ENVIRONMENTAL STUDIES MAJOR, B.A.

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. There are two tracks available. Students should contact Dr. Amy Cooke (amycooke@unc.edu) to discuss the right track for their interests and career goals.

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

In addition to the program requirements, students must

- earn a minimum final cumulative GPA of 2.000
- complete a minimum of 45 academic credit hours earned from UNC–Chapel Hill courses
- take at least half of their major core requirements (courses and credit hours) at UNC–Chapel Hill
- earn a minimum cumulative GPA of 2.000 in the major core requirements. Some programs may require higher standards for major or specific courses.

For more information, please consult the degree requirements section of the catalog (https://catalog.unc.edu/undergraduate/degree-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. 4)

Environmental Studies Major, B.A.

Code	Title	Hours
Core Requirements		
ENEC 201	Introduction to Environment and Society [H, F]	4
ENEC 202	Introduction to the Environmental Sciences	4
ENEC 698	Capstone: Analysis and Solution of Environmental Problems	3
or ENEC 694H	Honors Project in Environmental Sciences and Studies	
One of the following earth system science courses:		3-4
BIOL 104	Biodiversity [F]	
or BIOL 103	How Cells Function	
ENEC 222	Estuarine and Coastal Marine Science [1]	
ENEC 489	Ecological Processes in Environmental Systems [1]	
ENEC/EMES 448	Coastal and Estuarine Ecology [1]	
ENEC 324 & 324L	Water in Our World: Introduction to Hydrologic Science and Environmental Problems and Water in Our World Laboratory [1]	
GEOG 412	Synoptic Meteorology	
Two courses from one of the following skills categories:		6
GIS:		
ANTH 419	Anthropological Application of GIS	
EMES 401/ BIOL 350/ ENVR 417	Oceanography	
ENEC 479	Landscape Analysis [1]	
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 456	Geovisualizing Change	
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	
EMES 483	Geologic and Oceanographic Applications of Geographical Information Systems	
Statistics & Analytics:		
STOR 155	Introduction to Data Models and Inference [F]	
or BIOS 600	Principles of Statistical Inference	
ECON 400	Introduction to Data Science and Econometrics [H]	
ENEC 492	Social Science Research Methods	
ENEC 562	Statistics for Environmental Scientists	
PLCY 460	Quantitative Analysis for Public Policy [H]	
Five courses chosen from one of the concentrations list below		15-20
Additional Requirements		
BIOL 101 & 101L	Principles of Biology and Introductory Biology Laboratory [H, F]	4
ECON 101	Introduction to Economics [H, F]	4
MATH 231	Calculus of Functions of One Variable I [H, F]	4
Select one of the following options: [3]		8
CHEM 101/101L and CHEM 102/102L		

PHYS 114 & PHYS 115	General Physics I: For Students of the Life Sciences and General Physics II: For Students of the Life Sciences [F]	
PHYS 118 & PHYS 119	Introductory Calculus-based Mechanics and Relativity and Introductory Calculus-based Electromagnetism and Quanta [H, F]	
Enough General Education and free electives to accumulate at least 120 credit hours. [2]		varies
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.

F FY-Launch class sections may be available. A FY-Launch section fulfills the same requirements as a standard section of that course, but also fulfills the FY-SEMINAR/FY-LAUNCH First-Year Foundations requirement. Students can search for FY-Launch sections in ConnectCarolina using the FY-LAUNCH attribute.

[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.

[2] Recommended courses are ECON 400 and one of the following PH courses: COMM 375/ENEC 375, ENEC 325, or ENEC 368/PHIL 368.

[3] Courses to be taken in a series; e.g., CHEM 101+L and CHEM 102+L.

Agriculture and Health Concentration

Code	Title	Hours
ANTH/ENEC 238	Human Ecology of Africa	3
ANTH 252	Archaeology of Food	3
ANTH 306	Water and Inequality: Anthropological Perspectives	3
ANTH 319	Global Health	3
ENEC/EMES 324	Water in Our World: Introduction to Hydrologic Science and Environmental Problems [1]	3
ENEC/EMES 324L	Water in Our World Laboratory	1
ENEC 325	Water Resource Management and Human Rights [H]	3-4
ENEC 370	Agriculture and the Environment [H]	3
ENEC 395	Research in Environmental Sciences and Studies for Undergraduates	3
or ENEC 396	Directed Readings	
ENEC 420	Community Design and Green Architecture	3
ENEC/ENVR 522	Environmental Change and Human Health	3
ENEC 693H	Honors Research in Environmental Sciences and Studies [1]	3
or ENEC 694H	Honors Project in Environmental Sciences and Studies	
GEOG 334	Human Ecology of Health and Disease	3
GEOG 457	Rural Latin America: Agriculture, Environment, and Natural Resources [H]	3
GEOG 542	Neighborhoods and Health	3
PLAN/ENEC/ ENVR 635	Energy Modeling for Environment and Public Health	3
PLCY 475	The Political Economy of Food [H]	3
PLCY 485	Poverty, Health, and Human Development in Low Income Countries	3

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.

Ecology and Society Concentration

Code	Title	Hours
ANTH 226	The Peoples of Africa	3
ANTH/ENEC 238	Human Ecology of Africa	3
ANTH 318	Human Growth and Development	3
ANTH 439	Political Ecology	3
ANTH/ENEC 460	Historical Ecology	3
BIOL/ENEC 256	Mountain Biodiversity	4
BIOL 260	Introduction to Ecology	3
BIOL/ENEC 272	Local Flora	3
BIOL 277	Vertebrate Field Zoology	3
BIOL 402	Infectious Disease in the Developing World	3
BIOL 427	Human Diversity and Population Genetics	3
BIOL 461	Fundamentals of Ecology	4
BIOL 463	Field Ecology	4
BIOL 464	Global Change Biology	3
BIOL 465	Global Biodiversity and Macroecology	3
BIOL 469	Behavioral Ecology	3
BIOL 561	Ecological Plant Geography	3
BIOL 565	Conservation Biology [H]	3
BIOL 567	Evolutionary Ecology	3
BIOL/ENEC 562	Statistics for Environmental Scientists	4
ENEC 222	Estuarine and Coastal Marine Science [1]	4
ENEC/POLI 254	International Environmental Politics	3
ENEC/GEOG 264	Conservation of Biodiversity in Theory and Practice	3
ENEC 304	Restoration Ecology	4
ENEC/EMES 324	Water in Our World: Introduction to Hydrologic Science and Environmental Problems	3
ENEC/EMES 352	Marine Fisheries Ecology	3
ENEC 370	Agriculture and the Environment [H]	3
ENEC/PLCY 372	Global Environment: Policy Analysis and Solutions	3
ENEC 395	Research in Environmental Sciences and Studies for Undergraduates	3
or ENEC 396	Directed Readings	
ENEC 462	Ecosystem Management	3
ENEC 479	Landscape Analysis [1]	3
ENEC 489	Ecological Processes in Environmental Systems [1]	4

ENEC 491	Effective Environmental Communication	3
ENEC 693H	Honors Research in Environmental Sciences and Studies [1]	3
or ENEC 694H	Honors Project in Environmental Sciences and Studies	
ENEC/EMES 441	Marine Physiological Ecology	3
ENEC/EMES 444	Marine Phytoplankton	3
ENEC/EMES 448	Coastal and Estuarine Ecology [1]	4
ENEC/EMES 450	Biogeochemical Processes	4
ENEC/EMES 471	Human Impacts on Estuarine Ecosystems	4
ENEC/PLAN 641	Watershed Planning	3
GEOG 237	Natural Resources	3
GEOG 334	Human Ecology of Health and Disease	3
GEOG 444	Landscape Biogeography	3
GEOG 470	Political Ecology: Geographical Perspectives	3
GEOG 597	Ecological Modeling	3

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.

Environmental Behavior and Decision Making Concentration

Code	Title	Hours
ANTH 422	Anthropology and Human Rights	3
ANTH 539	Environmental Justice	3
BIOL/MATH 553	Mathematical and Computational Models in Biology	3
BUSI 507	Sustainable Business and Social Enterprise [H]	3
COMM/ENEC 375	Environmental Advocacy	3
ENEC/POLI 254	International Environmental Politics	3
ENEC 305	Data Analysis and Visualization of Social and Environmental Interactions	4
ENEC 309	Environmental Values and Valuation	3
ENEC 312	Risk-Based International Environmental Decisions	3
ENEC/EMES 324	Water in Our World: Introduction to Hydrologic Science and Environmental Problems	3
ENEC 325	Water Resource Management and Human Rights [H]	3-4
ENEC 350	Environmental Law and Policy	3
ENEC 351	Coastal Law and Policy	3
ENEC/PLCY 372	Global Environment: Policy Analysis and Solutions	3
ENEC 380	Environmental Economics	3
ENEC 395	Research in Environmental Sciences and Studies for Undergraduates	3
or ENEC 396	Directed Readings	
ENEC 421	Textiles: Environmental Impacts, Issues, and Innovations	3
ENEC 432	Environmental Life Cycle Assessment	3
ENEC 462	Ecosystem Management	3
ENEC/BUSI 463	Corporate Environmental Stewardship	3
ENEC/ENVR 470	Environmental Risk Assessment	3
ENEC 473	Business and Finance Fundamentals for Change Makers	3
ENEC 474	Sustainable Coastal Management	3
ENEC/PLCY 475	The Political Economy of Food [H]	3
ENEC 485	Coastal Resource Economics and Policy	3-4
ENEC 491	Effective Environmental Communication	3
ENEC 492	Social Science Research Methods	3
ENEC/PLAN 547	Energy, Transportation, and Land Use	3
ENEC/MEJO 565	Environmental Storytelling	3
ENEC 580	Environmental Markets: Science and Economics	3
ENEC 581	Water Resource Planning and Policy Analysis	3
ENEC 586	Water Quality Policies and Planning	3
ENEC/PLAN 641	Watershed Planning	3
ENEC 675	Environmental Communication and the Public Sphere	3
ENEC 685	Environmental and Resource Economics	3
ENEC 693H	Honors Research in Environmental Sciences and Studies [1]	3
or ENEC 694H	Honors Project in Environmental Sciences and Studies	
GEOG 237	Natural Resources	3
GEOG 435	Global Environmental Justice	3
GEOG 470	Political Ecology: Geographical Perspectives	3
PLAN 639	Complete, Safe, Equitable Streets	3
PLCY/ENEC 371	Energy Policy	3
PLCY/ENEC 372	Global Environment: Policy Analysis and Solutions	3
PLCY/ENEC 373	Confronting Climate Change in the Anthropocene	3

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

Population, Environment, and Development Concentration

Code	Title	Hours
ANTH/ENEC 238	Human Ecology of Africa	3
ANTH 318	Human Growth and Development	3
ANTH 319	Global Health	3
ANTH 320	Anthropology of Development	3
ANTH 439	Political Ecology	3
ANTH 459	Ecological Anthropology	3
ANTH 539	Environmental Justice	3
ENEC 266	Contemporary Africa: Issues in Health, Population, and the Environment	3
ENEC/EMES 324	Water in Our World: Introduction to Hydrologic Science and Environmental Problems	3
ENEC 325	Water Resource Management and Human Rights [H]	3-4

ENEC 350	Environmental Law and Policy	3
ENEC 351	Coastal Law and Policy	3
ENEC 370	Agriculture and the Environment [H]	3
ENEC 380	Environmental Economics	3
ENEC 395	Research in Environmental Sciences and Studies for Undergraduates	3
or ENEC 396	Directed Readings	
ENEC 421	Textiles: Environmental Impacts, Issues, and Innovations	3
ENEC 485	Coastal Resource Economics and Policy	3-4
ENEC 491	Effective Environmental Communication	3
ENEC 492	Social Science Research Methods	3
ENEC 580	Environmental Markets: Science and Economics	3
ENEC 693H	Honors Research in Environmental Sciences and Studies [1]	3
or ENEC 694H	Honors Project in Environmental Sciences and Studies	
ENVR 600	Environmental Health	3
GEOG 222	Health and Medical Geography	3
GEOG 237	Natural Resources	3
GEOG 269	Human-Environment Interactions in the Galapagos Islands	3
GEOG/ENEC 437	Social Vulnerability to Climate Change	3
GEOG/ENEC 451	Population, Development, and the Environment	3
GEOG 452	Mobile Geographies: The Political Economy of Migration	3
GEOG 457	Rural Latin America: Agriculture, Environment, and Natural Resources [H]	3
GEOG 470	Political Ecology: Geographical Perspectives	3
PLCY/ENEC 372	Global Environment: Policy Analysis and Solutions	3
PLCY 373	Confronting Climate Change in the Anthropocene	3
PLCY 475	The Political Economy of Food [H]	3

[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.– 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.

Code	Title	Hours
Core Requirements		
ENEC 201	Introduction to Environment and Society [H, F]	4
ENEC 307	Energy and Material Flows in the Environment and Society	3
One course from the following options: [2]		3
ENEC 330	Principles of Sustainability	
ENEC/PLCY 373	Confronting Climate Change in the Anthropocene	
ENEC 421	Textiles: Environmental Impacts, Issues, and Innovations	
ENEC 431	Sustainable Cities: Exploring Ways of Making Cities More Sustainable	
ENEC 698	Capstone: Analysis and Solution of Environmental Problems	3
or ENEC 694H	Honors Project in Environmental Sciences and Studies	
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):		12-15
Equity		
ANTH 306	Water and Inequality: Anthropological Perspectives	
ANTH 439	Political Ecology	
ANTH 539	Environmental Justice	
ENEC 309	Environmental Values and Valuation	
ENEC 325	Water Resource Management and Human Rights [H]	
ENEC 350	Environmental Law and Policy	
ENEC 351	Coastal Law and Policy	
ENEC/GEOG 437	Social Vulnerability to Climate Change	
GEOG 470	Political Ecology: Geographical Perspectives	
GEOG 480	Liberation Geographies	
PHIL/ENEC 368	Living Things, Wilderness, and Ecosystems: An Introduction to Environmental Ethics	
PLAN 247	Solving Urban Problems	
PLAN 574	Political Economy of Poverty and Inequality	
PLAN 637	Public Transportation	
PLAN 638	Pedestrian and Bike Transportation	
PLAN 639	Complete, Safe, Equitable Streets	
PLCY 373	Confronting Climate Change in the Anthropocene [2]	
SOCI 274	Social and Economic Justice	
Economics		
BUSI 507	Sustainable Business and Social Enterprise [H]	
ECON 455	Environmental Economic Theory	
ENEC 380	Environmental Economics	
ENEC/BUSI 463	Corporate Environmental Stewardship	
ENEC 473	Business and Finance Fundamentals for Change Makers	
ENEC 481	Energy Economics	
ENEC 485	Coastal Resource Economics and Policy	
ENEC 580	Environmental Markets: Science and Economics	
PUBA 787	Applied Environmental Finance: How to Pay for Environmental Services	
Environment		
ENEC 202	Introduction to the Environmental Sciences	
ENEC/BIOL 256	Mountain Biodiversity	
ENEC/GEOG 264	Conservation of Biodiversity in Theory and Practice	

ENEC 304	Restoration Ecology
ENEC 324 & 324L	Water in Our World: Introduction to Hydrologic Science and Environmental Problems and Water in Our World Laboratory
ENEC 370	Agriculture and the Environment [H]
ENEC 405	Mountain Preservation
ENEC 420	Community Design and Green Architecture
ENEC 421	Textiles: Environmental Impacts, Issues, and Innovations [2]
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
ENEC/PLAN/ ENVR 548	Sustainable Energy Systems
GEOG 441	Introduction to Watershed Systems
GEOG/ENEC 451	Population, Development, and the Environment
EMES/ENEC 220	North Carolina Estuaries: Environmental Processes and Problems
EMES/ENEC 411	Oceanic Processes in Environmental Systems
EMES/ENEC 433	Wetland Hydrology
EMES 444/ BIOL 456/ ENEC 444	Marine Phytoplankton
EMES/ENEC 448	Coastal and Estuarine Ecology
PHYS 131	Energy: Physical Principles and the Quest for Alternatives to Dwindling Oil and Gas
PLAN 547	Energy, Transportation, and Land Use
PLAN 548	Sustainable Energy Systems
Two courses from one skill area and one additional course from a second skill (3 courses total):	9-12
Basic Science	
BIOL 101 & 101L & BIOL 103	Principles of Biology and Introductory Biology Laboratory and How Cells Function [H, F]
BIOL 101 & 101L & BIOL 104	Principles of Biology and Introductory Biology Laboratory and Biodiversity [H, F]
CHEM 101 & 101L & CHEM 102 & CHEM 102L	General Descriptive Chemistry I and Quantitative Chemistry Laboratory I and General Descriptive Chemistry II and Quantitative Chemistry Laboratory II [H, F]
PHYS 114 & PHYS 115	General Physics I: For Students of the Life Sciences and General Physics II: For Students of the Life Sciences [F]
Communications and Research	
COMM/ENEC 375	Environmental Advocacy
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 [1]
or ENEC 694H	Honors Project in Environmental Sciences and Studies
MEJO 560	Environmental and Science Journalism [H]
MEJO 562	Environmental and Science Documentary Television
MEJO/ENEC 565	Environmental Storytelling
PLCY 305	Communicating Under Pressure: Tools for Effective Communication
GIS and Remote Sensing	
ANTH 419	Anthropological Application of GIS
ENEC 479	Landscape Analysis
ENVR 468	Temporal GIS and Space/Time Geostatistics for the Environment and Public Health
GEOG 370	Introduction to Geographic Information
GEOG 456	Geovisualizing Change
GEOG 477	Introduction to Remote Sensing of the Environment
GEOG 491	Introduction to GIS
GEOG 592	Geographic Information Science Programming
EMES 483	Geologic and Oceanographic Applications of Geographical Information Systems
Analytics	
BUSI 410	Business Analytics
BUSI 520	Advanced Spreadsheet Modeling for Business
ECON 400	Introduction to Data Science and Econometrics [H]
ENEC 432	Environmental Life Cycle Assessment
ENEC 562	Statistics for Environmental Scientists
PLAN 372	Introduction to Urban Data Analytics
PLCY 460	Quantitative Analysis for Public Policy [H]
STOR 305	Introduction to Decision Analytics
STOR 455	Methods of Data Analysis
STOR 556	Time Series Data Analysis
Programming and Informatics	
BIOL 222	Introduction to Programming with Biological Data
COMP 110	Introduction to Programming and Data Science [H]
or COMP 116	Introduction to Scientific Programming
COMP 210	Data Structures and Analysis

INLS 161	Tools for Information Literacy	
INLS 382	Information Systems Analysis and Design	
INLS 560	Programming for Information Science	
Additional Requirements		
ECON 101	Introduction to Economics [H, F]	4
MATH 152	Calculus for Business and Social Sciences [F]	3
or MATH 231	Calculus of Functions of One Variable I	
Enough General Education and free electives to accumulate at least 120 credit hours. [1]		varies
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.

F FY-Launch class sections may be available. A FY-Launch section fulfills the same requirements as a standard section of that course, but also fulfills the FY-SEMINAR/FY-LAUNCH First-Year Foundations requirement. Students can search for FY-Launch sections in ConnectCarolina using the FY-LAUNCH attribute.

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

2 This course appears on a core requirement list as well as a pillar requirement list, but can only be counted towards one of the two.

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

First Year		Hours
First-Year Foundation Courses		
IDST 101	College Thriving	1
ENGL 105 or ENGL 105I	English Composition and Rhetoric or English Composition and Rhetoric (Interdisciplinary)	3
First-Year Seminar or First-Year Launch (https://catalog.unc.edu/undergraduate/ideas-in-action/first-year-seminars-launches/) [F]		3
Triple-I and Data Literacy (https://catalog.unc.edu/undergraduate/ideas-in-action/triple-i/)		4
Global Language through level 3 (https://catalog.unc.edu/undergraduate/ideas-in-action/global-language/)		varies
Major Courses		
BIOL 101 & 101L	Principles of Biology and Introductory Biology Laboratory [H, F]	4
ECON 101	Introduction to Economics [H, F]	4
ENEC 201	Introduction to Environment and Society [H, F]	4
MATH 231	Calculus of Functions of One Variable I [H, F]	4
Additional Courses		
Lifetime Fitness (https://catalog.unc.edu/undergraduate/ideas-in-action/lifetime-fitness/)		1
Electives or IDEAs in Action Requirements		3
Hours		**31**
Sophomore Year		
Select one of the following:		4
CHEM 101 & 101L	General Descriptive Chemistry I and Quantitative Chemistry Laboratory I [H, F]	
PHYS 114	General Physics I: For Students of the Life Sciences [F]	
PHYS 118	Introductory Calculus-based Mechanics and Relativity [H, F]	
ENEC 202	Introduction to the Environmental Sciences	4
Select one of the following:		4
CHEM 102 & 102L	General Descriptive Chemistry II and Quantitative Chemistry Laboratory II [H, F]	
PHYS 115	General Physics II: For Students of the Life Sciences [F]	
PHYS 119	Introductory Calculus-based Electromagnetism and Quanta [H, F]	
One earth system science core		3-4
Two courses from the concentration core		6
Electives or IDEAs in Action Requirements		7
Hours		**28-29**
Junior Year		
Two courses from the environmental skills core		6
Two courses from the concentration core		6
ECON 400	Introduction to Data Science and Econometrics [H]	4
Electives or IDEAs in Action Requirements		15
Hours		**31**
Senior Year		
ENEC 698 or ENEC 694H	Capstone: Analysis and Solution of Environmental Problems or Honors Project in Environmental Sciences and Studies	3
Remaining concentration course		3
Electives or IDEAs in Action Requirements as needed to complete curriculum and a minimum of 120 academic hours		24
Hours		**30**
Total Hours		**120-121**

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

F FY-Launch class sections may be available. A FY-Launch section fulfills the same requirements as a standard section of that course, but also fulfills the FY-SEMINAR/FY-LAUNCH First-Year Foundations requirement. Students can search for FY-Launch sections in ConnectCarolina using the FY-LAUNCH attribute.

Suggested Program of Study for the Sustainability Track

First Year		Hours
First-Year Foundation Courses		
IDST 101	College Thriving	1
ENGL 105 or ENGL 105I	English Composition and Rhetoric or English Composition and Rhetoric (Interdisciplinary)	3
First-Year Seminar or First-Year Launch (https://catalog.unc.edu/undergraduate/ideas-in-action/first-year-seminars-launches/) [F]		3
Triple-I and Data Literacy (https://catalog.unc.edu/undergraduate/ideas-in-action/triple-i/)		4
Global Language through level 3 (https://catalog.unc.edu/undergraduate/ideas-in-action/global-language/)		varies
Major Courses		
ENEC 201	Introduction to Environment and Society [H, F]	4
MATH 152 or MATH 231	Calculus for Business and Social Sciences [F] or Calculus of Functions of One Variable I	3
ECON 101	Introduction to Economics [H, F]	4
Additional Courses		
Lifetime Fitness (https://catalog.unc.edu/undergraduate/ideas-in-action/lifetime-fitness/)		1
Electives or IDEAs in Action Requirements		7
Hours		**30**
Sophomore Year		
ENEC 330 or ENEC 421 or ENEC 431 or PLCY 373	Principles of Sustainability or Textiles: Environmental Impacts, Issues, and Innovations or Sustainable Cities: Exploring Ways of Making Cities More Sustainable or Confronting Climate Change in the Anthropocene	3
Two envrionmental skills core courses		6
Two pillars of sustainability core courses		6
Electives or IDEAs in Action Requirements		15
Hours		**30**
Junior Year		
ENEC 307	Energy and Material Flows in the Environment and Society	3
One environmental skills core course		3
Two pillars of sustainability core courses		6
Electives or IDEAs in Action Requirements		18
Hours		**30**
Senior Year		
ENEC 698 or ENEC 694H	Capstone: Analysis and Solution of Environmental Problems or Honors Project in Environmental Sciences and Studies	3
Remaining IDEAs in Action courses and free electives to reach a minimum of 120 credit hours		27
Hours		**30**
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.

F FY-Launch class sections may be available. A FY-Launch section fulfills the same requirements as a standard section of that course, but also fulfills the FY-SEMINAR/FY-LAUNCH First-Year Foundations requirement. Students can search for FY-Launch sections in ConnectCarolina using the FY-LAUNCH attribute.

Dual Bachelor's–Master's Degree Program

Four dual bachelor's–master's programs are offered:

1. *Environmental and science communication* is a collaboration between the environment, ecology and energy program (E3P) and the School of Journalism and Media;
2. *Environmental informatics* is a collaboration between E3P and the School of Information and Library Science;
3. *Environmental finance and leadership* is a collaboration between E3P and the School of Government;
4. *Environmental geography* is a collaboration between E3P and the Department of Geography.

Each program is designed for students to earn their bachelor's degree and complete a master's degree in a professional school or program in as few as five years:

- The dual degree in environmental and science communication is approached through the bachelor of arts degree with a major in environmental studies, and students then complete a master's degree in journalism with a focus on strategic communication or journalism. The Hussman School has one-year graduate degrees in both journalism and strategic communications (so-called +1 programs) but retain a "pipeline" for environmental studies and sciences students interested in obtaining both degrees.
- The dual degree in environmental informatics is approached through the bachelor of science degree with a major in environmental science, and students then complete a master's in information sciences (M.S.I.S.).
- The dual degree in environmental finance and leadership is approached through either the bachelor of science in environmental science or the bachelor of arts in environmental studies, and students then complete a master of public administration (M.P.A.).
- The dual degree in environmental geography is is approached through either the bachelor of science in environmental science or the bachelor of arts in environmental studies, and students then complete a master's in geography.

Students in the last three programs may begin taking courses for the graduate degree while in the undergraduate program. In some programs,

up to 12 hours of undergraduate credits can also be counted in the graduate degree. 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 most programs 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 degrees in environmental science and communication, nor for the dual degrees in environmental geography; 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 website listed above for the dual-degree program of interest.

In addition to the four dual-degree programs specific to collaborations with E3P, there are other dual-degree undergraduate/graduate programs developed by other UNC departments and colleges. Programs of interest include the Department of City and Regional Planning for a master's in city and regional planning (M.C.R.P.) (https://planning.unc.edu/academics/dual-degree/bachelor/), the Department of Public Policy for a master's in public policy (M.P.P.) (https://publicpolicy.unc.edu/mpp-unc/), and the Gillings School of Global Public Health (https://sph.unc.edu/envr/bachelors-to-masters-programs/) for a range of public health-related master's programs.

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 (https://catalog.unc.edu/undergraduate/programs-study/environmental-studies-major-ba/gwbell@email.unc.edu), to ensure that appropriate requirements are fulfilled. (Requirements can be found on the Honors Program website (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 Epsilon Eta Environmental Honors Fraternity is an organization dedicated to excellence in environmental education. Interested students are nominated for membership and membership is not limited to E3P majors. E3P faculty are involved with a number of student organizations and initiatives across campus. See UNC Heel Life (https://heellife.unc.edu/) for more environmental clubs at Carolina.

Experiential Education

Possibilities for experiential education include APPLES service-learning courses (ENEC 593), Coral Reef Ecology and Management (ENEC 259), internships (ENEC 393, ENEC 493), research (ENEC 395, ENEC 396, ENEC 698), and honors research (ENEC 693H, ENEC 694H).

Additionally, a series of five experiential education field sites (https://ie.unc.edu/field-education/field-sites/) are located 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 (sustainability/urban planning) and in Thailand (energy and pollution).

Summer programs are also offered in the Galapagos via UNC's Center for Galapagos Studies. Faculty members often arrange Burch Program summer educational trips to such locations as Australia (conservation, restoration, and natural resource management) and northern Europe (energy, sustainability, and communication). Contact our advisors about other opportunities — many other study abroad programs combine well with the E3P program.

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 Ecostudio Internship Incubator website (https://ecostudio.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), or the Ecostudio, to obtain the required application for credit before the term begins. Students may also find their own internship and petition the Ecostudio to gain academic credit.

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.

Department Programs

Majors

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

Minors

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

Graduate Programs

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

Contact Information

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