ENVIRONMENTAL STUDIES MAJOR, B.A.

Contact Information
Curriculum for the Environment and Ecology
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This major is designed for students seeking interdisciplinary preparation in the social sciences and humanities needed to understand how society affects the environment, how it organizes itself to respond to environmental problems, and how understanding of the environment is transmitted through culture. The major prepares students for graduate and professional training, especially in environmental policy, journalism, education, and law.

Department Programs
Majors
- Environmental Studies, B.A. (p. 1)
- Environmental Science, B.S. (http://catalog.unc.edu/undergraduate/programs-study/environmental-science-bs)
- Dual Bachelor’s-Master’s Degree Programs (p. 7)

Minors
- Environmental Science and Studies Minor (http://catalog.unc.edu/undergraduate/programs-study/environmental-science-studies-minor)
- Sustainability Studies Minor (http://catalog.unc.edu/undergraduate/programs-study/sustainability-studies-minor)

Graduate Programs
- Doctor of Philosophy (http://catalog.unc.edu/graduate/schools-departments/environment-ecology/#programstext)
- Master of Science (http://catalog.unc.edu/graduate/schools-departments/environment-ecology/#programstext)
- Master of Arts (http://catalog.unc.edu/graduate/schools-departments/environment-ecology/#programstext)

Student Learning Outcomes
Upon completion of the environmental studies program (B.A.), students should be able to:
- Demonstrate knowledge in the connections in social and/or natural sciences through an understanding of major concepts, theoretical reasoning, and empirical findings in environmental studies
- Demonstrate knowledge of a marketable skill (e.g. GIS, communication, statistics) to enhance their ability to apply concepts from the program in the real world
- Demonstrate mastery of research and problem-solving skills through individual or team-based projects working for a researcher or client in a social or natural science

Requirements
The environmental studies program provides two options:
- Environmental Studies Major, B.A. (p. 1) (with several concentration areas)
- Environmental Studies Major, B.A.–Sustainability Track (p. 6)

Environmental Studies Major, B.A.
In addition to the program requirements listed below, students must
- attain a final cumulative GPA of at least 2.0
- complete a minimum of 45 academic credit hours earned from UNC–Chapel Hill courses
- take at least half of their major course requirements (courses and credit hours) at UNC–Chapel Hill
- earn a minimum of 18 hours of C or better in the major core requirements (some majors require 21 hours).

For more information, please consult the degree requirements section of the catalog (http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements/#degreerequirementstext).

Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENEC 201</td>
<td>Introduction to Environment and Society</td>
<td>4</td>
</tr>
<tr>
<td>ENEC 202</td>
<td>Introduction to the Environmental Sciences</td>
<td>4</td>
</tr>
<tr>
<td>ENEC 698</td>
<td>Capstone: Analysis and Solution of Environmental Problems</td>
<td>3</td>
</tr>
</tbody>
</table>

One of the following earth system science courses: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 201</td>
<td>Ecology and Evolution</td>
<td>1</td>
</tr>
<tr>
<td>ENEC 222</td>
<td>Estuarine and Coastal Marine Science</td>
<td>1</td>
</tr>
<tr>
<td>ENEC 489</td>
<td>Ecological Processes in Environmental Systems</td>
<td>1</td>
</tr>
<tr>
<td>ENEC/MASC 448</td>
<td>Coastal and Estuarine Ecology</td>
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One of the following earth system core courses: 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 324 &amp; 324L</td>
<td>Water in Our World: Introduction to Hydrologic Science and Environmental Problems and Water in Our World Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 324 &amp; 324L</td>
<td>Water in Our World: Introduction to Hydrologic Science and Environmental Problems and Water in Our World Laboratory</td>
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One of the following earth system core courses: 1

<table>
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<tr>
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<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 412</td>
<td>Synoptic Meteorology</td>
<td>1</td>
</tr>
<tr>
<td>GEOL 215</td>
<td>Energy Resources</td>
<td>1</td>
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</table>

Two courses from one of the following skills categories: 6

GIS:
- ANTH 419 Anthropological Application of GIS
- ENEC 479 Landscape Analysis
- GEOG 370 Introduction to Geographic Information
- GEOG 491 Introduction to GIS
- GEOG 541 GIS in Public Health
- GEOG 591 Applied Issues in Geographic Information Systems
- GEOG 592 Geographic Information Science Programming
Remote Sensing:
- GEOG 370 Introduction to Geographic Information
- GEOG 477 Introduction to Remote Sensing of the Environment
- GEOG 577 Advanced Remote Sensing
- GEOL/MASC 483 Geologic and Oceanographic Applications of Geographical Information Systems

Statistics:
- BIOS 600 Principles of Statistical Inference
- ECON 400 Introduction to Statistics and Econometrics
- ENEC 562 Statistics for Environmental Scientists
- STOR 155 Introduction to Data Models and Inference

Five courses chosen from one of the concentrations list below: 15-20

**Additional Requirements**

- BIOL 101 Principles of Biology 4
- & 101L Principles of Biology Laboratory
- CHEM 101 General Descriptive Chemistry I 4
- & 101L General Descriptive Chemistry Laboratory I
- PHYS 114 General Physics I: For Students of the Life Sciences
- PHYS 118 Introductory Calculus-based Mechanics and Relativity
- CHEM 102 General Descriptive Chemistry II 4
- & 102L General Descriptive Chemistry Laboratory II
- PHYS 115 General Physics II: For Students of the Life Sciences
- PHYS 119 Introductory Calculus-based Electromagnetism and Quanta

**ECON 101 Introduction to Economics**

**MATH 231 Calculus of Functions of One Variable I** 4

*Enough General Education (http://catalog.unc.edu/undergraduate/curriculum-degree-requirements) and free electives to accumulate at least 120 credit hours.*

**Total Hours: 120**

**Concentrations**

- Agriculture and Health (p. )
- Ecology and Society (p. )
- Environmental Behavior and Decision Making (p. )
- Population, Environment, and Development (p. )

**Agriculture and Health**
- ANTH 252 Archaeology of Food 3

**Anthropology of Development**
- ANTH 226 The Peoples of Africa 3
- ANTH 231 Human Growth and Development 3
- ANTH 232 Anthropology of Development 3
- ANTH 239 Political Ecology 3
- ANTH/ENEC 238 Human Ecology of Africa 3
- ANTH/ENEC 460 Historical Ecology 3
- BIOL 201 Ecology and Evolution 4
- BIOL 272 Local Flora 4
- BIOL 277 Vertebrate Field Zoology 3
- BIOL 427 Human Diversity and Population Genetics 3
- BIOL 461 Fundamentals of Ecology 4
- BIOL 463 Field Ecology 4
- BIOL 464 Global Change Ecology 3
- BIOL 465 Global Biodiversity and Macroeconomics 3
- BIOL 469 Behavioral Ecology 3
- BIOL 561 Ecological Plant Geography 3
- BIOL 564 Conservation Biology 3
- BIOL 567 Evolutionary Ecology 3
- BIOL/ENEC 256 Mountain Biodiversity 4
Environmental Behavior and Decision Making

ANTH 422 Anthropology and Human Rights  
ANTH 539 Environmental Justice  
BIOL/MATH 553 Mathematical and Computational Models in Biology  
BUSI 507 Sustainable Business and Social Entrepreneurship  

Environmental Studies Major, B.A.

BIOL/ENEC 461 Fundamentals of Ecology  
BIOL/ENEC 562 Statistics for Environmental Scientists  
CHIN 356 Chinese Environmental Literature  
ENEC 222 Estuarine and Coastal Marine Science  
ENEC 304 Restoration Ecology  
ENEC 395 Research in Environmental Sciences and Studies for Undergraduates  
or ENEC 396 Directed Readings  
ENEC 462 Ecosystem Management  
ENEC 479 Landscape Analysis  
ENEC 489 Ecological Processes in Environmental Systems  
ENEC 491 Effective Environmental Communication  
ENEC 693H Honors Research in Environmental Sciences and Studies  
or ENEC 694H Honors Project in Environmental Sciences and Studies  
ENEC/GEOG 264 Conservation of Biodiversity in Theory and Practice  
ENEC/GEOG 324 Water in Our World: Introduction to Hydrologic Science and Environmental Problems  
ENEC/GEOG/MASC 450 Biogeochemical Processes  
ENEC/MASC 352 Marine Fisheries Ecology  
ENEC/MASC 441 Marine Physiological Ecology  
ENEC/MASC 444 Marine Phytoplankton  
ENEC/MASC 448 Coastal and Estuarine Ecology  
ENEC/MASC 471 Human Impacts on Estuarine Ecosystems  
ENEC/PLAN 641 Ecology and Land Use Planning  
ENEC/PLCY 372 Global Environment: Policy Analysis and Solutions  
ENEC/PLCY 520 Environment and Development  
ENEC/PLCY 524 International Environmental Politics  
GEOG 228 Urban Geography  
GEOG 232 Agriculture, Food, and Society  
GEOG 261 The South  
GEOG 423 Social Geography  
GEOG 434 Cultural Ecology of Agriculture, Urbanization, and Disease  
GEOG 444 Landscape Biogeography  
GEOG 470 Political Ecology: Geographical Perspectives  
GEOG 597 Ecological Modeling  

COMM/ENEC 375 Environmental Advocacy  
ENEC 305 Data Analysis and Visualization of Social and Environmental Interactions  
ENEC 309 Environmental Values and Valuation  
ENEC 312 Risk-Based International Environmental Decisions  
ENEC 325 Water Resource Management and Human Rights  
ENEC 350 Environmental Law and Policy  
ENEC 351 Coastal Law and Policy  
ENEC 380 Environmental Economics  
ENEC 395 Research in Environmental Sciences and Studies for Undergraduates  
or ENEC 396 Directed Readings  
ENEC 462 Ecosystem Management  
ENEC/BUSI 463 Business and the Environment  
ENEC 474 Sustainable Coastal Management  
ENEC 485 Coastal Resource Economics and Policy  
ENEC 580 Environmental Markets: Science and Economics  
ENEC 581 Water Resource Planning and Policy Analysis  
ENEC 586 Water Quality Policies and Planning  
ENEC 491 Effective Environmental Communication  
ENEC 492 Social Science Research Methods  
ENEC 675 Environmental Communication and the Public Sphere  
ENEC 685 Environmental and Resource Economics  
ENEC 693H Honors Research in Environmental Sciences and Studies  
or ENEC 694H Honors Project in Environmental Sciences and Studies  
ENEC/ENVR 470 Environmental Risk Assessment  
ENEC/ENVR/PLAN/PLCY 585 American Environmental Policy  
ENEC/GEOL 324 Water in Our World: Introduction to Hydrologic Science and Environmental Problems  
ENEC/MEJO 565 Environmental Storytelling  
ENEC/PLCY 547 Energy, Transportation, and Land Use  
ENEC/PLCY 641 Ecology and Land Use Planning  
ENEC/PLCY 372 Global Environment: Policy Analysis and Solutions  
ENEC/PLCY 475 The Political Economy of Food  
ENEC/PLCY 480 Environmental Decision Making  
ENEC/PLCY 524 International Environmental Politics  
GEOG 237 Natural Resources  
GEOG 435 Environmental Politics  
GEOG 470 Political Ecology: Geographical Perspectives  

H Honors version available. An honors course fulfills the same requirements as the nonhonors version of that course. Enrollment and GPA restrictions may apply.

1 This course appears on a core requirement list as well as a concentration requirement list, but can only be counted toward one of the two.

Population, Environment, and Development

ANTH 318 Human Growth and Development  
ANTH 319 Global Health  
ANTH 439 Political Ecology  
ANTH 459 Ecological Anthropology  
ANTH 539 Environmental Justice  
ANTH/ENEC 238 Human Ecology of Africa  

H Honors version available. An honors course fulfills the same requirements as the nonhonors version of that course. Enrollment and GPA restrictions may apply.
In addition to the program requirements listed below, students must

- attain a final cumulative GPA of at least 2.0
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<th>Credits</th>
</tr>
</thead>
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<tr>
<td>ENEC 201</td>
<td>Introduction to Environment and Society</td>
<td>4</td>
</tr>
<tr>
<td>ENEC 330</td>
<td>Principles of Sustainability</td>
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<td>3</td>
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</tbody>
</table>

One course from each of the Pillars of Sustainability, plus one additional course at the 300-level or above in any pillar (4 courses total):

### Equity

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 306</td>
<td>Water and Inequality: Anthropological Perspectives</td>
</tr>
<tr>
<td>ANTH 439</td>
<td>Political Ecology</td>
</tr>
<tr>
<td>ANTH 539</td>
<td>Environmental Justice</td>
</tr>
<tr>
<td>ENEC 325</td>
<td>Water Resource Management and Human Rights</td>
</tr>
<tr>
<td>ENEC 350</td>
<td>Environmental Law and Policy</td>
</tr>
<tr>
<td>ENEC 351</td>
<td>Coastal Law and Policy</td>
</tr>
<tr>
<td>GEGO 470</td>
<td>Political Ecology: Geographical Perspectives</td>
</tr>
<tr>
<td>GEGO 480</td>
<td>Liberation Geographies: The Place, Politics, and Practice of Resistance</td>
</tr>
<tr>
<td>PHIL/ENEC 368</td>
<td>Environmental Geographies: The Place, Politics, and Practice of Resistance</td>
</tr>
<tr>
<td>PLAN 247</td>
<td>Solving Urban Problems</td>
</tr>
<tr>
<td>PLAN 574</td>
<td>Political Economy of Poverty and Inequality</td>
</tr>
<tr>
<td>PLAN 637</td>
<td>Public Transportation</td>
</tr>
<tr>
<td>PLAN 638</td>
<td>Pedestrian and Bike Transportation</td>
</tr>
<tr>
<td>SOCI 274</td>
<td>Social and Economic Justice</td>
</tr>
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</table>

### Economics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSI 507</td>
<td>Sustainable Business and Social Entrepreneurship</td>
</tr>
<tr>
<td>ECON 400</td>
<td>Introduction to Statistics and Econometrics</td>
</tr>
<tr>
<td>ENEC 309</td>
<td>Environmental Values and Valuation</td>
</tr>
<tr>
<td>ENEC 380</td>
<td>Environmental Economics</td>
</tr>
<tr>
<td>ENEC/BUSI 463</td>
<td>Business and the Environment</td>
</tr>
<tr>
<td>ENEC 485</td>
<td>Coastal Resource Economics and Policy</td>
</tr>
<tr>
<td>ENEC 580</td>
<td>Environmental Markets: Science and Economics</td>
</tr>
<tr>
<td>PLCY 475</td>
<td>The Political Economy of Food</td>
</tr>
</tbody>
</table>

### Environment

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENEC 202</td>
<td>Introduction to the Environmental Sciences</td>
</tr>
<tr>
<td>ENEC/BIOI 256</td>
<td>Mountain Biodiversity</td>
</tr>
<tr>
<td>ENEC/GEOG 264</td>
<td>Conservation of Biodiversity in Theory and Practice</td>
</tr>
<tr>
<td>ENEC 304</td>
<td>Restoration Ecology</td>
</tr>
<tr>
<td>ENEC 324</td>
<td>Water in Our World: Introduction to Hydrologic Science and Environmental Problems</td>
</tr>
<tr>
<td>ENEC 370</td>
<td>Agriculture and the Environment</td>
</tr>
<tr>
<td>ENEC 405</td>
<td>Mountain Preservation</td>
</tr>
</tbody>
</table>

### Sustainability Track

This major is designed for students who wish to pursue business and policy with an interdisciplinary approach to resiliency and sustainability. This track is appropriate for students wishing to pursue graduate or professional studies in business or policy.

In addition to the program requirements listed below, students must

- earn a minimum of 18 hours of C or better in the major core requirements (some majors require 21 hours).
ENEC 420 Community Design and Green Architecture
ENEC 431 Sustainable Cities: Exploring Ways of Making Cities More Sustainable
ENEC 462 Ecosystem Management
ENEC 471 Human Impacts on Estuarine Ecosystems
ENEC 482 Energy and the Environment: A Coastal Perspective
ENEC 489 Ecological Processes in Environmental Systems
ENVR/ENEC/PLAN/PLCY 585 American Environmental Policy
GEOG 441 Introduction to Watershed Systems
GEOG/ENEC 451 Population, Development, and the Environment
GEOL 215 Energy Resources
MASC/ENEC 220 North Carolina Estuaries: Environmental Processes and Problems
MASC 441 Marine Physiological Ecology
MASC 444 Marine Phytoplankton
MASC/ENEC 448 Coastal and Estuarine Ecology
MASC 433 Wetland Hydrology
PHYS 131 Energy: Physical Principles and the Quest for Alternatives to Dwindling Oil and Gas
PLAN 547 Energy, Transportation, and Land Use
PLCY/ENEC/ENVR/PLAN 686 Policy Instruments for Environmental Management

Two courses from one skill area and one additional course from a second skill (3 courses total):

**Basic Science**

CHEM 101 General Descriptive Chemistry I
& 101L and Quantitative Chemistry Laboratory I
& CHEM 102 and General Descriptive Chemistry II
& CHEM 102L and Quantitative Chemistry Laboratory II

PHYS 114 General Physics I: For Students of the Life Sciences and General Physics II: For Students of the Life Sciences

BIOL 101 Principles of Biology
& 101L and Introductory Biology Laboratory
& BIOL 201 and Ecology and Evolution

**Communications and Research**

COMM/ENEC 375 Environmental Advocacy

ENEC 393 Internship in Sustainability
or ENEC 493 Environmental Internship
or ENEC 593 Environmental Practicum

ENEC 395 Research in Environmental Sciences and Studies for Undergraduates
or ENEC 396 Directed Readings

ENEC 491 Effective Environmental Communication
ENEC 492 Social Science Research Methods
ENEC 693H Honors Research in Environmental Sciences and Studies
or ENEC 694 Honors Project in Environmental Sciences and Studies

MEJO/ENEC 565 Environmental Storytelling
PLCY 305 Communicating in Public Policy

**GIS and Remote Sensing**

ANTH 419 Anthropological Application of GIS
ENEC 479 Landscape Analysis
ENVR 468 Advanced Functions of Temporal GIS
GEOG 370 Introduction to Geographic Information
GEOG 477 Introduction to Remote Sensing of the Environment

GEOG 491 Introduction to GIS
GEOG 592 Geographic Information Science Programming
GEOL/MASC 483 Geographical Information Systems

**Analytics**

STOR 305 Decision Making Using Spreadsheet Models
STOR 455 Statistical Methods I
STOR 556 Advanced Methods of Data Analysis

COMP 110 Introduction to Programming
or COMP 111 Introduction to Scientific Programming

COMP 401 Foundation of Programming

INLS 161 Tools for Information Literacy
INLS 201 Foundations of Information Science
INLS 382 Information Systems Analysis and Design

**Additional Requirements**

ECON 101 Introduction to Economics (SS) 3
MATH 152 Calculus for Business and Social Sciences (QR) 3
or MATH 231 Calculus of Functions of One Variable I

Enough General Education (http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements) and free electives to accumulate at least 120 credit hours.

**Total Hours** 120

H Honors version available. An honors course fulfills the same requirements as the nonhonors version of that course. Enrollment and GPA restrictions may apply.

1 Recommended courses are ENEC 202 (PX), ECON 400 (QI) and one of the following PH courses: ENEC 325, COMM 375/ENEC 375, or PHIL 368/ENEC 368.

**Sample Plan of Study**

Sample plans can be used as a guide to identify the courses required to complete the major and other requirements needed for degree completion within the expected eight semesters. The actual degree plan may differ depending on the course of study selected (second major, minor, etc.). Students should meet with their academic advisor to create a degree plan that is specific and unique to their interests. The sample plans represented in this catalog are intended for first-year students entering UNC–Chapel Hill in the fall term. Some courses may not be offered every term.
# Suggested Program of Study for B.A. Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 101 &amp; 101L</td>
<td>Principles of Biology and Introductory Biology Laboratory H</td>
<td>4</td>
</tr>
<tr>
<td>ECON 101</td>
<td>Introduction to Economics H</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 105</td>
<td>English Composition and Rhetoric</td>
<td>3</td>
</tr>
<tr>
<td>Language levels 2 and 3 (FL)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>MATH 231</td>
<td>Calculus of Functions of One Variable I</td>
<td>4</td>
</tr>
<tr>
<td>Lifetime fitness</td>
<td>1</td>
<td></td>
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<tr>
<td>Approaches (<a href="http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements">http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements</a>) and Connections (<a href="http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements">http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements</a>)</td>
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<tr>
<td><strong>Total Hours</strong></td>
<td>120-121</td>
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**Suggested Program of Study for the Sustainability Track**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENEC 201</td>
<td>Introduction to Environment and Society H</td>
<td>4</td>
</tr>
<tr>
<td>MATH 152 or MATH 231</td>
<td>Calculus for Business and Social Sciences or Calculus of Functions of One Variable I</td>
<td>3</td>
</tr>
<tr>
<td>ECON 101</td>
<td>Introduction to Economics H</td>
<td>3</td>
</tr>
<tr>
<td>Language levels 2 and 3</td>
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<tr>
<td>ENGL 105</td>
<td>English Composition and Rhetoric</td>
<td>3</td>
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<td>Lifetime fitness</td>
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<tr>
<td><strong>Sophomore Year</strong></td>
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<td>ENEC 330</td>
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<tr>
<td>Two environmental skills core courses</td>
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<td></td>
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<tr>
<td>Two pillars of sustainability core courses</td>
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<td></td>
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<tr>
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<td><strong>Junior Year</strong></td>
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<tr>
<td>One environmental skills core course</td>
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<tr>
<td>Two pillars of sustainability core courses</td>
<td>6</td>
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<tr>
<td>ECON 400</td>
<td>Introduction to Statistics and Econometrics H</td>
<td>3</td>
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<td>Suplemental General Education (<a href="http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements">http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements</a>)</td>
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</tbody>
</table>

H Honors version available. An honors course fulfills the same requirements as the nonhonors version of that course. Enrollment and GPA restrictions may apply.
Environmental Studies Major, B.A.

Free elective courses 9

<table>
<thead>
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<th>Hours</th>
<th>Senior Year</th>
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<tr>
<td>E NEC 698</td>
<td>Capstone: Analysis and Solution of Environmental Problems 3</td>
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</table>

Supplemental General Education (http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements) (two courses) 6

Remaining General Education (http://catalog.unc.edu/undergraduate/general-education-curriculum-degree-requirements) courses and free electives to reach a minimum of 120 credit hours 22

<table>
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<th>Hours</th>
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<td>30</td>
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H Honors version available. An honors course fulfills the same requirements as the nonhonors version of that course. Enrollment and GPA restrictions may apply.

Dual Bachelor’s–Master’s Degree Program

Three dual bachelor’s–master’s programs are offered:

1. Environmental and Science Communication is a collaboration between Environment and Ecology and the School of Media and Journalism;
2. Environmental Informatics is a collaboration between Environment and Ecology and the School of Information and Library Science;
3. Environmental Finance and Leadership is a collaboration between Environment and Ecology and the School of Government.

Each program is designed for students to earn their bachelor’s degree and complete a master’s degree in a professional school in as few as five years. The dual degree in environmental and science communication is approached through the bachelor’s of arts degree with a major in environmental studies, and students then complete a master’s degree in journalism. The dual degree in environmental informatics is approached through the bachelor’s of science degree with a major in environmental science, and students then complete a master’s in information sciences. The dual degree in environmental finance and leadership is approached through either the bachelor’s of science or the bachelor’s of arts in environment and ecology, and students then complete a master’s in public administration.

Students may begin taking courses for the graduate degree while in the undergraduate program, and a limited number of credit hours of approved graduate coursework may be transferred into the graduate degree program in mass communication (up to nine hours), information sciences (up to 12 hours) and public administration (up to 13 hours). Courses taken as an undergraduate for graduate credit may not be counted as part of the undergraduate degree if the intent is to transfer them to the graduate program. Early advising is essential to success in navigating these dual-degree programs. Advisors are available in both units to help students prepare and select courses appropriately to get the most from their education.

Applying for one of the dual-degree programs is a two-step process. It is highly recommended that interested first- and second-year students speak to an advisor early in their college program. Students must submit a conditional application to the program no later than their junior year to ensure that they will receive preference in registering for courses. Students must formally apply to the program through The Graduate School in their senior year. The GRE is not required for applications from current UNC–Chapel Hill students for the dual degree in environmental science and communication; for other dual degrees students should check with their advisors about GRE requirements. For complete information on the application process and curriculum requirements, please go to the specific Web site listed above for the dual-degree program of interest.

Special Opportunities in Environmental Science and Studies

Honors in Environmental Science or Studies

Students in either the B.S. or B.A. degree program may participate in honors research leading to graduation with honors or highest honors. This distinction is earned by participation in honors research (ENEC 693H) and culminates in ENEC 694H, thesis writing and defense. Students should follow the guidelines established by Honors Carolina and meet with the faculty honors advisor, Dr. Geoff Bell, to ensure that appropriate requirements are fulfilled (Requirements can be found on the Honors Program Web site (http://honorscarolina.unc.edu/current-students/honors-thesis-and-undergraduate-research/honors-thesis)). Honors students can use three credit hours of ENEC 693H (research) or ENEC 694H (thesis), but not both courses, to fulfill a concentration requirement.

Departmental Involvement

The Carolina Environmental Student Alliance (CESA) is an interdisciplinary organization dedicated to uniting the environmental interests of students across campus. Participation is open to all students and community members with an interest in the environment. The Epsilon Eta Environmental Honors Fraternity is an organization dedicated to excellence in environmental education. Interested students are nominated for membership.

Experiential Education

Possibilities for experiential education include APPLES service-learning courses (ENEC 593), Coral Reef Ecology and Management (ENEC 259), Sierra Nevada Program (ENEC 208), internships (ENEC 393, ENEC 493), research (ENEC 395, ENEC 396, ENEC 698), and honors research (ENEC 693H, ENEC 694H). Additionally, a series of experiential education field sites is available in North Carolina and around the world where students may take coursework and conduct research for a semester. Fall semester field sites are offered in North Carolina at Highlands Biological Station (mountain/ecology), the Institute for Marine Sciences (marine ecology/geology), and the Coastal Studies Institute/Outer Banks (coastal policy and economics). Spring semester field sites are offered on the UNC campus (Sustainable Triangle field site), in Thailand (energy and pollution), and Ecuador (ecology or sustainable development). The Ecuador and Thailand field site experiences incorporate part of the following summer as well. Summer programs are also offered in the Galapagos via UNC’s Center for Galapagos Studies. Contact our advisors about other opportunities. Faculty members often arrange Burch Program summer educational trips to such locations as Australia (conservation, restoration, and natural resource management), Siberia, Russia (ecology and anthropology), the Sierra Nevadas (ecology and physical geography), and Northern Europe (energy, sustainability, and communication).

Internships

Students are encouraged to apply for paid or unpaid internships in local, state, national, and international environmental organizations.
Internship opportunities can be found through the environmental internships Web site (http://environmentalinternships.web.unc.edu). These internships provide valuable practical experience, and some may be conducted for academic credit. Students interested in academic credit should contact the director of undergraduate studies, Dr. Amy Cooke (amycooke@unc.edu), to obtain the required application for credit before the term begins.

**Study Abroad**
Exchange and other study abroad programs are available through the UNC Study Abroad Office. At some locations students may take courses for UNC credit, such as some field sites listed above. Students may take courses at other universities during study abroad and apply for transfer credit as well. We encourage students to participate in study abroad during their career at Carolina.

**Undergraduate Awards**
Undergraduates may be considered for the Watts and Betsy Carr Awards, Mary and Watts Hill Jr. Awards, and Robert Alonzo Winston Scholarships.

**Undergraduate Research**
All students are encouraged (but not required) to complete an independent or team research project. Such projects introduce students to the tools needed for graduate study. They also provide an important opportunity for working directly with the world-class environmental faculty members and graduate students at UNC–Chapel Hill, as well as in the many environmental organizations in the Research Triangle. The Triangle area contains one of the largest collections of environmental organizations and expertise in the world, providing unique opportunities for students to conduct research on an immense range of topics from fundamental scientific research to policy applications. Students interested in obtaining course credit for research should speak with either Dr. Geoff Bell (honors advisor) or Dr. Amy Cooke (director of undergraduate studies) to ensure all the requirements and appropriate paperwork has been approved within the first week of classes.