Before 1600 (3) (FC:FA) (P: Junior standing; ART 1905 or 1910; 1906, 1907; or consent of instructor)
ART 4950. Twentieth Century Architecture (3) (F) (P: ART 1906, 1907; or consent of instructor)
ART 4970. History of Nineteenth- and Twentieth-Century Design (3) (S) Same as ART 4970. (P: ART1906, 1907; or consent of instructor)

5. Electives to complete requirements for graduation.

http://www.ecu.edu/cs-acad/ugcat/EthnicStudies.cfm

Thomas Harriot College of Arts and Sciences

Interdisciplinary Programs

Ethnic Studies

Joyce Irene Middleton, Director, 2128 Bate Building
Su-Ching Huang, Assistant Director, 2150 Bate Building

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.

The ethnic studies minor requires 24 s.h. of credit. A maximum of 6 s.h. may be used to satisfy requirements for both the foundations curriculum and the ethnic studies minor. A course may not count both toward the student’s major requirements and the ethnic studies minor requirements. Study programs abroad having the prior approval of the director may be accepted for up to 6 s.h. of credit toward the minor. Additional courses may be approved by the director if they significantly further the student’s understanding of ethnic studies. Departmental prerequisites may be waived in special cases by the department offering the course.

1. Core - 6 s.h.

ETHN 4000. Seminar in Ethnic Studies (3) (S) (FC:HU)

2. Electives - 18 s.h.
Choose 12 - 18 s.h. in at least three different disciplines from the following courses:
ANTH 3005. North American Indians (3) (EY) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ART 3961. Native North American Art and Ritual (3) (S) (P: ART 1906, 1907)
ART 3975. African American Art (3) (F,S) (FC:FA) (P: ART 1906, 1907; or consent of instructor)
CDFR 4303. Families and Cultural Diversity (3) (F,S) (P: CDFR 1103)
COMM 3180. Intercultural Communication (3) (SL*) (Formerly COMM 3080) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)
COMM 4040. Media, Culture, and Society (3) (SL*) (F,S) (P: COMM major or minor or consent of instructor; 15 s.h. COMM)
EDUC 3002. Introduction to Diversity (3)
ENGL 3240. U.S. Latino/a Literature (3) (WI) (F) (FC:HU)
ENGL 3250. Native American Literatures (3) (WI) (FC:HU)
ENGL 3260. African American Literature (3) (WI) (F,S,SS) (FC:HU) (P: ENGL 1200)
ENGL 3290. Asian American Literatures (3) (FC:HU) (P: ENGL 1200)
ENGL 3570. American Folklore (3) (WI) (F,S) (FC:HU) (P: ENGL 1200)
ENGL 4040. Literature of the New World to 1820 (3) (WI) (FC:HU)
ENGL 4340. Ethnic American Literature (3) (F) (S-OY) (FC:HU) (P: ENGL 1200)
ENGL 4380. Studies in African American and African Diasporic Literatures (3) (P: ENGL 1200)
ETHN 3501. Selected Topics in Ethnic Studies, Humanities (3) (S) (FC:HU)
ETHN 3502. Selected Topics in Ethnic Studies, Social Sciences (3) (F) (FC:SO)
FORL 2600. Literature in Translation: The Holocaust (3) (S) (FC:HU)
FORL 2666. Latino Texts (3) (F) (FC:HU)
HIST 3110. History of African Americans (3) (FC:SO)
HIST 3170. History of Native Americans (3) (FC:SO)
HIST 3780. Mexico and Central America (3) (WI*) (F) (FC:SO)
HIST 5230. Themes in African-American History (3) (S)
JUST 3700. Race, Gender and Special Populations in the Criminal Justice System (3)
MUSC 2258. History of Jazz Music (2) (F,S,SS) (FC:FA)
POLS 3050. Theory and Politics of Social Protest Movements in the United States (3) (S) (FC:SO)
POLS 3039. Black Politics in America (3) (F) (FC:SO)
POLS 3224. Civil Liberties (3)
PSYC 2777. Ethno-cultural Psychology (3) (FC:SO) Formerly PSYC 3777 (P: PSYC 1000 or 1060)
SOCI 3219. Sociology of Immigration (3) (FC:SO) P: SOCI 2110
SOCI 4345. Racial and Cultural Minorities (3) (F) (FC:SO) (P: ANTH 1000 or SOCI 2110)
SOCI 4347. Social Inequality (3) (F) (FC:SO)

Choose up to 6 s.h. from the following courses:

ANTH 2010. Societies Around the World (3) (FC:SO)
ANTH 3002. Cultures of East Asia (3) (FC:SO)
ANTH 3003. Cultures of Africa (3) (OY) (FC:SO)
ANTH 3004. Cultures of the South Pacific (3) (EY) (FC:SO)
ANTH 3009/WOST/RELI 3000. Motherhood of God in Asian Traditions (3) (EY) (FC:SO)
ANTH 3016. Cultures of the Caribbean (3) (FC:SO)
ANTH 3017. Cultures of Mexico and Guatemala (3) (OY) (FC:SO)
ANTH 3018. Cultures of South and Central America (3) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 3200. Women’s Roles in Cross-Cultural Perspective (3) (EY) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
ANTH 5005. Contemporary Latin American Cultures (3)
ART 2906. West and Central African Art (3) (S) (FC:FA) (P: Non-ART major)
ART 3920. Asian Art (3) (WI*) (F, S)
ART 3960. Art and Power in Mesoamerica (3) (W, S) (P: ART 1906, 1907)
ART 3970. African Art (3) (WI*) (F, S) (P: ART 1906, 1907, or consent of instructor)
ART 4916. Art of India (3) (W) (P: ART 1906, 1907; or consent of instructor)
ENGL 2760. Afro-Caribbean Language and Culture (3) (W) (P: ENGL 1200)
ENGL 3280. African Literatures (3) (P: ENGL 1200)
ENGL 4360. African Literatures (3) (W) (P: ENGL 1200)
FORL 2622. Francophone Literature of the Americas in Translation (3)
FORL 2624. Francophone Literature of Africa in Translation (3)
FORL 2661. Latin-American Literature in Translation (3) (W) (P: CON: FA)
FORL 3660. Hispanic Women Writers (3) (FC:HU)
FREN 2442. Readings in the Francophone Cultures of the Americas (3) (P: FREN 1004)
FREN 2443. Readings in the Francophone Cultures of Africa (3) (P: FREN 1004)
FREN 3558. The Francophone World: Colonization to Independence (3) (P: FREN 3500 or consent of dept chair)
FREN 3560. The Contemporary French and Francophone World (3) (P: FREN 3500 or consent of dept chair)
GEOG 2110. World Geography: Less Developed Regions (3) (F, S, SS) (FC:SO)
GEOG 3049. Latin America (3) (W) (FC:SO)
GEOG 3050. Africa (3) (W) (S) (FC:SO)
GEOG 3051. Asia (3) (S) (FC:SO)
GEOG 3056. Middle American (3) (FC:SO)
GEOG 4320. Gender, Economy & Development (3) (S) (P: Consent of Instructor)
GEOG 4345. Human Migration and Global Restructuring (3) (F) (FC:SO)
HIST 3610. History of East Asia to 1600 (3) (FC:SO)
HIST 3611. History of East Asia since 1600 (3) (FC:SO)
HIST 3615. History of Traditional Japan (3) (FC:SO)
HIST 3620. History of Modern Japan (3) (FC:SO)
HIST 3629. History of Traditional China (3) (FC:SO)
HIST 3630. History of Modern China (3) (FC:SO)
HIST 3670. History of the Middle East since 1500 (3) (W) (FC:SO)
HIST 3710. Introduction to Latin American History: Colonial Period (3) (W) (FC:SO)
HIST 3711. Introduction to Latin American History: Since 1808 (3) (WI*) (FC:SO)
HIST 3780. Mexico and Central America (3) (W) (F) (FC:SO)
HIST 3810. History of Africa (3) (W) (F) (FC:SO)
HIST 3820. History of South Africa (3) (WI) (FC:SO)
HIST 3830. Africa and Islam (3) (WI) (FC:SO)
HIST 4610. History of Southeast Asia (3) (FC:SO)
HIST 5130. Comparative History of New World Slavery and Race Relations (3) (WI*)
HIST 5300. Comparative History of Non-Western Civilizations (3) (WI*)
HIST 5765. Latin America: 1492 to the present (3) (WI*)
INTL 2003. Introduction to Chinese Culture (3) (FC:HU) (P: ENGL 1200)
INTL 2004. Introduction to Japanese Culture (3)
INTL 3010. Field Study in Latin America (6) (P: Consent of instructor)
MUSC 2248. Music of the World’s People (2) (F,S,SS) (FC:FA)
MUSC 2268. Music of Latin America (2) (FC:FA)
MUSC 5466. Folk and Indigenous Music of Europe and the Americas (2)
MUSC 5476. African Music (2)
MUSC 5516. Ibero-American Musics of the Twentieth Century (3) (WI) (P: MUSC 2166 or consent of instructor)
PHIL 2455. Introduction to Africana Philosophy (3) (WI*) (FC:HU)
POLS 3260. Middle Eastern Political Systems (3) (S) (FC:SO)
POLS 3265. African Political Systems (3) (FC:SO)
POLS 3270. Latin-American Political Systems (3) (FC:SO) (S)
POLS 3280. South Asian Political Systems (3) (SS)
RELI 1690. World Religions (3) (F,S) (FC:HU) (Formerly PHIL 1690)
RELI 2691. Classical Islam (3) (FC:HU) (Formerly PHIL 2691)
RELI 2692. Buddhism (3) (FC:HU) (Formerly PHIL 2692)
RELI 3691. Islam in the Modern World (3) (WI*) (FC:HU) (Formerly PHIL 3691)
SPAN 2441. Latin-American Culture and Civilization (3) (P: SPAN 2222 or 2330 or consent of dept chair)
SPAN 4560. Major Latin-American Authors (3) (P: SPAN 2441, 2550; or consent of dept chair)
SPAN 4561. Latin-American Texts of the Pre-Columbian and Colonial Periods (3) (P: SPAN 2441, 2550; or consent of dept chair; RP: SPAN 4560)
SPAN 4562. Latin-American Texts of the Nineteenth and Early Twentieth Centuries (3) (P: SPAN 2441, 2550; or consent of dept chair; RP: SPAN 4560)
SPAN 4563. Latin-American Texts: The Boom and Beyond (3) (P: SPAN 2441, 2550; or consent of dept chair)
SPAN 5445. Hispanic Cinema (3)
SPAN 5550. Hispanic Women Writers (3) (P: Consent of dept chair)

http://www.ecu.edu/cs-acad/ugcat/english.cfm

Thomas Harriot College of Arts and Sciences

Department of English
Jeffrey Johnson, Chair, 2201 Bate Building

Film Studies Minor

Amanda Klein, Coordinator, 2147 Bate Building

The minor in film studies provides students with an opportunity to study the history, theory, criticism, cultural uses, aesthetics, and production practices of cinema. The courses are designed to help students meet the new challenges they will encounter as citizens and workers in the information age and to learn how to analyze and engage critically with the visual media that has become a fixture of contemporary life. This curriculum complements a wide range of liberal arts majors by teaching students textual analysis, critical thinking, and writing skills.

This interdisciplinary minor asks students to forge connections between the discipline of film studies and other disciplines, including literature, creative writing, rhetoric, music, communications, history, foreign languages, sociology, and political science, among others. Courses in the minor will address cinema within its social, political and cultural contexts including an understanding of how race, ethnicity, gender, religion and class are constructed through the cinematic image. Courses taken towards the minor must come from at least three different prefixes (ART, COMM, ENGL, ETHN, FORL, GERM, MPRD, RELI, RUSS, SOCI, SPAN, or POLS). Courses designated as Special Topics only count toward the minor when taught as film studies. Other appropriate courses may be considered for inclusion as electives change or upon review by the coordinator. For more information go to: http://www.ecu.edu/english/filmstudies/

Minimum requirement for the minor in film studies is 24 s.h. of credit as follows:

1. Core - 9 s.h.

   ENGL 2900. Introduction to Film Studies (3) (F,S) (FC:HU) (P: 1000-level writing intensive course or advanced placement or consent of instructor)
   ENGL 3920. Film Theory and Criticism (3) (WI) (FC:HU) (P: ENGL 2900 or consent of the instructor)
   ENGL 4985. Film Studies Capstone (3) (WI) (3 lecture and 2 lab hours per week) (P: ENGL 2900; declared minor in film studies; or consent of instructor)

2. Cognates - 6 s.h.

   Choose one from each cognate:
   Film History:
   ENGL 3900. American and International Film History, Part I (3) (P: ENGL 2900 or consent of instructor)
   ENGL 3901. American and International Film History, Part II (3) (P: ENGL 2900 or consent of instructor)
   ENGL 4910. Survey of Film Styles and Movements (3) (WI) (FC:HU)
MPRD 3660. History of the Moving Image (3) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)
Multicultural/Transnational/International Film:
COMM 4040. Media, Culture, and Society (3) (SL*) (F,S) (P: COMM major or minor or consent of instructor; COMM 1001, 1002; 15 hours COMM courses or consent of instructor)
ENGL 4920. Contemporary American and International Cinema (3) (WI) (FC:HU) (P: 6 s.h. of literature or consent of instructor; RP: ENGL 4910)
GERM 3700. Special Topics (3) (May be repeated for maximum of 6 s.h. with change of topic) (P: GERM 2210 or 2211; or consent of instructor)
POLS 3012. Politics Through Film (3) (S) (FC:SO)
RUSS 3230. Russian and Soviet Film (3) (FC:HU) (P: RUSS 2120 or consent of instructor)
SPAN 5445. Hispanic Cinema (3) (May be repeated for maximum of 6 s.h. with change of topic) (P: Consent of chair)

3. Electives - 9 s.h.
Note: Courses taken for the core requirement or as cognates may not be repeated as electives.

ART 3080. Introductory Video Art (3) (P for art majors: ART 1015, 1030; P for communication arts students: ART 2220)
ART 3081. Intermediate Video Art (3) (P: ART 3080)
COMM 4040. Media, Culture, and Society (3) (SL*) (F,S) (Formerly COMM 4600) (P: COMM major or minor or consent of instructor; COMM 1001, 1002; 15 hours COMM courses or consent of instructor)
COMM 4060. Special Problems in Communication (3) (F,S,SS) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)
ENGL 2900. Introduction to Film Studies (3) (F,S) (FC:HU) (P: 1000-level writing intensive course or advanced placement or consent of instructor)
ENGL 3660. Representing Environmental Crisis (3) (WI) (P: ENGL 1200)
ENGL 3900. American and International Film History, Part I (3) (P: ENGL 2900 or consent of instructor)
ENGL 3901. American and International Film History, Part II (3) (P: ENGL 2900 or consent of instructor)
ENGL 4910. Survey of Film Styles and Movements (3) (WI) (FC:HU)
ENGL 4920. Contemporary American and International Cinema (3) (WI) (FC:HU) (P: 6 s.h. of literature or consent of instructor; RP: ENGL 4910)
ENGL 4930. Film: The Writer’s Perspective (3)
ENGL 4980. Topics in Film Aesthetics (3) (May be repeated with change of topic for maximum 6 s.h.) (P: ENGL 2900 or consent of instructor)
ENGL 5350. Special Studies in Film (3)
ETHN 3501. Selected Topics in Ethnic Studies: Humanities (3) (F) (FC:HU) (May be repeated for a maximum of 6 s.h. with change of topic)
FORL 2760. Special Topics in Hispanic Studies (3) (FC:HU) (May be repeated for maximum of 6 s.h. with change of topic) (May not count toward foreign language requirement)
GERM 3700. Special Topics (3) (May be repeated for maximum of 6 s.h. with change of topic) (P: GERM 2210 or 2211; or consent of instructor)
MPRD 2250. Classic Documentaries, 1900-2000 (3) (P: COMM major or minor or consent of instructor; COMM 1001,1002)
MPRD 2260. Image Theory and Aesthetics (3) (P: COMM major or minor or consent of instructor; COMM 1001,1002)
MPRD 3235. Advanced Writing for Media (3) (P: COMM major or consent of instructor; COMM 1001,1002)
MPRD 3660. History of the Moving Image (3) (P: COMM major or minor or consent of instructor; COMM 1001, 1002)
POLS 3012. Politics Through Film (3) (S) (FC:SO)
RELI 2400. Religion and Film (3) (FC:HU)
RUSS 3230. Russian and Soviet Film (3) (FC:HU) (P: RUSS 2120 or consent of instructor)
SOCI 3025. Sociology of Mass Media (3) (FC: SO) (P: SOCI 2110)
SPAN 5445. Hispanic Cinema (3) (May be repeated for maximum of 6 s.h. with change of topic) (P: Consent of chair)

http://www.ecu.edu/cs-acad/ugcat/Women.cfm

Thomas Harriot College of Arts and Sciences

Interdisciplinary Programs

Women's Studies

Marieke Van Willigen, Director, Brewster B103

BA in Women’s Studies

The women’s studies major is an interdisciplinary degree program that includes courses on women and gender offered by the women’s studies program as well as through traditional disciplines and departments. The purpose of women’s studies is to offer a contemporary as well as a historical perspective on women’s contributions to selfhood, family, and society; identify, critically examine, and evaluate the assumptions made about women by tradition; and discover, acquire, and accumulate knowledge about women in order to empower understanding of their lives, their roles, and their humanity. Women’s studies balances traditional Western cultural assumptions with international women’s perspectives, including those of minorities, the disabled, and the economically deprived. The requirements for the major include an introductory women’s studies course; electives chosen from the arts, humanities, natural and social sciences, and professional schools; and a core of women’s studies courses, including a capstone experience of
a senior seminar and internship or directed readings. Women’s studies majors are encouraged to combine women’s studies with another major. Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) - 42 s.h.
2. Foreign language through level 1004 - 12 s.h.
3. Core - 12 s.h.

WOST 2000. Introduction to Women’s Studies: Humanities (3) (F,S,SS) (FC:HU) or WOST 2200. Introduction to Women’s Studies: Art (3) (FC:FA) or WOST 2400. Introduction to Women’s Studies: Social Sciences (3) (FC:SO)
WOST 3910, 3920, 3930. Directed Readings in Women’s Studies (1,1,1) (F,S,SS) (P: WOST 2000 or 2200 or 2400 or consent of director) or WOST 4500. Internship in Women’s Studies (3) (F,S,SS) (P: Senior standing; WOST 4000; minimum 2.5 GPA or consent of director)
WOST 4000. Senior Seminar in Women’s Studies (3) (S) (P: WOST 2000 or 2200 or 2400; additional 3 s.h. in WOST; or consent of instructor)
WOST 4200. Feminist Theory (3) (F) (WI) (P: WOST 2000 or 2200 or 2400; 1 other WOST course accepted for WOST major or minor)

4. Area of study (Choose one from each area.) - 12 s.h.

Cultural Diversity:
ANTH 2025. Sexual Behavior from an Anthropological Perspective (3) (F) (FC:SO) (P: Introductory course in ANTH, SOCI, PSYC or consent of instructor)
ENGL 3260. Black Literature in America (3) (WI) (F,S,SS) (FC:HU) (P: ENGL 1200)
ENGL 4360. World Literature in English (3) (WI) (FC:HU) (P: ENGL 1200)
ENGL 5360. Studies in African-American Literature (3)
FORL 2600. Literature in Translation: The Holocaust (3) (S) (FC:HU)
HIST 3110. History of African-Americans (3) (FC:SO)
HIST 5230. Themes in African-American History (3)
SOCI 4345. Racial and Cultural Minorities (3) (F) (FC:SO) (P: ANTH 1000 or SOCI 2110)

Humanities:
ENGL 3300. Women and Literature (3) (WI) (F,S,SS) (FC:HU) (P: ENGL 1200)
ENGL 5330. Study in Women’s Literature (3) (WI) (P: ENGL 1200)
RELI 3000. Motherhood of God in Asian Traditions (3) (FC:HU)
RELI 3690. Women and Religion (3) (FC:HU) (WI*) (Formerly PHIL 3690)

Social Science:
ANTH 3200. Women’s Roles in Cross-Cultural Perspective (3) (EY) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
COMM 4135. Gender and Communication (3) (F) (P: COMM 1001 or 1002; or WOST 2000 or 2400)
POLS 3040. Women in Politics (3) (S) (P: POLS 1010 or consent of instructor)
PSYC 4335. Psychology of Women (3) (S) (P: PSYC 1000 or 1060)
PSYC 4350. Psychology of Sexual Behavior (3) (F,S) (P: 6 s.h. in PSYC)
SOCI 3400. Introduction to Gender and Society (3) (FC:SO) (P: SOCI 2110)
SOCI 5400. Seminar in Gender Roles (3) (P: SOCI 2110; consent of instructor)
Women’s History:
HIST 3140. Women in American History (3) (F,S) (FC:SO)
HIST 5220. Selected Topics in US Women’s History (3)

5. Electives - 12 s.h.

ANTH 3009/RELI 3000/WOST 3000. Motherhood of God in Asian Traditions (3) (EY)
(FC:SO) (RELI 3000 FC:HU)
ANTH 3200. Women’s Roles in Cross-Cultural Perspective (3) (FC:SO) (P: ANTH 1000
or 2010 or 2200 or consent of instructor)
CFDR 5300. Families, Sexuality, and Gender Roles (3)
CLAS 2400. Women in Classical Antiquity (3) (FC:HU)
COMM 4035. Gender and Communication (3) (F) (P: COMM 2001 or WOST 2000 or
2400)
ENGL 3300. Women and Literature (3) (WI) (FC:HU) (P: ENGL 1200)
ENGL 5330. Studies in Women’s Literature (3) (WI) (P: ENGL 1200)
FORL 3660. Hispanic Women Writers (3) (FC:HU)
GEOG 4320. Gender, Economy, and Development (3) (S) (P: Consent of instructor)
HIST 3140. Women in American History (3) (F,S) (FC:SO)
HIST 5220. Selected Topics in US Women’s History (3)
HLTH 3020. Health Disparities (3) (F,S,SS) (P: HLTH 1000 or 1050; 3010 or consent of
instructor)
HLTH 5310. Education for Human Sexuality (3) (P: Health education major or consent
of instructor)
NURS 5327. Women’s Health (3)
POLS 3040. Women in Politics (3) (S)
POLS 3041. Women and Public Policy (3) (FC:SC)
PSYC 4335. Psychology of Women (3) (S) (P: PSYC 1000 or 1060)
PSYC 4350. Psychology of Sexual Behavior (3) (F,S) (P: 6 s.h. in PSYC)
RELI 3690. Women and Religion (3) (FC:HU) (WI*) (Formerly PHIL 3690)
SOCI 3400. Introduction to Gender and Society (3) (FC:SO) (P: SOCI 2110)
SOCI 5400. Seminar in Gender Roles (3) (P: SOCI 2110; consent of instructor)
SOCW 5007. Women as Clients (3)
SPAN 5550. Hispanic Women Writers (3) (P: Consent of dept chair)
WOST 3500. Selected Topics in Women’s Studies: Social Sciences (3) (WI) (FC:SO) (P:
WOST 2000 or 2200 or 2400 or consent of instructor)
WOST 3510. Selected Topics in Women’s Studies: Humanities (3) (WI) (FC:HU) (P:
WOST 2000 or 2200 or 2400 or consent of program director)
WOST 3520. Selected Topics in Women’s Studies: Fine Arts (3) (WI) (FC:FA) (P:
WOST 2000 or 2200 or 2400 or consent of program director)
WOST 3910, 3920, 3930. Directed Readings in Women’s Studies (1,1,1) (F,S,SS) (P:
WOST 2000 or 2200 or 2400 or consent of director)
WOST 4500. Internship in Women’s Studies (3) (F,S,SS) (P: Senior standing; WOST 4000; minimum 2.5 GPA or consent of director)

WOST 5000. Advanced Seminar in Women’s Studies (3) (P: Consent of instructor)
Selected topics and honors seminars as approved by the Women’s Studies Executive Committee

6. Second major or minor and general electives to complete requirements for graduation. Each course taken for the major can only be used to satisfy one requirement of the major. For students electing women’s studies as part of a double major, the director may give consent that a maximum of 6 s.h. of the women’s studies major be waived or double counted.

Women’s Studies Minor
The minor in women’s studies is an interdisciplinary academic program with courses designed to complement and enrich students’ work in their major fields. To ensure flexibility in each student’s 24 s.h. program and thus assure the possibility of coordinating with the major, the women’s studies minor comprises a 6 s.h. core, which includes a course that introduces the student to the discipline and a senior seminar which helps the student synthesize what she or he has learned, and 18 s.h. of electives. A course may not count toward the student’s major degree and the women’s studies minor.

1. Core - 6 s.h.
   WOST 2000. Introduction to Women’s Studies: Humanities (3) (F,S,SS) (FC:HU) or WOST 2200. Introduction to Women’s Studies: Arts (3) (FC:FA) or WOST 2400. Introduction to Women’s Studies: Social Sciences (3) (FC:SO)
   WOST 4000. Senior Seminar in Women’s Studies (3) (S) (P: WOST 2000 or 2200 or 2400; additional 3 s.h. in WOST; or consent of instructor)

2. Electives - 18 s.h.
   ANTH 3009/RELI 3000/WOST 3000. Motherhood of God in Asian Traditions (3) (EY) (FC:SO) (RELI 3000 FC:HU)
   ANTH 3200. Women’s Roles in Cross-Cultural Perspective (3) (EY) (FC:SO) (P: ANTH 1000 or 2010 or 2200 or consent of instructor)
   CDFR 5300. Families, Sexuality, and Gender Roles (3)
   CLAS 2400. Women in Classical Antiquity (3) (FC:HU)
   COMM 4135. Gender and Communication (3) (F) (P: COMM 1001 or 1002; or WOST 2000 or 2400)
   ENGL 3300. Women and Literature (3) (WI) (F,S,SS) (FC:HU) (P: ENGL 1200)
   ENGL 5330. Studies in Women’s Literature (3) (WI) (P: ENGL 1200)
   FORL 3660. Hispanic Women Writers (3) (FC:HU)
   GEOG 4320. Gender, Economy, and Development (3) (S) (P: Consent of instructor)
   HIST 3140. Women in American History (3) (F,S) (FC:HU)
HIST 5220. Selected Topics in US Women’s History (3)
HLTH 3020. Health Disparities (3) (F,S,SS) (P: HLTH 1000 or 1050; 3010 or consent of instructor)
HLTH 5310. Education for Human Sexuality (3) (P: Health education major or consent of instructor)
NURS 5327. Women’s Health (3)
POLS 3040. Women in Politics (3) (S)
POLS 3041. Women and Public Policy (3) (FC:SC)
PSYC 4335. Psychology of Women (3) (S)
PSYC 4350. Psychology of Sexual Behavior (3) (F,S) (P: 6 s.h. in PSYC)
RELI 3690. Women and Religion (3) (FC:HU) (WI*) (Formerly PHIL 3690)
SOC 1340. Introduction to Gender and Society (3) (FC:SO) (P: SOCI 2110)
SOC 5400. Seminar in Gender Roles (3) (P: SOCI 2110; consent of instructor)
SOCW 5007. Women as Clients (3)
SPAN 5550. Hispanic Women Writers (3) (P: Consent of dept chair)
WOST 3500. Selected Topics in Women’s Studies: Social Sciences (3) (FC:SO) (P: WOST 2000 or 2200 or 2400 or consent of instructor)
WOST 3510. Selected Topics in Women’s Studies: Humanities (3) (WI) (FC:HU) (P: WOST 2000 or 2200 or 2400 or consent of program director)
WOST 3520. Selected Topics in Women’s Studies: Fine Arts (3) (WI) (FC:FA) (P: WOST 2000 or 2200 or 2400 or consent of program director)
WOST 3910, 3920, 3930. Directed Readings in Women’s Studies (1,1,1) (F,S,SS) (P: WOST 2000 or 2200 or 2400 or consent of director)
WOST 4200. Feminist Theory (3) (F) (WI) (P: WOST 2000 or 2200 or 2400; 1 other WOST course accepted for WOST major or minor)
WOST 4500. Internship in Women’s Studies (3) (F,S,SS) (P: Senior standing; WOST 4000; minimum 2.5 GPA or consent of director)
WOST 5000. Advanced Seminar in Women’s Studies (3) (P: Consent of instructor)
Selected topics and honors seminars as approved by the Women’s Studies Executive Committee
May choose only one elective from:
ANTH 2025. Sexual Behavior from an Anthropological Perspective (3) (F) (FC:SO) (P: Introductory course in ANTH, SOCI, PSYC or consent of instructor)
ENGL 3260. African American Literature (3) (WI) (F,S,SS) (FC:HU) (P: ENGL 1200)
ENGL 4360. World Literature in English (3) (WI) (FC:HU) (P: ENGL 1200)
ENGL 5360. Studies in African-American Literature (3)
FORL 2600. Literature in Translation: The Holocaust (3) (S) (FC:HU)
HIST 3110. History of African-Americans (3) (FC:SO)
HIST 5230. Themes in African-American History (3)
SOC 4345. Racial and Cultural Minorities (3) (F) (FC:SO) (P: ANTH 1000 or SOCI 2110)