Undergraduate Handbook for majors in Environmental Studies and Environmental Science

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https://www.sc.edu/study/colleges_schools/artsandsciences/earth_ocean_and_environment/documents/envr_envs_rvsd_06_2018_handbook.pdf
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Revised June 2018
THE CAROLINIAN CREED

The community of scholars at the University of South Carolina is dedicated to personal and academic excellence.

Choosing to join the community obligates each member to a code of civilized behavior.

As a Carolinian...

I will practice personal and academic integrity;

I will respect the dignity of all persons;

I will respect the rights and property of others;

I will discourage bigotry, while striving to learn from differences in people, ideas and opinions;

I will demonstrate concern for others, their feelings, and their need for conditions which support their work and development.

Allegiance to these ideals requires each Carolinian to refrain from and discourage behaviors which threaten the freedom and respect every individual deserves.
The School of the Earth, Ocean and Environment (SEOE) is a division of the College of Arts and Sciences. It encompasses three academic degree programs – the Environment and Sustainability (ENVR/ENVS) degrees, the Geoscience and Geophysics (GEOL/GEOP) degrees, and the Marine Science (MSCI) degree – and two research units – the Belle W. Baruch Institute for Marine and Coastal Sciences (Baruch Institute) and the Earth Sciences and Resources Institute (ESRI) – under the direction of Dr. Carol Boggs.

The SEOE includes a wide variety of faculty, staff, and researchers from across the University! But, as an environmental major, you will likely interact the most with the following:

<table>
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<th>Name</th>
<th>Position</th>
<th>Responsibilities</th>
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<tr>
<td>Dr. Gwen Geidel</td>
<td>Undergraduate Director</td>
<td>Approving petitions and independent study contracts; clarifying degree requirements; advisement issues; study abroad course approval; any and all other concerns, academic or personal. One of your go-to contacts.</td>
</tr>
<tr>
<td>Sheri Foxworth</td>
<td>Undergraduate Student Services Coordinator</td>
<td>Answering all questions; providing forms and information; clarifying degree requirements; advisement issues; any and all other concerns, academic or personal. Another of your go-to contacts.</td>
</tr>
<tr>
<td>Jacqueline McClary</td>
<td>Student Services Coordinator</td>
<td>Scholarships and awards; internships; placement in research labs; course syllabi, textbooks, and evaluations.</td>
</tr>
<tr>
<td>Jenny Sweitzer</td>
<td>First-Year Academic Advisor</td>
<td>Providing students with academic advising support and coaching that guides progression towards a degree through standard advising practices and technologies. Your go-to contact for all Freshman.</td>
</tr>
<tr>
<td>Krista Russell</td>
<td>Administrative Assistant</td>
<td>SEOE financial billing, seminar coordination, updating websites and other duties as assigned.</td>
</tr>
<tr>
<td>Dr. Joe Jones</td>
<td>Faculty Principal for Green Quad and Research Asst. Professor</td>
<td>Connecting students with environmentally-oriented experiences and opportunities.</td>
</tr>
<tr>
<td>Mark Evans</td>
<td>IT Specialist</td>
<td>Updating, troubleshooting and maintaining iPads, laptops and computers in the SEOE Student Services Office.</td>
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OVERVIEW OF THE ENVIRONMENT AND SUSTAINABILITY DEGREE PROGRAM

Interdisciplinary environmental research and scholarship integrates the full range of natural scientific and social-cultural disciplines, and seeks to understand the extraordinarily complex interactions among organisms, their environments, and humans. The natural environment provides us with many of our essential resources and services, but new knowledge about our environment is increasingly needed as we face serious challenges of dwindling resources, polluted habitats, stresses on health and quality of life, and adjustments in fundamental processes produced by global climate change.

The University of South Carolina has a diverse range of research and scholastic programs that integrate traditionally separate lines of enquiry, resulting in a rich assemblage of foci for research, scholarship, advanced problem-solving, and service. The Environment and Sustainability Degree Programs, within the College of Arts and Sciences’ School of the Earth, Ocean and Environment, provides a focal point for building interdisciplinary linkages, particularly between the natural sciences and the range of other non-science disciplines that enable the wise use and management of complex natural systems. The extensive and diverse range of environmental research and scholastic programs can be described within six main focus areas: (1) Eco- and Earth Systems, (2) Sustainability, (3) Climate Change and Weather, (4) Environmental Risks and Hazards, (5) Water Resources, and (6) Society and the Environment.

Eco- and Earth Systems

Understanding the mechanisms that influence natural populations of organisms, their health, and their abilities to adapt to new conditions is extremely complex and requires sophisticated interdisciplinary approaches. Major research programs at Carolina provide new insights in the biology, physiology, and ecology of plants and animals in natural environments, with particular strengths in coastal and hydrologic systems. University faculty address complex research questions on the physical and chemical properties of environments, and how they influence the developmental and evolutionary biology of resident organisms.

Sustainability

To deal with increasing pressures on our environmental resources, citizens and government are realizing the need for new technological and behavioral approaches for sustaining resources for future generations. Environmental research at Carolina develops new mechanisms and innovations in design and construction for treatment of wastes, meeting our future energy needs, and improving sustainability. Research and scholarship also provide new insights and approaches to environmental law and regulation, while spatial studies and data analysis promote improved land use planning.

Climate Change and Weather

Recent findings clearly demonstrate that our planetary climate is changing. It is increasingly important to understand the causes of change, and how we can either mitigate damaging change or adapt to it. Research on climate variability and change provides new information on climatic influences on water resources, agricultural systems, and sea level rise.

Environmental Risks and Hazards

Humans are subject to risk through catastrophic events, such as hurricanes, or more subtle, long-term exposure to hazards, such as toxic contaminants. Chemical, physical, engineering, and biological
research provides explanations and ultimately predictions for the transport and fate of contaminants. Additional research provides innovative methods for remediating or containing polluting substances. Social and economic research adds critical information on risk assessment, resiliency, and behavioral responses of human populations to minimize the impacts of hazards.

**Water Resources**

There are two impending freshwater crises: First, the quantity of water to support our direct needs and essential ecological functions is diminishing and already insufficient in many parts of the world. Further, due to contamination and degradation of water supplies, water quality is deteriorating, making it increasingly unfit for human use and support of natural communities. Advanced research in water resource management helps policy makers, who must deal with the human outcomes of water resource problems. Such problems include: degraded water quality, droughts, and the need to redistribute water supplies because of changes in climate patterns or community water transport and storage capabilities.

**Society and the Environment**

Our primary social institutions – including Law, Public Policy, and Public Communication – play essential roles in the use, regulation, and protection of our environmental resources and services. Similarly, much of our economic structure is based on environmental resources, such as energy and water. Beyond these basic needs, our culture is infused with environmental themes that span history and cultural sectors. The relationships among these societal uses and the natural environment have huge implications for the health and wealth of the global community.
OVERVIEW OF THE UNDERGRADUATE MAJORS

The Environment and Sustainability Degree Program offers two undergraduate majors, a Bachelor of Science (BS) degree in Environmental Science and a Bachelor of Arts (BA) degree in Environmental Studies. The Environmental Studies degree emphasizes the Social Sciences and Humanities, compared to the greater science and technology focus of the Environmental Science degree. Like two sides of the same coin, these interdisciplinary degree programs complement each other and examine similar environmental concerns through different approaches.

The BS in Environmental Science curriculum is designed to give students a strong scientific background while allowing them the flexibility to choose courses that address their specific interests. Under the direction of a faculty advisor, students may draw upon subject matter in many different fields of scientific endeavor in order to fulfill specific educational goals. Only in a program such as this can courses from the Environment, Geology, Biology, Chemistry, Marine Science, Mathematics, Economics, Political Science, Physics, Engineering, and Environmental Health Science be combined into an individually-tailored curriculum. Environmental Science majors may choose to specialize in climate systems, energy and infrastructure, natural systems, health and environment, water resources, or other specialties according to their individual interests.

The BA in Environmental Studies degree incorporates critical social, economic, policy, communications, and/or humanities components that are not within the BS degree. The curriculum prepares students to address complex environmental problems requiring knowledge and understanding from multiple social and science disciplines that are framed in an environmental context. Students learn to make sound analyses and judgments about interdisciplinary environmental challenges, and to seek and develop sustainable solutions that productively integrate social and economic needs with scientific and technical understanding.

Impending environmental challenges include climate change, increasing drought and other extreme weather events and their impacts on infrastructure and food, energy and water supply, loss of biodiversity, increases in infectious disease, and invasive species. Environmental scientists may find themselves conducting field research to quantify such issues, while Environmental Studies majors may use their skills to incorporate that data into policy, advocacy, and sustainable business practices.
### Environmental Science vs. Environmental Studies: What’s the Difference?

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<thead>
<tr>
<th>BS in Environmental Science:</th>
<th>BA in Environmental Studies:</th>
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<tr>
<td>• Emphasizes science, math &amp; technology</td>
<td>• Emphasizes humanities &amp; social sciences</td>
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<tr>
<td>• Major credit courses in lab sciences, engineering, public health</td>
<td>• Major credit courses in the environment, politics, history, economics, literature</td>
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<tr>
<td>• Includes fieldwork, research</td>
<td>• Includes sustainability, policy, advocacy</td>
</tr>
<tr>
<td>• Leads to Bachelor of Science degree</td>
<td>• Leads to Bachelor of Arts degree</td>
</tr>
<tr>
<td>• 128 credits required for graduation</td>
<td>• 120 credits required for graduation</td>
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### What do they have in common?

- Opportunity to live in the Green Quad Living/Learning Community
- Access to 50+ faculty associated with the Environment & Sustainability degrees
- Interdisciplinary degrees allow students to tailor coursework to their own interests
- Biology, policy, chemistry, calculus and ethics courses required for both
ENVIRONMENTAL CAREERS

College graduates must enter a society that will be increasingly impacted by serious environmental issues, including climate change, threats to water resources and food supplies, degradation of natural resources and amenities, and increased contamination of resources with pathogens and pollution. These challenges require an informed citizenry and educated workforce to make wise decisions and develop new sustainable solutions for increasingly complex environmental problems. Accordingly, the professional and work opportunities are evolving to meet these needs, and growth in “green” jobs has been predicted to increase as much as 11% by 2026,1 which is faster than the average for all occupations.

As part of this trend of increasing employment in environmental occupations, not only are new environmental positions being created, but traditional careers with an environmental component show a continuing increase. Furthermore, the “graying” of the workforce and projected retirements will result in an expansion of entry level positions for graduates in a range of public and private sector environmental fields. The variety of emerging new careers including such fields as: conservation and pollution mitigation, clean energy, energy efficiency; environmental education and communication; policy, advocacy and environmental activism; and environmental support jobs, federal, state, and Non-governmental organizations. Increasingly, industries and small businesses are incorporating sustainable business practices, including energy conservation, waste reduction, auditing and monitoring, and accompanying management and planning support.

Within South Carolina, environmental careers constitute a broad spectrum of private and governmental positions in diverse areas such as: water and wastewater treatment; land conservation; multiple areas within the SC Department of Health and Environmental Control (DHEC), SC Department of Natural Resources (DNR), SC Parks Recreation and Tourism (PRT) and Department of Transportation (DOT); local and county government; industries such as the paper producers, forestry, automotive (BMW has a major environmental component to its manufacturing processes); recycling; and many universities have an environmental component within facilities to manage wastes, permits, recycling, energy production, etc.

The interdisciplinary nature of the environmental degrees at USC, combining as they do both the science behind environmental issues and the policy and economics of implementing solutions, will well prepare students for careers with:

- Government agencies at the federal, state and local levels which regulate the use of natural resources, solve problems and conduct research, including national parks, state departments of natural resources, the Environmental Protection Agency and the Bureau of Land Management.
- Private industry in fields including environmental toxicology, air pollution analysis, green building, water treatment, and clean energy.
- Private consulting firms conducting environmental impact and assessment projects.

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- Corporations seeking to become more sustainable and incorporate green practices into their business plans.

- Utility companies seeking to balance the needs of their customers with their environmental footprint, and to find ecofriendly, renewable and cost-effective sources of power.

- Non-governmental organizations advocating environmental awareness and activism.

- International aid organizations and domestic nonprofits combating social issues including pollution, water supply in arid areas, and food supply.

- The Peace Corps, which seeks to bring sustainable farming and resource conservation to less developed nations.

Although a bachelor’s degree qualifies an individual for careers in these areas, graduate study is often advantageous and is required for some positions. In addition to M.S. and Ph.D. programs in Marine Science, Biology, Geology, Chemistry, Environmental Science, Physics, Mathematics, Statistics, Computer Science, Environmental/Public Health, and Geography, many of our students go on to pursue degrees in Education, Medicine, Veterinary Medicine, Law and Business Administration.
RESEARCH OPPORTUNITIES FOR UNDERGRADUATES

Undergraduates routinely participate in faculty and graduate student research in conjunction with the more than 80 USC faculty associated with the School of the Earth, Ocean and Environment (SEOE). Our students also have the opportunity to present their research at national meetings as well as at Discover USC Day (http://www.sc.edu/our/discovery.shtml), an annual event for students at USC in any discipline to present their research and scholarship through poster and oral presentations.

The SEOE fosters undergraduate student involvement in research; opportunities to do field and laboratory studies include the following programs:

Undergraduate Student Assistants. Faculty at USC welcome undergraduate students to assist with their research. Students typically begin as volunteers and then progress to positions paid from research grants. The undergraduates receive hands-on laboratory or practical research experience which can lead to independent research and even co-authorship on peer-reviewed publications.

Independent Research (ENVR 499). Students whose work in a faculty member’s lab leads to an independent research project may earn 1-3 major credits.

Independent Study Projects (ENVR 399). Under the direction of a faculty instructor, a student plans, proposes and executes a research project, receiving one to six credit hours of major credit toward their degree. Students may also choose to receive academic credit for a volunteer internship conducted off-campus or over the summer.

Magellan Scholars Program. The Magellan Scholars program at Carolina was created to enrich the academic experience of USC’s undergraduates through research opportunities, access to faculty mentoring relationships and a professional research experience. Students may apply for grants to fund original research projects, equipment and supplies, and related travel.

Honors Thesis Projects. Seniors who are in the South Carolina Honors College do research projects under the direction of faculty instructors. At the completion of the projects, students write and defend a thesis of their research.

Sustainable Carolina. A branch of the Office of Sustainability, Sustainable Carolina empowers students to address campus and global issues through intensive experiential learning and leadership opportunities. A wide variety of internships and volunteer opportunities are available throughout the year http://www.sc.edu/green/programs/index.php).

Additional Opportunities. Our students often participate in summer Research Experience for Undergraduates (REU) programs at other universities. In addition, our students find summer jobs and internships in private companies and government agencies, such as the US Fish and Wildlife Service, the SC Department of Natural Resources, the SC Department of Health and Environmental Control, Santee Cooper and other utility companies, nonprofit environmental advocacy groups, and nearby Congaree National Park. The SEOE Student Services undergraduate office circulates email announcements for these opportunities.

http://www.sc.edu/green/programs/index.php
SCHOLARSHIPS AND AWARDS

The Environment & Sustainability Degree Programs of the School of the Earth, Ocean and Environment award annual scholarships for environmental majors with outstanding academic achievement. Applications are available in Jones PSC 108, EWS 603, on the SEOE website (http://www.sc.edu/study/colleges_schools/artsandsciences/earth_ocean_and_environment/apply/scholarships/index.php), and at the end of this handbook; the submission deadline each year is April 1. Out-of-state scholarship recipients may also qualify for a tuition benefit that reduces full tuition by approximately 50%. Some scholarships are annual and require students to reapply each year while others may be renewed each year provided the recipient maintains a minimum 3.0 GPA and remains an environmental major. Please check our website for details.

http://www.sc.edu/study/colleges_schools/artsandsciences/earth_ocean_and_environment/apply/scholarships/index.php

The E&S also presents three major awards at Undergraduate Awards Day each April. The Pastides Sustainability Scholarship Award recognizes a USC undergraduate student that has truly impacted Sustainability at USC and whose efforts reflect President Harris Pastides and Patricia Moore-Pastides commitment to sustainability and its positive impact on multiple systems. The recipient student will have demonstrated an impact in one or more of the following areas related to sustainability: scholarship, leadership, and/or engagement. The E&S also presents the Outstanding Undergraduate in Environmental Science Award and the Bruce C. Coull Outstanding Undergraduate in Environmental Studies Award. These two awards are based on outstanding academic performance as well as research participation, volunteerism and environmental leadership. Nominations for each of the three awards are solicited in the spring, and recipients chosen by an Undergraduate Committee.

The SEOE Student Services Office also tracks scholarships and fellowships offered by agencies external to USC that are specifically geared towards students studying environmentally-related majors; a list is available in Jones 108 or via email. In particular, outstanding sophomores are encouraged to apply for the Ernest F. Hollings NOAA Fellowship; but all students with a 3.5 GPA or higher are encouraged to contact the Office of Fellowships and Scholar Programs (http://www.sc.edu/ofsp/) to apply for competitive national awards, such as the Barry M. Goldwater and Udall Foundation Scholarships.
ADVISEMENT PROCESS AND ASSIGNING OF ADVISORS

In-coming Freshman and Transfer students with less than 40 hours are advised by the First-Year Advisor (FYA) through the University Advising Center. Students are advised through the SEOE Student Services Office when they first declare an environmental major and are then assigned an advisor for the next major advisement period. Depending on number of hours, assignments may be made to the FYA or to a faculty member. All majors at the sophomore level or above, have the right to request a different advisor at any time by contacting the Student Services Office. Students are encouraged to seek an advisor with whom they feel comfortable, who knows their goals, and who is knowledgeable about the area of their specific interests.

Although students may contact their advisor at any time, environmental majors are required to meet with their advisors each semester during an officially scheduled advisement period to choose their courses for the following semester. Freshman advisement with the FYA for Spring courses begins early in the Fall semester. For upper level students, advisement with your faculty advisor for the Spring semester starts after Fall Break and continues through the Friday before Registration (typically three weeks). Freshman advising dates for Summer and Fall courses are set by your FYA. Upper level advisement for Summer and Fall courses begins after Spring Break and continues through the Friday before Registration. Meeting with your major advisor is necessary to avoid delays in graduation, even for students who receive supplementary advice from other sources (such as athletes advised by athletic counselors, Honors College students advised by Honors College advisors or ROTC members advised by ROTC advisors).

Appointments during the scheduled advisement period are one-on-one and last approximately 30 minutes. Student and advisor discuss courses for the upcoming semester, research opportunities, study abroad, academic progress and success, as well as many other topics related to the student’s education. In addition, faculty are always willing to meet with students throughout the year, and the staff in the Student Services Office are available at any time to provide information and guidance.

SENIOR RECORDS CHECK

Students who have completed 90 hours or are within two semesters of graduation should complete a Major Program Card in conjunction with their advisor. This helps define a student's program of study and ensure that the degree requirements will be completed by the time the student plans to graduate. Major Program Cards are available in the Student Services Office in Jones 108.

After meeting with their advisor, students must contact the Dean’s office (110 Flinn Hall) to make an appointment for a Senior Records Check: visit http://www.sc.edu/advising/artsandsciences/ and call them at 803-777-2993 or visit them in Flinn Hall 110 to schedule an appointment. The Dean’s staff will go over both the Major Program Card and all other degree requirements to make sure a student is on track for graduation.

Students who wait until their final semester for a senior records check may find themselves short a class and therefore unable to graduate!

ADMISSION AND RETENTION:

Transfer Admission: A student applying for transfer to the Environmental Science major from other programs within the University, or from an accredited college or university, is required to have
a minimum GPA of 2.80 on scale of 4.00. A student applying for transfer to the Environmental Studies major is required to have a minimum GPA of 2.80 on a scale of 4.00 and a minimum of 12 credit hours.

Retention: Environmental majors may enroll in a Major Program Requirement course a maximum of twice to earn the required grade of C or higher. For the purposes of progression, withdrawal with a W does not constitute enrollment.

TRANSFER STUDENTS

Students transferring to the University of South Carolina should immediately schedule an appointment with the SEOE Undergraduate Director.

Information regarding admissions, minimum application grades and course requirements may be found online at http://www.sc.edu/admissions/#; information regarding USC course equivalents for SC Technical Colleges or any other college or university can be found at:

https://www.sc.edu/about/offices_and_divisions/registrar/transfer_credits/course_equivalency.php

The information detailed below is to be used for informational purposes only.

A maximum of 76 semester hours from a regionally accredited junior or two-year college may be transferred to USC for degree credit. A maximum of 30 semester hours of credit by correspondence and credit awarded for educational experiences in the military may be applied toward the baccalaureate degree and must be approved by the Undergraduate Dean of the College Arts and Sciences. A maximum of 30 semester hours of credit earned while classified as a non-degree special student at USC may be applied toward meeting the requirements for a baccalaureate degree. Students transferring to the University from another college or university must, before enrolling in class at USC, have their transcripts evaluated by the Office of Undergraduate Admissions and the Undergraduate Dean of the College of Arts and Sciences.

Students transferring from non-accredited colleges may be allowed to validate credit after admission to the University. Details of the validation procedure vary and may be obtained from the Undergraduate Dean's office of the College of Arts and Sciences. Credits earned while a student is on academic suspension from USC cannot be applied toward a degree or used in improving the grade-point average. The last 30 credits (representing the senior year's work) must be earned in residence at USC and at least 12 hours of the student's major courses must be earned at USC.
STUDY ABROAD

Many Environmental majors choose to study abroad, either over the summer or during their junior year. Recent destinations include Iceland, Germany, South Africa, Madagascar, Costa Rica, Alaska, New Zealand, and France! Students interested in studying abroad need to make an appointment with the Study Abroad office as soon as possible (http://www.studyabroad.sc.edu, studyabroad@sc.edu, 803-777-7557), as most paperwork is done months in advance of the term abroad. Note that even volunteer internships and other experiences not taken for academic credit will still require insurance (short-term, inexpensive) purchased through the Study Abroad Office.

GRADUATION WITH LEADERSHIP DISTINCTION

Students who study abroad, work in a research lab, serve as a peer leader or club officer, or perform extensive community service can qualify for Graduation with Leadership Distinction (http://www.sc.edu/uscconnect/leadership/). This honor appears on your diploma, earns you the right to wear special cords at graduation, and lets potential employers know that you have demonstrated exceptional leadership abilities.
CURRICULUM FOR THE B.S. IN ENVIRONMENTAL SCIENCE

1. Pre-Major Requirements:
   Environmental Literacy
   ENVR 201 and ENVR 202 – Environmental Science and Policy I & II (8).
   Student must pass with a grade of “C” or better

2. Major Program Requirements: (34-36 hours)
   All required and selected courses below must be passed with a grade of a C or better.
   a. Required Courses (17-18 hours)
      ENVR 590-Environmental Issues Seminar (3)
      BIOL 301 and 301L – Ecology and Evolution and Lab (3 + 1)
      Select 3 of these 4 courses (10-11 hrs)
         GEOL 315 – Surface and Near Surface Processes (4)
         GEOG 202 – Weather and Climate (4)
         ECIV 350 – Introduction to Environmental Engineering (3)
         ENHS 660-Concepts of Environmental Health Science (3)
   b. Selected Courses with Advisor Approval (17-18 hours)
      Students, in consultation with their assigned advisor, must develop a program of
      study which either provides a broad set of environmental science courses or allows
      students to focus in a defined area. Given the current course offerings and faculty
      expertise at the University, if a student wanted to focus their elective course work,
      possible areas include: Climate Systems; Environmental Life Sciences; Water
      Resources; Energy, Infrastructure and Technology; or Health and Environment. All
      students’ selective courses should include at least 2 courses taken at the 400 or
      above level, all courses can be ENVR courses but, if not ENVR courses, then no
      more than 3 should be from a single discipline and no more than one Research
      Methods course (not required, but if selected only one from CSCE 145, EMCH 111
      or ECIV 111). No more than 6 hours of independent study credits may apply
      toward the degree.
      See the defined list of “Courses Acceptable for Major Credit in Environmental
      Science” in this handbook and at
      http://bulletin.sc.edu/preview_program.php?catoid=70&poid=4357&returnto=2005

3. Other Requirements:
   a. Analytical Reasoning & Problem Solving: MATH through 142, CSCE 102 or
      higher, and STAT 515
   b. Aesthetic & Interpretive Understanding: 1 Fine Arts or Literature course AND 1
      Ethics Course (ENVR 322 Environmental Ethics preferred)
   c. Global Citizenship & Multicultural Understanding: foreign language proficiency,
      one US and one non-US history, and POLI 201; also either ECON 221, 223 or 224
      AND either ENVR 548 or POLI 477 or POLI 478.
   d. Scientific Literacy: BIOL 101 and BIOL 102 (with labs) or MSCI 101 and 102 (8)
      AND CHEM 111 and 112 (with labs) (8)
      AND select 8 hours from following:
         Either GEOL 101 or 201 or GEOG 201 (4) AND
         Either PHYS 201/201L or PHYS 211/211L (4).
4. **Cognate:**
   There is no cognate requirement in the Environmental Science degree program.

5. **Carolina Core**
   All Environmental Science majors must satisfy the general education (Carolina Core) requirements prescribed for the Bachelor of Science. The BS in Environmental Science requires that some aspects of the Carolina Core be satisfied by specific courses, while other aspects may be satisfied by a choice from among many approved courses (see details below).

   Note that a Bachelor of Science degree in the College of Arts and Science requires a minimum of 128 credit hours for graduation.

**Carolina Core Requirements:**

I. **Effective, Engaged and Persuasive Communication (CMW) [grade of C or better required]**
   ENGL 101 & 102 (6 hrs)

II. **Analytical Reasoning & Problem Solving (ARP)**
   CALCULUS: MATH 141 & 142 (8 hrs);
   STATISTICS: STAT 515
   COMPUTER SCIENCE: CSCE 102 or higher

III. **Global Citizenship & Multicultural Understanding (GFL, GHS, GSS)**
   FOREIGN LANGUAGE: Demonstration of proficiency in one foreign language equivalent to the minimal passing grade on the exit examination in the 122 course level (0-9 hours);
   HISTORICAL THINKING: Two courses at the 100 level, one US history and one non-US history (6 hours)
   SOCIAL SCIENCE: Courses selected from: anthropology, economics, criminal justice, environment (select courses), geography, political science, psychology, and sociology, as approved by the Carolina Core. **ENVR majors must take POLI 201 AND either ECON 221, 223 or 224 AND either ENVR 548 (=ECON 548) or POLI 477 or POLI 478.**

IV. **Aesthetic and Interpretive Understanding (AIU)**
   (Humanities, Fine Arts, Literature) **ENVR majors must take 1 Fine Arts (ARTE, ARTH ARTS, FILM, DANC (101 only) MUSC (select courses), THEA, ENGL 270, 282-288) or Literature course and 1 Ethics Course (ENVR 322 Environmental Ethics preferred).**

V. **Scientific Literacy (SCI)**
   (Laboratory Science) Courses (both with laboratory) selected from: astronomy, biology, chemistry, geological sciences, marine science, and physics. **ENVR majors must take either BIOL 101/L and 102/L OR MSCI 101 and 102, plus CHEM 111/L and 112/L, and either GEOL 101, 201 or GEOG 201, and either PHYS 201/L or 211/L.**

VI. **Overlay**
   Two of three overlay courses can also fulfill Carolina Core requirements; overlay courses cannot be counted for major or minor credit:
   A. **PERSUASIVE COMMUNICATION (CMS)**
   B. **INFORMATION LITERACY (INF)**
   C. **VALUES, ETHICS & SOCIAL RESPONSIBILITY (VSR)**
Courses Acceptable for Major Credit in Environmental Science

A representative list of courses acceptable for major credit is presented below. Any course that is eligible for cognate credit in the College of Arts and Sciences can potentially be a major course in Environmental Science, with appropriate approvals. Courses above 300 in other colleges may also count as major credits. The determination of the major courses in this interdisciplinary program is the result of consultation between the student and a faculty advisor.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>CROSS-LISTED</th>
<th>CREDITS</th>
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<tbody>
<tr>
<td>ENVR 321</td>
<td>Environmental Pollution and Health</td>
<td>=ENHS 321</td>
<td>3</td>
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<tr>
<td>ENVR 323</td>
<td>Global Environmental Health</td>
<td>=ENHS 323</td>
<td>3</td>
</tr>
<tr>
<td>ENVR 331</td>
<td>Integrating Sustainability</td>
<td></td>
<td>3</td>
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<tr>
<td>ENVR 352</td>
<td>Energy, Society and Sustainability</td>
<td></td>
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<tr>
<td>ENVR 399</td>
<td>Independent Study</td>
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<tr>
<td>ENVR 460</td>
<td>Congaree National Park: Field Investigations in Environmental Science</td>
<td></td>
<td>4</td>
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<tr>
<td>ENVR 490</td>
<td>Special Topics in Sustainability and the Environment</td>
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<tr>
<td>ENVR 499</td>
<td>Research in Environmental Science</td>
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<td>1-3</td>
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<tr>
<td>ENVR 500</td>
<td>Environmental Practicum</td>
<td></td>
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<tr>
<td>ENVR 501</td>
<td>Special Topics in the Environment</td>
<td></td>
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<tr>
<td>ENVR 531</td>
<td>Sustainability Management and Leadership Strategies</td>
<td></td>
<td>3-4</td>
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<tr>
<td>ENVR 571</td>
<td>Conservation Biology</td>
<td>=BIOL 571</td>
<td>3</td>
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<tr>
<td>ENVR 572</td>
<td>Freshwater Ecology</td>
<td>=BIOL 572</td>
<td>3</td>
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<tr>
<td>ENVR 590</td>
<td>Environmental Issues Seminar</td>
<td></td>
<td>3</td>
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<tr>
<td>BIOL 302</td>
<td>Cell and Molecular Biology</td>
<td></td>
<td>3</td>
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<tr>
<td>BIOL 420/L</td>
<td>Survey of the Plant Kingdom</td>
<td></td>
<td>3/1</td>
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<tr>
<td>BIOL 460</td>
<td>General Physiology</td>
<td></td>
<td>3</td>
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<tr>
<td>BIOL 526</td>
<td>The Fall Flora</td>
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<td>3</td>
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<tr>
<td>BIOL 527</td>
<td>The Spring Flora</td>
<td></td>
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<tr>
<td>BIOL 541/L</td>
<td>Principles of Biochemistry</td>
<td>=CHEM 550/L</td>
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<tr>
<td>BIOL 549</td>
<td>Plant Physiology</td>
<td></td>
<td>4</td>
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<tr>
<td>BIOL 570/L</td>
<td>Principles of Ecology</td>
<td></td>
<td>3/1</td>
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<td>BIOL 571</td>
<td>Conservation Biology</td>
<td>=ENVR 571</td>
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<tr>
<td>BIOL 572</td>
<td>Freshwater Ecology</td>
<td>=ENVR 572</td>
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<td>BIOL 640</td>
<td>Microbial Ecology</td>
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<td>BIOL 671</td>
<td>Plant Responses to the Environment</td>
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<tr>
<td>CHEM 321/L</td>
<td>Quantitative Analysis</td>
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<td>CHEM 333/L</td>
<td>Organic Chemistry I</td>
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<td>CHEM 334/L</td>
<td>Organic Chemistry II</td>
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<td>CHEM 623</td>
<td>Introductory Environmental Chemistry</td>
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<tr>
<td>CHEM 624</td>
<td>Aquatic Chemistry</td>
<td>=MSCI 624</td>
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### From the Earth and Marine Sciences

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<tr>
<th>Course</th>
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<tr>
<td>GEOL 302</td>
<td>Rocks and Minerals</td>
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</tr>
<tr>
<td>GEOL 305</td>
<td>Earth Systems Through Time</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 315</td>
<td>Surface and Near Surface Processes</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 335</td>
<td>Processes of Global Environmental Change</td>
<td>=MSCI 335, 4</td>
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<tr>
<td>GEOL 371</td>
<td>A View of the River</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 524</td>
<td>Environmental Radioisotope Geochemistry</td>
<td>=MSCI 524, 3</td>
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<tr>
<td>GEOL 548</td>
<td>Environmental Geophysics</td>
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<tr>
<td>GEOL 557</td>
<td>Coastal Processes</td>
<td>=MSCI 557, 3</td>
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<tr>
<td>GEOL 560</td>
<td>Earth Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 570</td>
<td>Environmental Hydrogeology</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 571</td>
<td>Soil Hydrology</td>
<td>4</td>
</tr>
<tr>
<td>GEOL 575</td>
<td>Numerical Modeling for Earth Science Applications</td>
<td>3</td>
</tr>
<tr>
<td>MSCI 305</td>
<td>Ocean Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MSCI 311</td>
<td>Biology of Marine Organisms</td>
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<tr>
<td>MSCI 313</td>
<td>Chemistry of the Sea</td>
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<tr>
<td>MSCI 314</td>
<td>Physical Oceanography</td>
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<tr>
<td>MSCI 450</td>
<td>Principles of Biological Oceanography</td>
<td>=BIOL 450, 3</td>
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<tr>
<td>MSCI 521</td>
<td>Introduction to Geochemistry</td>
<td>=GEOL 521, 3</td>
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<tr>
<td>MSCI 552</td>
<td>Population Genetics</td>
<td>=BIOL 552, 4</td>
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<tr>
<td>MSCI 575/L</td>
<td>Marine Ecology</td>
<td>=BIOL 575/L, 3/1</td>
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<tr>
<td>MSCI 579</td>
<td>Air-Sea Interaction</td>
<td>=GEOL 579, 3</td>
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### From the Geographical Sciences:

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<tbody>
<tr>
<td>GEOG 202</td>
<td>Weather and Climate</td>
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<tr>
<td>GEOG 343</td>
<td>Human Impact on the Environment</td>
<td>3</td>
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<tr>
<td>GEOG 346</td>
<td>Climate and Society</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 347</td>
<td>Water as a Resource</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 363</td>
<td>Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 371</td>
<td>Air Pollution Climatology</td>
<td>3</td>
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<tr>
<td>GEOG 546</td>
<td>Applied Climatology</td>
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<tr>
<td>GEOG 547</td>
<td>Fluvial Geomorphology</td>
<td>3</td>
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<tr>
<td>GEOG 549</td>
<td>Water and Watersheds</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 562</td>
<td>Satellite Mapping and the Global Positioning System</td>
<td>3</td>
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<tr>
<td>GEOG 563</td>
<td>Advanced Geographic Information Systems</td>
<td>3</td>
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<tr>
<td>GEOG 564</td>
<td>GIS-Based Modeling</td>
<td>3</td>
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<tr>
<td>GEOG 567</td>
<td>Long-Term Environmental Change</td>
<td>=GEOL 567, 3</td>
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<tr>
<td>GEOG 568</td>
<td>Human Dimensions of Global Environmental Change</td>
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<tr>
<td>GEOG 569</td>
<td>Environment and Development</td>
<td>=ANTH 569, 3</td>
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<tr>
<td>GEOG 573</td>
<td>Climatic Change and Variability</td>
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### From Mathematics, Statistics and Engineering

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<tr>
<td>CSCE 206</td>
<td>Scientific Applications Programming</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 567</td>
<td>Visualization Tools</td>
<td>3</td>
</tr>
<tr>
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<tr>
<td>ECHE 300</td>
<td>Chemical Process Principles</td>
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<tr>
<td>ECHE 310</td>
<td>Introductory Chemical Engineering Thermodynamics</td>
<td>3</td>
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<tr>
<td>ECHE 311</td>
<td>Chemical Engineering Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>ECHE 567</td>
<td>Process Safety, Health and Loss Prevention</td>
<td>3</td>
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<tr>
<td>ECHE 573</td>
<td>Next Energy</td>
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<tr>
<td>ECHE 589</td>
<td>Special Advanced Topics in Chemical Engineering</td>
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<tr>
<td>ECIV 350/L</td>
<td>Introduction to Environmental Engineering</td>
<td>3/1</td>
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<tr>
<td>ECIV 362</td>
<td>Introduction to Water Resources Engineering</td>
<td>3</td>
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<tr>
<td>ECIV 405</td>
<td>Systems Applications in Civil Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECIV 551</td>
<td>Elements of Water and Wastewater Treatment</td>
<td>3</td>
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<tr>
<td>ECIV 555</td>
<td>Principles of Municipal Solid Waste Engineering</td>
<td>3</td>
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<tr>
<td>ECIV 556</td>
<td>Air Pollution Control Engineering</td>
<td>3</td>
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<tr>
<td>ECIV 557</td>
<td>Sustainable Construction for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>ECIV 558</td>
<td>Environmental Engineering Process Modeling</td>
<td>3</td>
</tr>
<tr>
<td>ECIV 560</td>
<td>Open Channel Hydraulics</td>
<td>3</td>
</tr>
<tr>
<td>ECIV 562</td>
<td>Engineering Hydrology</td>
<td>3</td>
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<tr>
<td>ECIV 563</td>
<td>Subsurface Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>ECIV 570</td>
<td>Land Development for Engineers</td>
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<td>EMCH 290</td>
<td>Thermodynamic Fundamentals</td>
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<tr>
<td>EMCH 529</td>
<td>Sustainable Design and Development</td>
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<tr>
<td>EMCH 553</td>
<td>Nuclear Fuel Cycles</td>
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<td>EMCH 592</td>
<td>Introduction to Combustion</td>
<td>3</td>
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<td>EMCH 594</td>
<td>Solar Heating</td>
<td>3</td>
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<tr>
<td>EMCH 597</td>
<td>Thermal Environmental Engineering</td>
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<td>ENCP 290</td>
<td>Thermodynamic Fundamentals</td>
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<td>ENCP 540</td>
<td>Environmentally Conscious Manufacturing</td>
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<tr>
<td>MATH 241</td>
<td>Vector Calculus</td>
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<tr>
<td>MATH 242</td>
<td>Elementary Differential Equations</td>
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<tr>
<td>MATH 523</td>
<td>Mathematical Modeling of Population Biology</td>
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<tr>
<td>STAT 516</td>
<td>Statistical Methods II</td>
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<td>STAT 518</td>
<td>Nonparametric Statistical Methods</td>
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<tr>
<td>STAT 520</td>
<td>Forecasting and Time Series</td>
<td>=MGSC 520</td>
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<td>STAT 528</td>
<td>Environmental Statistics</td>
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<td>STAT 540</td>
<td>Computing in Statistics</td>
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**From the Health Sciences:**

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<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ENHS 321</td>
<td>Environmental Pollution and Health</td>
<td>=ENVR 321</td>
</tr>
<tr>
<td>ENHS 323</td>
<td>Global Environmental Health</td>
<td>3</td>
</tr>
<tr>
<td>ENHS 660</td>
<td>Concepts of Environmental Health Science</td>
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<tr>
<td>ENHS 665</td>
<td>Biofilms in Environmental Health and Disease</td>
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<tr>
<td>ENHS 670</td>
<td>Environmental Pollutants and Human Health</td>
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**Research Methods courses** (none required; but if selected, only one of these may be taken for major credit):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CSCE 145</td>
<td>Algorithmic Design I</td>
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<tr>
<td>EMCH 111</td>
<td>Introduction to Engineering Graphics &amp; Visualization</td>
<td>=ECIV 111</td>
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<tr>
<td>----------</td>
<td>-----------------------------------------------------</td>
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<tr>
<td>ECIV 111</td>
<td>Intro to Engineering Graphics &amp; Visualization</td>
<td>=EMCH 111</td>
</tr>
</tbody>
</table>
Environmental Science Degree Requirements: Carolina Core

**CMW Written Communication (Grade of C or higher required)**
- ENGL-101 (3)
- ENGL-102 (3)

**ARP Analytical Reasoning & Problem Solving**
- MATH 141 (grade of C or higher is required) (4)
- MATH 142 (4)
- STAT 515 (3)
- CSCE 102 (or higher CSCE course) (3)

**SCI Scientific Literacy**
- BIOL 101/101L or MSCI 101 (*Note: must take either both BIOL or both MSCI) (4)
- BIOL 102/L or MSCI 102 (4)
- PHYS 201/201L - General Physics I or 211/211L: Essentials of Physics I (3/1)
- GEOL 101 or 201 or GEOG 201 (4)
- CHEM 111/111L - General Chemistry I (3/1)
- CHEM 112/111L - General Chemistry II (3/1)

**Global Citizenship & Multicultural Understanding**

**GFL Communicating Effectively In More Than One Language**
- Foreign Language thru 122 level (0-9 credits)
  - (may include language 109, 110 (or 121) and 122

**GHS Historical Thinking**
- History: 100-level US (3)
- History: 100-level non US (3)

**GSS Social Sciences**
- POLI 201 - American National Government (3)
- ECON 221, 223 or 224 (Micro- or Introduction to Economics) (3)
- ENVR 548 or POLI 478 or POLI 477 (3)
Aesthetic & Interpretive Understanding

3 Credits from Fine Arts or Literature: CC approved including:
ARTE 101, 260; ARTH 105, 106; ARTS 103, 104; CLAS 220; CPLT 150, 270; DANC 101; ENGL 270, 282-288; FILM 110, 180, 240; FREN 290; GERM 290; MART 110, 210; MUSC 110, 113-115, 140; RUSS 280; SOST 101; SPAN 220; THEA 170, 181, 200

3 Credits from Ethics:
ENVR 322 Environmental Ethics; or PHIL 312, 320-325, 360, 514 or 550

Overlay

A. CMS Persuasive Communication
PHIL 213, 325; SAEL 200; SPCH 140, 145, 213, 230, 260

B. INF Information Literacy
ENGL 102 (recommended); or LIBR 101, SLIS 202, STAT 112

C. VSR Values, Ethics & Social Responsibility
BIOL 208; CPLT 150; CSCE 390; HIST 108; LING 240; PHIL 103, 211, 320-322, 325; POLI 201, 302-304; RELG 205; SAEL 200; WGST 112

Environmental Science Degree Requirements: Major Requirements

Premajor Requirements (Pass with C or higher) (8 credits)

- ENVR 201 - Environmental Science & Policy I (4)
- ENVR 202 - Environmental Science and Policy II (4)

Major Courses (Pass with C or higher) (17-18 credits)

- BIOL 301/301L Ecology and Evolution (3/1)
- ENVR 590 Environmental Issues Seminar (3)

Select 3 of 4:
- GEOL 315 Surface/Near Surfaces Processes (4)
- GEOG 202 Weather and Climate (4)
- ECIV 350 Intro to Environmental Engineering (3)
- ENHS 660 Concepts in Environmental Health Sciences (3)

Plus 17-18 additional major credits; at least two courses must be at the 400-level or above; all courses may be ENVR courses, but if not, then no more than three courses can be selected from a single discipline; no more than one research methods class; see handbook for courses from which to select.
128 Credits needed for graduation (includes electives; does not include PEDU, Band and other one-credit performance courses)
Requirements:

Carolina Core

CMW Written Communication (Grade of C or higher required)

ENGL-101 (3)

ENGL-102 (3)
ARP Analytical Reasoning & Problem Solving (grade of C or Higher required)

MATH 141 (prereq: MATH 115) 4

MATH 142 4

STAT 515 (prereq: MATH 141) 3

CSCE 102 (or higher) 3

SCI Scientific Literacy

BIOL 101/101L or MSCI 101 (*Note: must take either both BIOL or both MSCI) 4

BIOL 102/L or MSCI 102 4

PHYS 201/201L- General Physics I or 211/211L: Essentials of Physics I 3

GEOL 101 or 201 or GEOG 201 4

CHEM 111/111L - General Chemistry 1 (prereq: MATH 115) 3
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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>CHEM 112/112L - General Chemistry II</td>
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<tr>
<td>Global Citizenship &amp; Multicultural Understanding (GFL) Communicating Effectively In More Than One Language</td>
<td>(may include language 109, 110 (or 121) and 122 credits)</td>
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<tr>
<td>GHS Historical Thinking</td>
<td>(3)</td>
</tr>
<tr>
<td>One Carolina Core GHS approved course primarily focused on U. S. History: HIST 111, 112, 214.</td>
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<tr>
<td>GSS Social Sciences</td>
<td>(3)</td>
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<tr>
<td>POLI 201 - American National Government</td>
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</tr>
<tr>
<td>ECON 221, 223 or 224 (Micro- or Introduction to Economics)</td>
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</table>
ENVR 548 or (POLI 478 or POLI 477) 3

For Freshman the Major Map may be offer helpful course sequencing information and it may be found here:

http://sc.edu/about/offices_and_divisions/advising/advisor_toolbox/majormaps.php?search=2018-2019

or here for the Environmental Science degree:
CURRICULUM FOR THE B.A. IN ENVIRONMENTAL STUDIES

(see also http://bulletin.sc.edu/)

1. Specified Major Prerequisites: (28-29 hours)
   The following courses fulfill some of the general education requirements and must be completed for a major in Environmental Studies:
   - MATH 122 or MATH 141 (3 or 4)
   - STAT 201, STAT 205, STAT 509, or STAT 515 (3)
   - CHEM 111 and CHEM 111L (3 + 1)
   - Either sequence BIOL 101/101L and BIOL 102/102L OR MSCI 101 and MSCI 102 (8)
   - One from ENVR 101/101L, GEOL 101, GEOL 103, GEOL 201, or GEOG 201 (4)
   - POLI 201 (3)
   - ECON 221, ECON 223, or ECON 224 (3)

2. Major Program Requirements: (36-37 hours)
   All required and selected courses below must be passed with a grade of a C or better.
   a. Required Courses (15 hours)
      ENVR 201 and 202 Environmental Science & Policy I & II (8)
      ENVR 590 Environmental Issues Seminar (3)
      BIOL 301 and 301L Ecology and Evolution and Lab (3 + 1)
   b. Select 4 of 6 (12 hours)
      ENGL 434 Environmental Literature (3)
      ENVR 322 {=PHIL 322} Environmental Ethics (3)
      ENVR 548 {=ECON 548} Environmental Economics OR ECON 509 Economics of Sustainable Development (3)
      GEOG 343 Human Impact on the Environment (3)
      HIST 448 American Environmental History (3)
      POLI 477 Green Politics OR POLI 478 Environmental Policy (3)
   c. Selected Courses with Advisor Approval (9-10 hours)
      Students, in consultation with their assigned advisor, will develop a program of study to meet their educational goals in environmental studies courses. No more than 2 courses should be selected from a single discipline.
      See the defined list of “Courses Acceptable for Major Credit in Environmental Studies” in this handbook.
   d. Special Opportunities
      The major endorses the use of independent study courses to further students’ intellectual pursuits in alternative ways. Before students may register for an independent study course, they must submit a completed independent study contract which has been approved by their major advisor and the Director of Undergraduate Studies. No student may apply more than 6 hours of independent study credits toward the degree. A minimum grade-point average of 2.50 is required to enroll in independent study courses.
4. **Cognate:**
   There is no cognate requirement in the Environmental Studies degree program.

5. **Carolina Core**
   All Environmental Studies majors must satisfy the general education (Carolina Core) requirements prescribed for the Bachelor of Arts. The BA in Environmental Studies requires that some aspects of the Carolina Core be satisfied by specific courses, while other aspects may be satisfied by a choice from among many approved courses (see ‘Specified Major Prerequisites’ above and details below).

   Note that a Bachelor of Arts degree in the College of Arts and Science requires a minimum of 120 academic credit hours for graduation (excludes athletic and performance courses.)

**Carolina Core Requirements:**

I. **Effective, Engaged and Persuasive Communication (CMW) [grade of C or better required]**
   ENGL 101 & 102

II. **Analytical Reasoning & Problem Solving (ARP)**
   CALCULUS: MATH 122 or 141
   STATISTICS: STAT 201, 205, 509 or 515

III. **Global Citizenship & Multicultural Understanding (GFL, GHS, GSS)**
   FOREIGN LANGUAGE: Demonstration of proficiency in one foreign language equivalent to the minimal passing grade on the exit examination in the 122 course level
   HISTORICAL THINKING: Two courses at the 100 level, one US history and one non-US history
   SOCIAL SCIENCE: POLI 201 American National Government and ECON 221, 223 or 224 (Microeconomics or Introduction to Economics)

IV. **Aesthetic and Interpretive Understanding (AIU)**
   (Humanities, Fine Arts, Literature) One Fine Arts or Literature course approved for the Carolina Core, plus three additional courses from the Fine Arts or Humanities.

V. **Scientific Literacy (SCI)**
   Laboratory Sciences: Either biology (BIOL 101/101L and BIOL 102/102L) or marine science (MSCI 101 and 102), plus chemistry (CHEM 111/L) and one of the following: environment (ENVR 101/101L), geology (GEOL 101, 103 or 201) or geography (GEOG 201).

VI. **Overlay**
   Two of three overlay courses can also fulfill Carolina Core requirements; overlay courses cannot be counted for major or minor credit:
   A. PERSUASIVE COMMUNICATION (CMS)
   B. INFORMATION LITERACY (INF)
   C. VALUES, ETHICS & SOCIAL RESPONSIBILITY (VSR)
Courses Acceptable for Major Credit in Environmental Studies

A representative list of courses acceptable for major credit is presented below. Any course that is eligible for cognate credit in the College of Arts and Sciences can potentially be a major course in Environmental Studies. Courses above 300 in other colleges may also count as major credits. The determination of the major courses in this interdisciplinary program is the result of consultation between the student and a faculty advisor.

<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
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<tr>
<td>ENVR 295</td>
<td>Green Technology in Germany</td>
<td>=GERM 295</td>
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<td>ENVR 321</td>
<td>Environmental Pollution and Health</td>
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<td>Global Environmental Health</td>
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<td>ENVR 399</td>
<td>Independent Study</td>
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<td>ENVR 460</td>
<td>Congaree National Park: Field Investigations in Environmental Science</td>
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<td>ENVR 490</td>
<td>Special Topics in Sustainability &amp; the Environment</td>
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<td>ENVR 499</td>
<td>Research in Environmental Science</td>
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<td>ENVR 500</td>
<td>Environmental Practicum</td>
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<td>Special Topics in the Environment</td>
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<td>ENVR 531</td>
<td>Sustainability Management &amp; Leadership Strategies</td>
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<td>ENVR 548</td>
<td>Environmental Economics</td>
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<td>ENVR 571</td>
<td>Conservation Biology</td>
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<td>ENVR 572</td>
<td>Freshwater Ecology</td>
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<td>Ethics of Science and Technology</td>
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<td>HRTM 482  Sustainable Tourism Planning and Policy</td>
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<td>ANTH 212  Food and Culture</td>
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<td>ANTH 213  Ethnobotany: Plants and Peoples</td>
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<td>ANTH 513  Anthropological Ethnobotany</td>
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<td>ANTH 525  Ethnoecology</td>
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<td>ECON 548  Environmental Economics = ENVR 548</td>
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<td>ECON 594  Introduction to Econometrics</td>
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<td>POLI 431  Science, Technology, and Public Policy</td>
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<td>SOCY 308  Community Organization</td>
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<td>SOCY 311  Ecology of Human Social Systems</td>
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<td>SOCY 315  World Population: Problems and Policies</td>
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<td>SOCY 501  Cities and Politics</td>
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<td>SOCY 514  Urbanization</td>
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<td>GEOG 324  Cities, Environmental Transformation, and Sustainability</td>
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<td>GEOG 341</td>
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<td>GEOG 343</td>
<td>Human Impact on the Environment</td>
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<td>GEOG 345</td>
<td>Interpretation of Aerial Photographs</td>
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<td>GEOG 346</td>
<td>Climate and Society</td>
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<td>GEOG 360</td>
<td>Geography of Wind</td>
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<td>GEOG 363</td>
<td>Geographic Information Systems</td>
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<td>GEOG 511</td>
<td>Planning and Locational Analysis</td>
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<td>GEOG 516</td>
<td>Coastal Zone Management</td>
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<td>GEOG 521</td>
<td>Landscapes of South Carolina</td>
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<td>GEOG 530</td>
<td>Environmental Hazards</td>
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<td>GEOG 541</td>
<td>Advanced Cartography</td>
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<td>GEOG 545</td>
<td>Synoptic Meteorology</td>
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<td>GEOG 563</td>
<td>Advanced Geographic Information Systems</td>
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<td>GEOG 564</td>
<td>GIS-Based Modeling</td>
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<td>GEOG 566</td>
<td>Social Aspects of Environmental Planning and Management</td>
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<td>GEOG 568</td>
<td>Human Dimensions of Global Environmental Change</td>
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<td>GEOG 569</td>
<td>Environment and Development</td>
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<td>GEOG 570</td>
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From the Natural Sciences:

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<td>BIOL 525</td>
<td>Marine Plants</td>
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<tr>
<td>BIOL 526</td>
<td>The Fall Flora</td>
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<td>BIOL 527</td>
<td>The Spring Flora</td>
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<td>BIOL 528</td>
<td>The Summer Flora</td>
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<td>BIOL 534</td>
<td>Animal Behavior</td>
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<td>BIOL 536</td>
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<tr>
<td>BIOL 570/L</td>
<td>Principles of Ecology</td>
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<td>BIOL 575/L</td>
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<td>GEOL 202 or 302</td>
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<td>GEOL 315</td>
<td>Surface and Near Surface Processes</td>
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<td>JOUR 303</td>
<td>Law and Ethics of the Mass Media</td>
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<td>JOUR 306</td>
<td>Theories of Mass Communications</td>
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<td>JOUR 310</td>
<td>Mass Media and Society</td>
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<td>JOUR 311</td>
<td>Minorities, Women and the Mass Media</td>
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<td>JOUR 501</td>
<td>Freedom, Responsibility and Ethics of the Mass Media</td>
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<td>JOUR 506</td>
<td>Mass Media Criticism</td>
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<td>JOUR 540</td>
<td>Magazine Article Writing</td>
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<td>JOUR 542</td>
<td>Public Opinion and Persuasion</td>
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<td>JOUR 562</td>
<td>Communicating Science, Health and the Environment</td>
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<td>JOUR 571</td>
<td>Faith, Values and the Mass Media</td>
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<td>MART 371</td>
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<td>EMCH 529</td>
<td>Sustainable Design and Development</td>
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<td>ENHS 321</td>
<td>Environmental Pollution and Health</td>
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<td>Global Environmental Health</td>
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<td>ENHS 660</td>
<td>Concepts of Environmental Health Science</td>
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<td>From Air to Alveoli: Exposure Science</td>
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<td>ENHS 675</td>
<td>Infectious Disease Ecology</td>
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Environmental Studies Degree Requirements: Carolina Core

- **CMW Written Communication** (grade of 'C' or higher; must be completed in first 60 hours)
  - ENGL-101
  - ENGL-102

- **ARP Analytical Reasoning & Problem Solving**
  - MATH 122 (prereq: MATH 111) or MATH 141 (prereq: MATH 115) (3 or 4)
  - STAT 201, 205, 509 or 515 (3)

- **SCI Scientific Literacy**
  - BIOL 101/101L, 102/102L or MSCI 101, 102 (8)
  - CHEM 111/111L - General Chemistry I (prereq: MATH 111 or 115) (3/1)
  - Select one:
    - ENVR 101 and 101L (4)
    - GEOL 101, 103 or 201 (4)
    - GEOG 201 Landform Geography (4)

- **Global Citizenship & Multicultural Understanding**
  - GFL Communicating Effectively In More Than One Language
    - Foreign Language thru 122 level (0-9 credits)
      - (may include language 109, 110 (or 121) and 122)

- **GHS Historical Thinking**
  - *History: 100-level US* (3)
  - *History: 100-level non US* (3)

- **AIU Aesthetic & Interpretive Understanding**
  - Select 4 courses (12 credits) from Fine Arts, Literature, or Humanities; at least one must be:
    - ARTE 101, 260; ARTH 105, 106; ARTS 103, 104, 210; CLAS 220; CPLT 150, 270; DANC 101;
      ENGL 270, 282-288; FILM 110, 180, 240; FREN 290; GERM 270, 290; MART 110, 210; MUSC 110,
      113-115, 140, 310; RELG 270; RUSS 280; SOST 101; SPAN 220; THEA 170, 181, 200 (3)
    - (3)
    - (3)
    - (3)
    - (3)
Environmental Studies Degree Requirements: Major Requirements

Major Courses (Pass with C or higher)

- ENVR 201 - Environmental Science & Policy I (4)
- ENVR 202 - Environmental Science and Policy II (4)
- BIOL 301/301L Ecology and Evolution (3/1)
- ENVR 590 Environmental Issues Seminar (3)

Select 4 of 6:
- ENVR/PHIL 322 Environmental Ethics (3)
- ENVR 548 Environmental Economics or ECON 509 Economics of Development (3)
- ENGL 434 Environmental Literature (3)
- GEOG 343 Human Impact on the Environment (3)
- HIST 448 American Environmental History (3)
- POLI 477 Green Politics or POLI 478 Environmental Policy (3)

Plus 9-10 additional major credits; no more than two courses from a single discipline; see handbook for courses from which to select

120 Credits needed for graduation (includes electives; does not include PEDU, Band and other one-credit performance courses)
For Freshman the Major Map may be offer helpful course sequencing information and it may be found here:

http://sc.edu/about/offices_and_divisions/advising/advisor_toolbox/majormaps.php?search=2018-2019

or here for the Environmental Studies degree:
MINOR IN ENVIRONMENTAL STUDIES

The minor in Environmental Studies consists of a minimum of 18 hours. Four courses (12-13 hours) make up the required core. The remaining hours (six) must come from the approved course list. Students wishing to enter the Environmental Studies minor must first complete ENVR 101 and 101L as a prerequisite. A course in Statistics (STAT 110 or equivalent) is strongly recommended. All prerequisite courses may be used to meet general education requirements, if applicable. Science and Engineering students must choose their remaining hours from the courses listed below specifically for them. Students enrolled in other colleges should choose their remaining hours from the courses listed specifically for them.

Prerequisite requirements for the Minor in Environmental Studies

ENVR 101 Introduction to the Environment and ENVR 101L Introduction to the Environment Lab (Or a score of 3 or better on the AP Environmental Science exam)

Core Requirements for the Minor in Environmental Studies (12-13 Hours)

One course from each group:

Group A:
ENVR 321 - Environmental Pollution and Health
GEOG 343 - Human Impact on the Environment

Group B:
GEOL 215 - Coastal Environments of the Southeastern U.S.
GEOL 205 - Earth Resources

Group C:
POLI 477 - Green Politics
POLI 478 - Environmental Policy
PHIL 322 - Environmental Ethics

Group D:
ECON 224 - Introduction to Economics
ENVR 548 - Environmental Economics
ECON 500 - Urban Economics
ECON 508 - Law and Economics

Additional Requirements Selected from List of Approved Courses (6 Hours)

Selectives for students pursuing a Bachelor of Science degree in the College of Arts and Sciences or College of Engineering and Computing:
ANTH 565 - Health and Disease in the Past
ENVR 295 – Green Technology in Germany
ENVR 399 - Independent Study
GEOG 346 - Climate and Society
GEOG 347 - Water as a Resource
GEOG 360 - Geography of Wind
GEOG 516 - Coastal Zone Management
GEOG 530 - Environmental Hazards
GEOG 566 - Social Aspects of Environmental Planning and Management
GEOG 568 - Human Dimensions of Global Environmental Change
GEOG 569 - Environment and Development
GERM 295 - Green Technology in Germany
HIST 448 - American Environmental History
JOUR 562 - Communicating Science, Health and the Environment
POLI 368 - Interest Groups and Social Movements
POLI 380 - Comparative Politics of Developing Countries
POLI 421 - Law and Contemporary International Problems
POLI 431 - Science, Technology, and Public Policy
SOCY 315 - Global Population Issues
SEGL 307 - Literature and Nature (only at USC Spartanburg)

Selectives for students pursuing a Bachelor of Arts degree in the College of Arts and Sciences and all other majors except those in the College of Engineering and Computing:
BIOL 301 - Ecology and Evolution
BIOL 570 - Principles of Ecology
CHEM 321 - Quantitative Analysis
ENVR 399 - Independent Study
GEOG 346 - Climate and Society
GEOG 360 - Geography of Wind
GEOG 347 - Water as a Resource
GEOG 371 - Air Pollution Climatology
GEOG 560 - Source Materials for Geographic Instruction
GEOG 561 - Contemporary Issues in Geography Education
GEOG 570 - Geography of Public Land and Water Policy
MSCI 390 - Policy and Marine Science
ECIV 350 - Introduction to Environmental Engineering
ECIV 551 - Elements of Water and Wastewater Treatment
ENCP 540 - Environmentally Conscious Manufacturing
ENHS 660 - Concepts of Environmental Health Science
STAT 519 - Sampling
UNDERGRADUATE COURSE OFFERINGS IN THE ENVIRONMENT & SUSTAINABILITY DEGREE PROGRAMS

**ENVR 101 – Introduction to the Environment** (3 credits)
Analysis of environmental issues and the role of science in their identification and resolution.

**ENVR 101L - Introduction to the Environment Lab** (1 credit)
Demonstrations, field trips, data analyses, and discussion relating to environmental issues, such as sustainability, resource management, and pollution control.
Prerequisites or corequisites: ENVR 101

**ENVR 200 - Natural History of South Carolina** (4 credits)
Course provides a general review of plants, animals, and geological features of South Carolina, with an emphasis on connections in the natural world.
Note: 3 lecture hours and 3 lab hours per week.

**ENVR 201 - Environmental Science and Policy I** (4 credits)
Introduction to interdisciplinary and multidisciplinary perspectives on environmental issues. Required for majors in the Environment and Sustainability Program. Integrative case studies address ways of understanding nature.
Prerequisites: Sophomore Standing

**ENVR 202 - Environmental Science and Policy II** (4 credits)
Continuing interdisciplinary and multidisciplinary exploration of relations between environment and society for majors in the Environment and Sustainability Program. Case studies raise issues, challenges, and strategies to achieving sustainability.
Prerequisites: Sophomore Standing, ENVR 201

**ENVR 231 - Introduction to Sustainability Management and Leadership** (3-4 credits)
Introduction to development, establishment, and implementation of sustainability management systems and organizational leadership for achieving environmental, social, and economic goals.

**ENVR 295 – Green Technology in Germany** (3 credits)
Examination of roots and culture of environmentalism and related technological innovation in Germany. Comparison of green practices around the world to practices within Europe and U.S.
Cross-listed Course: GERM 295

**ENVR 321 - Environmental Pollution and Health** (3 credits)
A survey of pollution (chemical, biological, physical) effects on environmental quality and public health with emphases on how each pollutant class behaves and affects individual and community health over acute to chronic exposure periods.
Cross-listed Course: ENHS 321

**ENVR 322 - Environmental Ethics** (3 credits)
Examination of principles and arguments surrounding moral issues involving the environment.
Cross-listed Course: PHIL 322

**ENVR 323 - Global Environmental Health** (3 credits)
Concerns in global environmental health, with a focus on toxic pollution and disease burden in developing countries. Investigation of international treaties, corresponding environmental pollution processes, and human health effects.
Cross-listed Course: ENHS 323
ENVR 331 - Integrating Sustainability (3 credits)
Multidisciplinary approach to interrelated environmental, economic and social problems facing humans at local, regional and global scales.

ENVR 352 - Energy, Society and Sustainability (3 credits)
The role of energy in shaping society and geographic settings, as well as how energy production and consumption are shaped by the societal values and norms in which it is extracted, produced, and consumed.

ENVR 399 - Independent Study (1-6 credits)
Contract approved by instructor, advisor, and dean of the School of the Environment is required for undergraduate students.

ENVR 460 – Congaree National Park: Field Investigations in Environmental Science (4 credits)
Field research practices and analysis techniques in environmental science. Combines inquiry-based field investigations at Congaree National Park and laboratory sample analysis with integration of data and public policy concepts. Daily field trips required.
Prerequisites: ENVR 201 and 202, or consent of instructor

ENVR 499 - Research in Environmental Science (1-3 credits)
Independent student research in collaboration with faculty mentors. Contract approved by instructor, advisor, and department chair is required.

ENVR 500 - Environmental Practicum (Credits: 3)
Multidisciplinary research projects related to University or community environmental problems (e.g., energy, water conservation, solid waste, recycling). Prerequisites: permission of instructor

ENVR 501 - Special Topics in the Environment (3 credits)
An in-depth analysis course of a specific interdisciplinary environmental topic. Course content varies and will be announced in the schedule of classes by suffix and title.
Prerequisites: ENVR 101 or ENVR 201 or consent of instructor

ENVR 531 - Sustainability Management and Leadership Strategies (3-4 credits)
Integrated management system principles and advanced leadership strategies to create sustainable development initiatives.

ENVR 548 - Environmental Economics (3 credits)
An analysis of the economics aspects of environmental decay, pollution control, and natural resource use. Analysis of the ability of the market system to allocate resources efficiently when economic activity is accompanied by environmental damage. Discussion of alternative public policy approaches to pollution control and natural resource conservation.
Cross-listed Course: ECON 548
**ENVR 571 - Conservation Biology** (3 credits)
Principles of conservation biology. Importance of biodiversity, causes of decline and extinction, and restoration and conversation policy in terrestrial and aquatic ecosystems.
Cross-listed Course: BIOL 571

**ENVR 572 - Freshwater Ecology** (3 credits)
Quantitative study of the population, community and evolutionary ecology of freshwater habitats (lakes, ponds, rivers, streams, wetlands).
Cross-listed Course: BIOL 572
Prerequisites: BIOL 301 or permission of instructor  
Note: Includes mandatory fieldtrips.

**ENVR 590 - Environmental Issues Seminar** (3 credits)
Collaborative study of a contemporary environmental issue.
Note: Field trips required.  
Restricted to: ENVR majors or special permission of department.  
Is the required senior seminar for BS and BA Environment degrees.
Faculty with interests primarily in the Environment and Sustainability Degree Programs include SEOE tenure track faculty, tenure-track faculty that have joint appointments with other units, research faculty, associate faculty who have their primary appointments in other Carolina units, and adjunct faculty whose primary appointments are outside of this university. Tenure-track and research faculty with appointments in the E&S, and associate faculty at the Columbia campus, are listed in the directory below (a complete list of SEOE faculty may be found on the website: http://www.sc.edu/study/colleges_schools/artsandsciences/earth_ocean_and_environment/our_people/index.php)

Administration:
Dr. Carol Boggs, School of the Earth, Ocean & Environment Director. EWS 603, 803-777-3921, boggscl@mailbox.sc.edu
Dr. Alicia Wilson, School of the Earth, Ocean & Environment Associate Director, EWS 603, 803-777-3921, awilson@geol.sc.edu
Dr. Gwendelyn Geidel, Undergraduate Director. Jones PSC 108, 803-777-7171, geidel@sc.edu
Sheri Foxworth, Undergraduate Coordinator. PSC 108, 803-777-6163, foxworth@mailbox.sc.edu
Jennifer Sweitser, First Year Advisor, Jones PSC 108; 777-2419, swoitzej@mailbox.sc.edu
Jacqueline McClary, Student Services. EWS 603, 803-777-9823, mcclaryj@mailbox.sc.edu

E&S Affiliate Faculty:

Tenure Track Faculty with focus on E&S issues:
Jessica Barnes, Ph.D., Columbia University, 2010. Assistant Professor. Water resources, agriculture, and climate change. (Jt with GEOG)
Monica Barra, Ph.D., City University of New York, 2018. Assistant Professor. Racial politics of land restoration; race and environment issues.
Carol Boggs, Ph.D., University of Texas at Austin, 1979. Evolutionary, functional and behavioral ecology with applications to conservation and environmental issues.
David Fuentes, Ph.D., University of North Carolina – Chapel Hill, 2017. Assistant Professor. Infrastructure planning, environmental policy, and international development with focus on water and sanitation.
Conor Harrison, Ph.D., University of North Carolina, Chapel Hill, 2014. Assistant Professor. Economic geography, natural resources, energy. (Jt with GEOG)
David Kneas, Ph.D., Yale University, 2014. Assistant Professor. Political ecology, environmental history, Latin America. (Jt with GEOG)
Thomas Lekan, Ph.D. University of Wisconsin-Madison, 1999. Environmental History. (Jt with HIST)
Dwayne Porter, Ph.D., University of South Carolina, 1995 (Appt in ASPH)
Joseph M. Quattro, Ph.D., Rutgers University, 1991. Environmental genetics; ichthyology.
Scott M. White, Ph.D., University of California, Santa Barbara, 2001.
Alicia Wilson, Ph.D., Johns Hopkins University, 1999. Hydrology and modeling
Neal Woods, Ph.D., University of Kentucky, 2003. Associate Professor. Environmental policy. (Jt with POLI).
Research Faculty with E&S focus:
Gwendelyn Geidel, Ph.D., University of South Carolina, 1982. Research Professor. Reclamation of land and water disturbances from anthropogenically impacted landscapes.
Jennifer R. Pournelle, Ph.D., University of California, San Diego, 2003. Research Associate Professor. Landscape Archaeology, satellite remote sensing in archaeology, wetland cultural ecology, environmental security, Middle East, MEERM Internship option.
Joseph “Joe” Jones, Ph.D., University of California, 2001. Faculty Principle at Green Quad Residence Hall. Genetics, Environmental Health, Oceans and human health; Sustainability

Faculty in the School of the Earth, Ocean and Environment in E&S related fields
Claudia Benitez-Nelson, Ph.D., Massachusetts Institute of Technology, 1999
Subrahmanyam Bulusu, Ph.D., Satellite Oceanography, National Oceanography Center, University of Southampton, England, 1998
Venkat Lakshmi, Ph.D., Princeton University, 1995
Robert C. Thunell, Ph.D., University of Rhode Island, 1978
Raymond Torres, Ph.D., University of California, Berkeley, 1997
George Voulgaris, Ph.D., University of Southampton, UK, 1992

Faculty at SEOE Belle W. Baruch Institute for Marine and Coastal Sciences
Dennis M. Allen, Ph.D., Lehigh University, 1978
Wendy B. Allen, M.Ed., University of South Carolina, 1980
James T. Morris, Ph.D., Yale University, 1979

Faculty from across campus with identified interests in Environmental and Sustainability issues:
College of Arts and Sciences
Department of Anthropology
Kenneth G. Kelly, Ph.D., University of California, Los Angeles, 1995
Gail E. Wagner, Ph.D., Washington University, St. Louis, 1987

Department of Biological Sciences
Ronald Benner, Ph.D., University of Georgia, 1984
Robert Friedman, Ph.D., University of South Carolina, 2002
James T. Morris, Ph.D., Yale University, 1979
Timothy A. Mousseau, Ph.D., McGill University, 1988
John B. Nelson, Ph.D., Florida State University
James L. Pinckney, Ph.D., University of South Carolina, 1992
Joseph M. Quattro, Ph.D., Rutgers University, 1991
Tammi Richardson, Ph.D., Dalhousie University, 1996

Department of Chemistry and Biochemistry
John Ferry, Ph.D., University of North Carolina, Chapel Hill, 1996
Scott R. Goode, Ph.D., Michigan State University, 1974
Timothy J. Shaw, Ph.D., University of California, San Diego, 1988
Department of English Language and Literature
James Barilla, Ph.D., University of California, Davis
Paula R. Feldman, Ph.D., Northwestern University, 1974
Christy Friend, Ph.D., University of Texas at Austin, 1997

Department of Geography
Jessica Barnes, Ph.D. Columbia University, 2010.
Gregory J. Carbone, Ph.D., University of Wisconsin, 1990
Susan L. Cutter, Ph.D., University of Chicago, 1976
Kirstin Dow, Ph.D., Clark University, 1996
Jean T. Ellis, Ph.D., Texas A&M University, 2006
Conor Harrison, Ph.D., University of North Carolina, Chapel Hill, 2014
April Hiscox, Ph.D., University of Connecticut, 2006
Michael E. Hodgson, Ph.D., University of South Carolina, 1987
L. Allan James, Ph.D., University of Wisconsin, 1988
David Kneas, Ph.D., Yale University, 2014
John Kupfer, Ph.D., University of Iowa, 1995
Jerry T. Mitchell, Ph.D., University of South Carolina, 1998
Cary J. Mock, Ph.D., University of Oregon, 1994

Department of History
Thomas M. Lekan, Ph.D., University of Wisconsin-Madison, 1999
Robert R. Weyeneth, Ph.D., University of California, Berkeley, 1984

Department of Mathematics
Douglas B. Meade, Ph.D., Carnegie Mellon University, 1989
Hong Wang, Ph.D., University of Wyoming, 1992

Department of Political Science

Department of Statistics
Don Edwards, Ph.D., Ohio State University, 1981

Center for Research in Nutrition and Health Disparities
Sonya Jones, Ph.D., University of North Carolina, 2002

Institute for Public Service and Policy Research
Robert W. Oldendick, Ph.D., University of Cincinnati, 1977

College of Education
Stephen Thompson, Ph.D., Vanderbilt University, 2002

College of Engineering and Computing
Department of Chemical Engineering
Michael A. Matthews, Ph.D., Texas A&M University, 1986
John W. Weidner, Ph.D., North Carolina State University, 1991
Department of Civil and Environmental Engineering
M. Hanif Chaudhry, Ph.D., University of British Columbia, 1970
Anthony S. McAnally, Ph.D., Auburn University, 1989
Michael E. Meadows, Ph.D., University of Tennessee, 1976

Department of Computer Science and Engineering
Michael N. Huhns, Ph.D., University of Southern California, 1975

Department of Mechanical Engineering
Abdel E. Bayoumi, Ph.D., North Carolina State University, 1982
Jamil A. Khan, Ph.D., Clemson University, 1988
Walter H. Peters, Ph.D., Virginia Polytechnic Institute and State University, 1978

Provost's Office
Rudolph "Rudy" E. Mancke, III, B.A., Wofford College, 1967

School of Law
Joshua Eagle, J.D., Georgetown University Law Center, 1990
David Linnan, J.D., University of Chicago Law School, 1979

Arnold School of Public Health
Department of Environmental Health Sciences
G. Thomas Chandler, Ph.D., Louisiana State University, 1986
Alan W. Decho, Ph.D., Louisiana State University, 1987
W. Joe Jones, Ph.D., University of California, 2001.
Dwayne E. Porter, Ph.D., University of South Carolina, 1995
School of the Earth, Ocean and Environment Scholarship Application

Applications must be received and complete by April 1st.
Electronic submission is preferred: please email to mcclaryj@mailbox.sc.edu or fax to (803) 777-3922. If mailed, please send to:

Jacqueline M. McClary
SEOE Student Services Program Coordinator
EWS 603, 712 Main Street
University of South Carolina
Columbia, SC 29208

Eligibility Requirements:
1. Must have minimum cumulative GPA of 3.0 (4.0 scale) in work done at other institutions; or
2. Must have a minimum cumulative USC GPA of 3.0 (4.0 scale) if appropriate.

Major: ___________________________ Date: ___________________________
Name: ___________________________
Local Address ___________________________
Permanent/Home Address ___________________________

Email ___________________________

Educational Background
High School Seniors:
High School ___________________________
Class Rank _______ GPA ___________

Current Undergraduates:
GPA_________ Hours completed at the end of current semester _________

Previous Awards or Honors:

Other Scholarships Applicable at the University of Carolina:

Please include the following (may be sent under separate cover):
__ A typed statement of how a departmental scholarship would be relevant to your educational and career goals
__ One letter of recommendation from a teacher or mentor
__ Current transcript of your grades (incoming students only; unofficial transcripts are acceptable; please send one even if you have already provided one to the Admissions Office)