



University of South Carolina

College of Arts & Sciences

School of the Earth,  
Ocean & Environment

## Environment and Sustainability Program



# Undergraduate Handbook

for majors in

## Environmental Studies

and

## Environmental Science

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## **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.

## SEOE STRUCTURE AND STAFF

The School of the Earth, Ocean and Environment (SEOE) is a division of the College of Arts and Sciences. It encompasses three academic units – the Environment and Sustainability Program (E&SP), the Department of Earth and Ocean Sciences (EOS), and the Marine Science Program (MSCI) – 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:

<p><b>Dr. Gwen Geidel</b> Jones 108; 777-7171 geidel@sc.edu</p>	<p><b>Undergraduate Director</b> and Director of the E&amp;SP <i>Responsibilities include:</i> 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 two go-to contacts.</p>
<p><b>Shelley Schlenk</b> Jones 108; 777-6163 schlenk@mailbox.sc.edu</p>	<p><b>Undergraduate Student Services Coordinator</b> <i>Responsibilities include:</i> Answering all questions; providing forms and information; clarifying degree requirements; advisement issues; any and all other concerns, academic or personal. The other of your two go-to contacts.</p>
<p><b>Jacqueline McClary</b> EWS 603; 777-9823 mcclaryj@mailbox.sc.edu</p>	<p><b>Student Services Coordinator</b> <i>Responsibilities include:</i> Scholarships and awards; internships; placement in research labs; course syllabi, textbooks, and evaluations.</p>
<p><b>Krista Russell</b> EWS 603; 777-3921 wodecki@mailbox.sc.edu</p>	<p><b>Assistant to the Director of the E&amp;SP Program</b> and the Director of the SEOE <i>Responsibilities include:</i> Updating websites; facilitating contact with E&amp;SP Director and faculty; maintaining faculty mailboxes; student travel reimbursements.</p>
<p><b>Dr. Joe Jones</b> Green Quad; 777-2093 w.joe.jones@gmail.com</p>	<p><b>Faculty Principal for Green Quad</b> and Research Asst. Professor <i>Responsibilities include:</i> Connecting students with environmentally-oriented experiences and opportunities.</p>
<p><b>Mark Evans</b> Byrnes 431; 960-3041 mevans@esri.sc.edu</p>	<p><b>IT Specialist</b> <i>Responsibilities include:</i> Updating, troubleshooting and maintaining iPads, laptops and computers in the SEOE Student Services Office.</p>



## **OVERVIEW OF THE ENVIRONMENT AND SUSTAINABILITY 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 Program, 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 oil, gas, 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.



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**Bachelor of Arts in  
Environmental Studies**



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**Bachelor of Science in  
Environmental Science**

## **OVERVIEW OF THE UNDERGRADUATE MAJORS**

The Environment and Sustainability 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.



<i>Environmental Science vs. Environmental Studies: What's the Difference?</i>	
<b>BS in Environmental Science:</b>	<b>BA in Environmental Studies:</b>
<ul style="list-style-type: none"> <li>• <b>Emphasizes science, math &amp; technology</b></li> <li>• <b>Major credit courses in lab sciences, engineering, public health</b></li> <li>• <b>Includes fieldwork, research</b></li> <li>• <b>Leads to Bachelor of Science degree</b></li> <li>• <b>128 credits required for graduation</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Emphasizes humanities &amp; social sciences</b></li> <li>• <b>Major credit courses in the environment, politics, history, economics, literature</b></li> <li>• <b>Includes sustainability, policy, advocacy</b></li> <li>• <b>Leads to Bachelor of Arts degree</b></li> <li>• <b>120 credits required for graduation</b></li> </ul>
<i>What do they have in common?</i>	
<ul style="list-style-type: none"> <li>• <b>Opportunity to live in the Green Quad Living/Learning Community</b></li> <li>• <b>Access to 100+ faculty associated with Environment &amp; Sustainability Program</b></li> <li>• <b>Interdisciplinary degrees allow students to tailor coursework to their own interests</b></li> <li>• <b>Biology, policy, chemistry, calculus and ethics courses required for both</b></li> </ul>	

## 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 make up as much as 10% of new job growth over the next 30 years<sup>1</sup>.

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.

According to a report from the Pew Charitable Trust<sup>2</sup>, between 1998 and 2007, green sector jobs grew by 36% while all jobs in SC grew at only 2.2%. 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.

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<sup>1</sup> U.S. Metro Economies: Current and Potential Green Jobs in the U.S. Economy. October 2008. Global Insight; prepared for the U.S. Conference of Mayors & the Mayors Climate Protection Center.

<sup>2</sup> The Pew Charitable Trust, Clean Energy Economy: South Carolina. 2009.

[http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact\\_Sheets/Clean\\_Economy\\_Factsheet\\_SouthCarolina.pdf](http://www.pewcenteronthestates.org/uploadedFiles/wwwpewcenteronthestatesorg/Fact_Sheets/Clean_Economy_Factsheet_SouthCarolina.pdf)

- Private consulting firms conducting environmental impact and assessment projects.
- 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 100 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 Discovery Day (<http://www.sc.edu/our/discovery.shtml>), an annual event for undergraduates 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/involvedSustainability.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.

## SCHOLARSHIPS AND AWARDS

The Environment & Sustainability Program and the School of the Earth, Ocean and Environment award annual scholarships for environmental majors with outstanding academic achievement. Applications are available in Jones 108, EWS 603, on the department website, 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%. Scholarships may be renewed each year provided the recipient maintains a minimum 3.0 GPA and remains an environmental major.

The E&SP also presents two major awards at Undergraduate Awards Day each April: the Outstanding Undergraduate in Environmental Science Award and the Bruce C. Coull Outstanding Undergraduate in Environmental Studies Award. These awards are based on outstanding academic performance as well as research participation, volunteerism and environmental leadership. Nominations are solicited in the spring, and recipients chosen by the 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 Scholarships (<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

Students are advised through the SEOE Student Services Office when they first declare an environmental major, and then assigned a faculty advisor for the next major advisement period. Assignments are made randomly at first, but all majors 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 faculty advisors each semester during an officially scheduled advisement period to choose their courses for the following semester. Advisement for Spring courses starts after Fall Break and continues through the Friday before Registration (typically three weeks). Advisement for Summer and Fall courses begins after Spring Break and continues through the Friday before Registration. This 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: <http://www.sc.edu/advising/artsandsciences/> and click on 'Other Student Services'. 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 2.00 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 can be found at <http://www.sc.edu/admissions/credittrans.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, Hawaii, and France! Students interested in studying abroad need to make an appointment with the Study Abroad office as soon as possible ([http://www.sa.sc.edu/sa\\_saabroad@mailbox.sc.edu](http://www.sa.sc.edu/sa_saabroad@mailbox.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/usconnect/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**

(see also bulletin.sc.edu)

### **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 500 level, 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.

### **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

Select 16 hours from following: CHEM 111 and 112 (with labs) (8) and  
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 MSCI 101 and 102 or BIOL 101/L and 102/L, plus CHEM 111 and 112, 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.

COURSE #	COURSE TITLE	CROSS-LISTED	CREDITS
<b>From the Environment and Sustainability Program:</b>			
ENVR 321	Environmental Pollution and Health	=ENHS 321	3
ENVR 323	Global Environmental Health	=ENHS 323	3
ENVR 331	Integrating Sustainability		3
ENVR 399	Independent Study		1-6
ENVR 460	Congaree National Park: Field Investigations in Environmental Science		4
ENVR 490	Special Topics in Sustainability & the Environment		1-4
ENVR 499	Research in Environmental Science		1-3
ENVR 500	Environmental Practicum		3
ENVR 501	Special Topics in the Environment		3
ENVR 531	Sustainability Management & Leadership Strategies		3-4
ENVR 571	Conservation Biology	=BIOL 571	3
ENVR 572	Freshwater Ecology	=BIOL 572	3
ENVR 590	Environmental Issues Seminar		3
<b>From the Life Sciences:</b>			
BIOL 302	Cell and Molecular Biology		3
BIOL 420/L	Survey of the Plant Kingdom		3/1
BIOL 460	General Physiology		3
BIOL 526	The Fall Flora		3
BIOL 527	The Spring Flora		3
BIOL 541/L	Principles of Biochemistry	=CHEM 550/L	3/1
BIOL 549	Plant Physiology		4
BIOL 570/L	Principles of Ecology		3/1
BIOL 640	Microbial Ecology		3
BIOL 671	Plant Responses to the Environment		3
CHEM 321/L	Quantitative Analysis		3/1
CHEM 333/L	Organic Chemistry I		3/1
CHEM 334/L	Organic Chemistry II		3/1
CHEM 623	Introductory Environmental Chemistry		3
CHEM 624	Aquatic Chemistry	=MSCI 624	3
<b>From the Earth and Marine Sciences</b>			
GEOL 202 or 302	Rocks and Minerals		4

GEOL 305	Earth Systems Through Time		4
GEOL 315	Surface and Near Surface Processes		4
GEOL 335	Processes of Global Environmental Change	=MSCI 335	4
GEOL 371	A View of the River		3
GEOL 524	Environmental Radioisotope Geochemistry	=MSCI 524	3
GEOL 548	Environmental Geophysics		4
GEOL 557	Coastal Processes	=MSCI 557	3
GEOL 560	Earth Resource Management		3
GEOL 570	Environmental Hydrogeology		3
GEOL 571	Soil Hydrology		4
GEOL 575	Numerical Modeling for Earth Science Applications		3
GEOL 581	Estuarine Oceanography	=MSCI 581	3
MSCI 305	Ocean Data Analysis		3
MSCI 311	Biology of Marine Organisms		4
MSCI 313	Chemistry of the Sea		4
MSCI 314	Physical Oceanography		4
MSCI 450	Principles of Biological Oceanography	=BIOL 450	3
MSCI 521	Introduction to Geochemistry	=GEOL 521	3
MSCI 552	Population Genetics	=BIOL 552	4
MSCI 575/L	Marine Ecology	=BIOL 575/L	3/1
MSCI 579	Air-Sea Interaction	=GEOL 579	3
MSCI 582	Marine Hydrodynamics	=GEOL 582	3
<b>From the Geographical Sciences:</b>			
GEOG 202	Weather and Climate		4
GEOG 343	Human Impact on the Environment		3
GEOG 346	Climate and Society		3
GEOG 347	Water as a Resource		3
GEOG 363	Geographic Information Systems		3
GEOG 371	Air Pollution Climatology		3
GEOG 546	Applied Climatology		4
GEOG 547	Fluvial Geomorphology		3
GEOG 549	Water and Watersheds		3
GEOG 562	Satellite Mapping and the Global Positioning System		3
GEOG 563	Advanced Geographic Information Systems		3
GEOG 564	GIS-Based Modeling		3
GEOG 567	Long-Term Environmental Change	=GEOL 567	3
GEOG 568	Human Dimensions of Global Environmental Change		3
GEOG 569	Environment and Development	=ANTH 569	3
GEOG 573	Climatic Change and Variability		3
<b>From Mathematics, Statistics and Engineering</b>			
CSCE 206	Scientific Applications Programming		3
CSCE 567	Visualization Tools		3

ECHE 300	Chemical Process Principles		3
ECHE 310	Introductory Chemical Engineering Thermodynamics		3
ECHE 311	Chemical Engineering Thermodynamics		3
ECHE 567	Process Safety, Health and Loss Prevention		3
ECHE 589	Special Advanced Topics in Chemical Engineering		3
ECIV 350/L	Introduction to Environmental Engineering		3/1
ECIV 362	Introduction to Water Resources Engineering		3
ECIV 405	Systems Applications in Civil Engineering		3
ECIV 551	Elements of Water and Wastewater Treatment		3
ECIV 555	Principles of Municipal Solid Waste Engineering		3
ECIV 556	Air Pollution Control Engineering		3
ECIV 557	Sustainable Construction for Engineers		3
ECIV 558	Environmental Engineering Process Modeling		3
ECIV 560	Open Channel Hydraulics		3
ECIV 562	Engineering Hydrology		3
ECIV 563	Subsurface Hydrology		3
ECIV 570	Land Development for Engineers		3
EMCH 290	Thermodynamic Fundamentals	=ENCP 290	3
EMCH 529	Sustainable Design and Development		3
EMCH 553	Nuclear Fuel Cycles		3
EMCH 592	Introduction to Combustion		3
EMCH 594	Solar Heating		3
EMCH 597	Thermal Environmental Engineering		3
ENCP 290	Thermodynamic Fundamentals		3
ENCP 540	Environmentally Conscious Manufacturing		3
MATH 241	Vector Calculus		3
MATH 242	Elementary Differential Equations		3
MATH 523	Mathematical Modeling of Population Biology		3
STAT 516	Statistical Methods II		3
STAT 518	Nonparametric Statistical Methods		3
STAT 520	Forecasting and Time Series	=MGSC 520	3
STAT 528	Environmental Statistics		3
STAT 540	Computing in Statistics		3
<b>From the Health Sciences:</b>			
ENHS 321	Environmental Pollution and Health	=ENVR 321	3
ENHS 323	Global Environmental Health	=ENVR 323	3
ENHS 660	Concepts of Environmental Health Science		3
ENHS 665	Biofilms in Environmental Health and Disease		3
ENHS 670	Environmental Pollutants and Human Health		3
<b>Research Methods courses</b> (none required; but if selected, only one of these may be taken for major credit):			
CSCE 145	Algorithmic Design I		4
EMCH 111	Introduction to Engineering Graphics & Visualization	=ECIV 111	3
ECIV 111	Intro to Engineering Graphics & Visualization	=EMCH 111	3



## Environmental Science Degree Requirements: Carolina Core

	(Credits)
<input type="checkbox"/> <b><u>CMW Written Communication (Grade of C or higher required)</u></b>	
<input type="checkbox"/> ENGL-101	(3)
<input type="checkbox"/> ENGL-102 (also fills INF Overlay when taken here)	(3)
<input type="checkbox"/> <b><u>ARP Analytical Reasoning &amp; Problem Solving (grade of C or Higher required)</u></b>	
<input type="checkbox"/> MATH 141	(4)
<input type="checkbox"/> MATH 142	(4)
<input type="checkbox"/> STAT 515	(3)
<input type="checkbox"/> CSCE 102 (or higher)	(3)
<input type="checkbox"/> <b><u>SCI Scientific Literacy</u></b>	
<input type="checkbox"/> BIOL 101/101L or MSC1 101 (*Note: must take either both BIOL or both MSC1)	(4)
<input type="checkbox"/> BIOL 102/L or MSC1 102	(4)
<input type="checkbox"/> PHYS 201/201L- General Physics I or 211/211L: Essentials of Physics I	(3/1)
<input type="checkbox"/> GEOL 101 or 201 or GEOG 201	(4)
<input type="checkbox"/> CHEM 111/111L - General Chemistry I	(3/1)
<input type="checkbox"/> CHEM 112/111L - General Chemistry II	(3/1)
<input type="checkbox"/> <b><u>Global Citizenship &amp; Multicultural Understanding</u></b>	
<input type="checkbox"/> <b>GFL Communicating Effectively In More Than One Language</b> Foreign Language thru 122 level (0-9 credits) (may include language 109, 110 (or 121) and 122)	
<input type="checkbox"/> <b>GHS Historical Thinking</b>	
<input type="checkbox"/> History: 100-level US	(3)
<input type="checkbox"/> History: 100-level non US or FILM 300, GERM 280, or HIST 214	(3)
<input type="checkbox"/> <b>GSS Social Sciences</b>	
<input type="checkbox"/> POLI 201 - American National Government	(3)
<input type="checkbox"/> ECON 221, 223 or 224 (Micro- or Introduction to Economics)	(3)
<input type="checkbox"/> ENVR 548 or POLI 478 or POLI 477	(3)
<input type="checkbox"/> <b><u>AIU Aesthetic &amp; Interpretive Understanding</u></b>	
<input type="checkbox"/> 3 Credits from Fine Arts or Literature: 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)
<input type="checkbox"/> 3 Credits from Ethics: ENVR 322 Environmental Ethics; or PHIL 312, 320-325, 360, 514 or 550	(3)

(over)



**Overlay**



A. CMS Persuasive Communication

PHIL 325; SAEL 200; SPCH 140



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**

(Credits)

**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)



ECTV 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 500-level; no more than three courses from a single discipline; no more than one research methods class; see handbook for courses from which to select*



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**128 Credits needed for graduation (includes electives; does not include PEDU, Band and other one-credit performance courses)**

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## **CURRICULUM FOR THE B.A. IN ENVIRONMENTAL STUDIES**

(see also 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.

COURSE #	COURSE TITLE	CROSS-LISTED	CREDITS
<b>From the Environment and Sustainability Program:</b>			
ENVR 295	Green Technology in Germany	=GERM 295	3
ENVR 321	Environmental Pollution and Health	=ENHS 321	3
ENVR 322	Environmental Ethics	=PHIL 322	3
ENVR 323	Global Environmental Health	=ENHS 323	3
ENVR 331	Integrating Sustainability		3
ENVR 399	Independent Study		1-6
ENVR 460	Congaree National Park: Field Investigations in Environmental Science		4
ENVR 490	Special Topics in Sustainability & the Environment		1-4
ENVR 499	Research in Environmental Science		1-3
ENVR 500	Environmental Practicum		3
ENVR 501	Special Topics in the Environment		3
ENVR 531	Sustainability Management & Leadership Strategies		3-4
ENVR 548	Environmental Economics	=ECON 548	3
ENVR 571	Conservation Biology	=BIOL 571	3
ENVR 572	Freshwater Ecology	=BIOL 572	3
ENVR 590	Environmental Issues Seminar		3
<b>From the Humanities:</b>			
ENGL 434	Environmental Literature		3
ENGL 462	Technical Writing		3
GERM 295	Green Technology in Germany	=ENVR 295	3
HIST 448	American Environmental History		3
HIST 492-494	Topics in History (when appropriate)		3
PHIL 320	Ethics		3
PHIL 321	Medical Ethics		3
PHIL 322	Environmental Ethics	=ENVR 322	3
PHIL 323	Ethics of Science and Technology		3
PHIL 324	Business Ethics		3
PHIL 325	Engineering Ethics		3
PHIL 535	Ecofeminism		3
SPCH 331	Organizational Communication		3
SPCH 380	Persuasive Communication		3
SPCH 464	Speechwriting		3

<b>From Hospitality, Retail and Sport Management:</b>			
HRTM 383	Ecotourism		3
HRTM 428	Sustainable Food Service Systems		3
HRTM 482	Sustainable Tourism Planning and Policy		3
HRTM 485	Sustainable Tourism		3
<b>From the Social Sciences:</b>			
ANTH 208	Anthropology of Globalization and Development		3
ANTH 212	Food and Culture		3
ANTH 213	Ethnobotany: Plants and Peoples		3
ANTH 513	Anthropological Ethnobotany		3
ANTH 525	Ethnoecology		3
ANTH 569	Environment and Development	=GEOG 569	3
ECON 500	Urban Economics		3
ECON 508	Law and Economics		3
ECON 509	Economics of Sustainable Development		3
ECON 548	Environmental Economics	=ENVR 548	3
ECON 594	Introduction to Econometrics		3
POLI 365	State Government		3
POLI 368	Interest Groups and Social Movements		3
POLI 370	Introduction to Public Administration		3
POLI 373	Regulatory Policies		3
POLI 374	Public Policy		3
POLI 431	Science, Technology, and Public Policy		3
POLI 452	The Judicial Process		3
POLI 462	The Legislative Process		3
POLI 463	The American Chief Executive		3
POLI 465	Psychology and Politics		3
POLI 470	Federalism and Intergovernmental Relations		3
POLI 477	Green Politics		3
POLI 478	Environmental Policy		3
PSYC 487	Community Psychology		3
SOCY 308	Community Organization		3
SOCY 310	Social Demography		3
SOCY 311	Ecology of Human Social Systems		3
SOCY 315	World Population: Problems and Policies		3
SOCY 501	Cities and Politics		3
SOCY 514	Urbanization		3
SOCY 550	Sociology of Science		3
<b>From the Geographical Sciences:</b>			
GEOG 202	Weather and Climate		4
GEOG 321	Cities, Environmental Transformation, and Sustainability		3
GEOG 324	Cities, Environmental Transformation, and Sustainability		3
GEOG 324	Landscapes of the United States		3

GEOG 330	Geography of Disasters		3
GEOG 341	Cartography		3
GEOG 343	Human Impact on the Environment		3
GEOG 345	Interpretation of Aerial Photographs		3
GEOG 346	Climate and Society		3
GEOG 347	Water as a Resource		3
GEOG 348	Biogeography		3
GEOG 360	Geography of Wind		3
GEOG 363	Geographic Information Systems		3
GEOG 511	Planning and Locational Analysis		3
GEOG 516	Coastal Zone Management		3
GEOG 521	Landscapes of South Carolina		3
GEOG 530	Environmental Hazards		3
GEOG 541	Advanced Cartography		3
GEOG 545	Synoptic Meteorology		4
GEOG 563	Advanced Geographic Information Systems		3
GEOG 564	GIS-Based Modeling		3
GEOG 566	Social Aspects of Environmental Planning and Management		3
GEOG 568	Human Dimensions of Global Environmental Change		3
GEOG 569	Environment and Development	=ANTH 569	3
GEOG 570	Geography of Public Land and Water Policy		3
<b>From the Natural Sciences:</b>			
BIOL 524	Mycology		4
BIOL 525	Marine Plants		4
BIOL 526	The Fall Flora		4
BIOL 527	The Spring Flora		4
BIOL 528	The Summer Flora		4
BIOL 534	Animal Behavior		3
BIOL 536	Ichthyology	=MSCI 536	4
BIOL 570/L	Principles of Ecology		3/1
BIOL 575/L	Marine Ecology	=MSCI 575/L	3/1
GEOL 202 or 302	Rocks and Minerals		4
GEOL 315	Surface and Near Surface Processes		4
GEOL 335	Processes of Global Environmental Change	=MSCI 335	4
GEOL 371	A View of the River		3
GEOL 520	Isotope Geology and Geochronology		3
GEOL 560	Earth Resource Management		3
MSCI 311	Biology of Marine Organisms		4
MSCI 390	Policy and Marine Science		3
MSCI 536	Ichthyology	=BIOL 536	4
MSCI 575/L	Marine Ecology	=BIOL 575/L	3/1

<b>From Journalism and Communications:</b>			
JOUR 302	History and Philosophy of the Mass Media		3
JOUR 303	Law and Ethics of the Mass Media		3
JOUR 306	Theories of Mass Communications		3
JOUR 310	Mass Media and Society		3
JOUR 311	Minorities, Women and the Mass Media		3
JOUR 501	Freedom, Responsibility and Ethics of the Mass Media		3
JOUR 506	Mass Media Criticism		3
JOUR 540	Magazine Article Writing		3
JOUR 542	Public Opinion and Persuasion		3
JOUR 562	Communicating Science, Health and the Environment		3
JOUR 571	Faith, Values and the Mass Media		3
MART 321	Writing for Media		3
MART 371	The Moving Image		3
MART 380	New Media Art		3
<b>From Mathematics, Statistics and Engineering</b>			
EMCH 529	Sustainable Design and Development		3
<b>From the Health Sciences:</b>			
ENHS 321	Environmental Pollution and Health	=ENVR 321	3
ENHS 323	Global Environmental Health	=ENVR 323	3
ENHS 592	Advanced Special Topics in Environmental Health		3
ENHS 660	Concepts of Environmental Health Science		3
ENHS 662	Industrial Health Programs		3
ENHS 665	Biofilms in Environmental Health and Disease		3
ENHS 670	Environmental Pollutants and Human Health		3
ENHS 671	From Air to Alveoli: Exposure Science		3
ENHS 675	Infectious Disease Ecology		3

## Environmental Studies Degree Requirements: Carolina Core

	(Credits)
<input type="checkbox"/> <b><u>CMW Written Communication</u></b> (grade of 'C' or higher; must be completed in first 60 hours)	
<input type="checkbox"/> ENGL-101	(3)
<input type="checkbox"/> ENGL-102 (also fills INF Overlay when taken here)	(3)
<input type="checkbox"/> <b><u>ARP Analytical Reasoning &amp; Problem Solving</u></b>	
<input type="checkbox"/> MATH 122 or 141	(3 or 4)
<input type="checkbox"/> STAT 201, 205, 509 or 515	(3)
<input type="checkbox"/> <b><u>SCI Scientific Literacy</u></b>	
<input type="checkbox"/> BIOL 101/101L, 102/102L or MSCI 101, 102	(8)
<input type="checkbox"/> CHEM 111/111L - General Chemistry I	(3/1)
Select one:	
<input type="checkbox"/> ENVR 101 and 101L	(4)
<input type="checkbox"/> GEOL 101, 103 or 201	(4)
<input type="checkbox"/> GEOG 201 Landform Geography	(4)
<input type="checkbox"/> <b><u>Global Citizenship &amp; Multicultural Understanding</u></b>	
<input type="checkbox"/> <b>GFL Communicating Effectively In More Than One Language</b> Foreign Language thru 122 level (0-9 credits) (may include language 109, 110 (or 121) and 122)	
<input type="checkbox"/> <b>GHS Historical Thinking</b>	
<input type="checkbox"/> History: 100-level US	(3)
<input type="checkbox"/> History: 100-level non US or FILM 300, GERM 280, or HIST 214	(3)
<input type="checkbox"/> <b>GSS Social Sciences</b>	
<input type="checkbox"/> POLI 201 - American National Government	(3)
<input type="checkbox"/> ECON 221, 223 or 224 (Micro- or Introduction to Economics)	(3)
<input type="checkbox"/> <b><u>AIU Aesthetic &amp; Interpretive Understanding</u></b>	
<input type="checkbox"/> 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; 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)
<input type="checkbox"/> _____	(3)
<input type="checkbox"/> _____	(3)
<input type="checkbox"/> _____	(3)

(over)



**Overlay**



A. CMS Persuasive Communication

PHIL 325; SAEL 200; SPCH 140



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 Studies Degree Requirements: Major Requirements**

(Credits)

**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*



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**120 Credits needed for graduation (includes electives; does not include PEDU, Band and other one-credit performance courses)**

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## **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 322 – Environmental Ethics  
ENVR 331 – Integrating Sustainability  
ENVR 399 - Independent Study  
ENVR 490 – Special Topics in Sustainability and the Environment



ENVR 531 Sustainability Management and Leadership Strategies  
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 323 – Global Environmental Health  
ENVR 331 – Integrating Sustainability  
ENVR 399 - Independent Study  
ENVR 460 – Congaree National Park: Field Investigations in Environmental Science  
ENVR 490 – Special Topics in Sustainability and the Environment (selected topics)  
ENVR 499 – Research in Environmental Science  
ENVR 501 – Special Topics in the Environment (selected topics)  
ENVR 531 – Sustainability Management and Leadership Strategies  
ENVR 571 – Conservation Biology  
ENVR 572 – Freshwater Ecology  
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 PROGRAM**

### **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 121 - Green Explorations (3 credits)**

Interdisciplinary seminar combining the intellectual exploration of ecological perspectives with the physical exploration of the local environment. First-year students only.

Cross-listed Course: POLI 121

### **ENVR 122 - Green Engagements (3 credits)**

Interdisciplinary seminar on designing, researching, and implementing collaborative projects to promote ecological sustainability. First-year students only.

Cross-listed Course: POLI 122

### **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 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 490 - Special Topics in Sustainability and the Environment (1-4 credits)**

Current developments in sustainability and global environmental issues selected to meet faculty and student interests. May be repeated as content varies by suffix and title.

**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 (3 credits)**

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 conservation 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.



## FACULTY IN THE ENVIRONMENT AND SUSTAINABILITY PROGRAM

Faculty in the Environment and Sustainability Program include 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&SP, and associate faculty at the Columbia campus, are listed in the directory below (a complete list of associate faculty may be found on the Program's website: [www.envIRON.sc.edu](http://www.envIRON.sc.edu))

### Administration:

Dr. Gwendelyn Geidel, Program Director and Undergraduate Director. PSC 108, 803-777-7171, [geidel@sc.edu](mailto:geidel@sc.edu).

Dr. Carol Boggs, School of the Earth, Ocean & Environment Director. EWS 603, 803-777-3921, [boggscl@mailbox.sc.edu](mailto:boggscl@mailbox.sc.edu).

Shelley Schlenk, Undergraduate Coordinator. PSC 108, 803-777-6163, [schlenk@mailbox.sc.edu](mailto:schlenk@mailbox.sc.edu).

Jacqueline McClary, Student Services. EWS 603, 803-777-9823, [mcclaryj@mailbox.sc.edu](mailto:mcclaryj@mailbox.sc.edu).

Krista Russell, Administrative Assistant. EWS 603, 803-777-3921, [krussell@sc.edu](mailto:krussell@sc.edu).

### Tenure Track Faculty:

Jessica Barnes, Ph.D., Columbia University, 2010. Assistant Professor. Water resources, agriculture, climate change.

Carol Boggs, Ph.D., University of Texas at Austin, 1979. Evolutionary, functional and behavioral ecology with applications to conservation and environmental issues.

Conor Harrison, Ph.D., University of North Carolina, Chapel Hill, 2014. Assistant Professor. Economic geography, natural resources, energy.

David Kneas, Ph.D., Yale University, 2014. Assistant Professor. Political ecology, environmental history, Latin America.

Thomas Lekan, Ph.D. University of Wisconsin-Madison, 1999. Environmental History.

Neal Woods, Ph.D., University of Kentucky, 2003. Associate Professor. Environmental policy.

### Research Professors:

Phillip E. Barnes, Ph.D., Erasmus University, Netherlands, 2000. Research Professor Emeritus. Industrial Ecology, Sustainability, Environmental Management Systems Integration, and Brownfield Redevelopment.

Jennifer R. Pournelle, Ph.D., University of California, San Diego, 2003. Research Assistant Professor. Landscape Archaeology, satellite remote sensing in archaeology, wetland cultural ecology, environmental security, Middle East, MEERM Internship option.

### Associate Faculty and Their Home Departments:

#### College of Arts and Sciences

##### *Department of Anthropology*

Joanna L. Casey, Ph.D., University of Toronto, 1993

Kenneth G. Kelly, Ph.D., University of California, Los Angeles, 1995

Gail E. Wagner, Ph.D., Washington University, St. Louis, 1987

*Department of Art*

David W. Voros, M.F.A., Indiana University, 1994

*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

*Department of Biological Sciences*

Ronald Benner, Ph.D., University of Georgia, 1984

Carol L. Boggs, Ph.D., University of Texas at Austin, 1979

Erin Connolly, Ph.D., University of California, 1997

Berten E. Ely III, Ph.D., Johns Hopkins University, 1973

Robert Friedman, Ph.D., University of South Carolina, 2002

Austin L. Hughes, Ph.D., Indiana University, 1984

Lazlo Marton, Ph.D., Jozsef Attila University, 1976

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

Roger H. Sawyer, Ph.D., University of Massachusetts, 1970

Dan Tufford, Ph.D., University of South Carolina, 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

Edward R. Carr, Ph.D., University of Kentucky, 2002; Ph.D., Syracuse University, 2001

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

John R. Jensen, Ph.D., University of California, Los Angeles, 1976

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

*Earth and Ocean Sciences*

Claudia Benitez-Nelson, Ph.D., Massachusetts Institute of Technology, 1999  
Subrahmanyam Bulusu, Ph.D., Satellite Oceanography, National Oceanography Center, University of Southampton, England, 1998  
Gwendelyn Geidel, Ph.D., J.D., University of South Carolina, 1982, 1989  
Camelia Knapp, Ph.D., Cornell University, 2000  
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  
Scott M. White, Ph.D., University of California, Santa Barbara, 2001  
Alicia Wilson, Ph.D., Johns Hopkins University, 1999  
Alexander E. Yankovsky, Ph.D., Physical-Mathematical Sciences/Geophysics, Marine Hydrophysical Inst., Sevastopol, USSR (now Ukraine), 1991

*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*

Laura Woliver, Ph.D., University of Wisconsin, 1986  
Neal Woods, Ph.D., University of Kentucky, 2003.

*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

*USC's Collaborative Research and Program Development*

Heidi Mills, Ed.D., Indiana University, 1986

*Institute for Public Service and Policy Research*

Robert W. Oldendick, Ph.D., University of Cincinnati, 1977

Moore School of Business

Kathleen M. Whitcomb, Ph.D., University of Minnesota, 1989  
Douglas F. Woodward, Ph.D., University of Texas at Austin, 1986



### College of Education

Stephen Thompson, Ph.D., Vanderbilt University, 2002

### College of Engineering and Computing

#### *Department of Chemical Engineering*

Francis A. Gadala-Maria, Ph.D., Stanford University, 1979

Michael A. Matthews, Ph.D., Texas A&M University, 1986

Branko N. Popov, Ph.D., University of Zagreb, 1972

James A. Ritter, Ph.D., State University of New York at Buffalo, 1989

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

Jonathan Goodall, Ph.D., University of Texas at Austin, 2005

Jasim Imran, Ph.D., University of Minnesota, 1997

Anthony S. McAnally, Ph.D., Auburn University, 1989

Michael E. Meadows, Ph.D., University of Tennessee, 1976

Charles A. Pierce, Ph.D., Northwestern University, 1998

Richard P. Ray, Ph.D., University of Michigan, 1983

#### *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

Mancke, III, Rudolph "Rudy" E., 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

### School of Medicine

#### *Department of Cell Biology and Anatomy*

Charles A. Blake, Ph.D., University of California, Los Angeles, 1972

#### *Department of Pathology, Microbiology and Immunology*

Alvin Fox, Ph.D., University of Leeds, 1976

### 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

Charles E. Feigley, Ph.D., University of North Carolina, 1978

W. Joe Jones, Ph.D., University of California, 2001.

Dwayne E. Porter, Ph.D., University of South Carolina, 1995

Sarah E. Rothenberg, D. Env, University of California, 2007

*Department of Epidemiology and Biostatistics*

James R. Hebert, Sc.D., Harvard University, 1984

*Department of Communication Sciences and Disorders*

Elaine M. Frank, Ph.D., University of South Carolina, 1988



# 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](mailto: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)