

Integrated Environmental Sciences

<p>FRESHMAN FALL (14 CREDITS)</p> <p>CTZN 110: Inquiry into Citizenship or ENGL 165 (3) EASC 211: Env. Geology or BIOL 120: Inter. Biology (4) * ENSC 100: Prof. Edu. Dev. for IES Majors (1) ^ ENSC 162: Explorations in Environmental Science (3) ^ MATH 171: Statistical Decision Making (3) **</p>	<p>FRESHMAN SPRING (16 CREDITS)</p> <p>ENGL 165: Writing & Rhetoric or CTZN 110 (3) EASC 212: Atmospheric Science (4) ^ or BIOL 251: Intro. to Ecology & Evolution (4) ^* ECON 217: Principles of Microeconomics (3)** 2 Civitae Pillar Courses (6)</p>
<p>SOPHOMORE FALL (14 CREDITS)</p> <p>EASC 211: Environmental Geology (4) or BIOL 120: Integrative Biology (4) * GEOG 275: Intro to GIS (4) or CHEM 111: Chemistry I (4) Civitae Pillar Course (3) Elective (3)</p>	<p>SOPHOMORE SPRING (17 CREDITS)</p> <p>ENSC 201: Integrated Environmental Investigations (4) ^ EASC 212: Atmospheric Sci. or BIOL 251: I Eco & Evol (4) * Civitae Perspectives Course (3) Civitae Pillar Course (3) Elective (3)</p>
<p>JUNIOR FALL (16-17 CREDITS)</p> <p>ENSC 340: Global Environmental Issues (3) ^* CHEM 111: Chemistry I or GEOG 275: Intro to GIS (4) Concentration Elective (3-4)* Civitae Perspectives Course (3) Elective (3)</p>	<p>JUNIOR SPRING (14-15 CREDITS)</p> <p>ENSC 380: Intro to Environmental Law & Policy (3) ENSC 490, 492, 496 or 498 (1) * Concentration Elective (3) * Civitae Perspectives Course (3) Elective (3)</p>
<p>SENIOR FALL (13-15 CREDITS)</p> <p>ENSC 401: Environmental Planning & Management (4) ^* PHYS 103: Conceptual Physics or Civitae Symposium (3-4) Concentration Elective (3-4) * Elective (3)</p>	<p>SENIOR SPRING (15-17 CREDITS)</p> <p>ENSC 402: Environmental Decision Making (3) ^* Civitae Symposium or PHYS 103: Conceptual Physics (3-4) Concentration Elective (3-4) * 2 Electives (6)</p>

Note: Students may need additional electives to meet university 120 credit minimum requirement.

^These courses MUST be taken in the semester that they are listed. * All IES majors are required to declare a concentration. **Students not as comfortable in math may switch these two courses.

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AFTER GRADUATION

Students who earn a degree in Integrated Environmental Sciences find employment in a variety of settings. We tracked recent graduates of the program, and here's what some of them are doing:

- Graduate Students, Univ. of Georgia, Virginia Tech, & UNC Wilmington
- GIS Professional and Land Surveyor, Dewberry
- Environmental Health Specialist, Virginia Department of Health
- Animal Care & Training Intern, Mote Marine Laboratory & Aquarium
- Environmental Scientist, Stantec
- Hydrologic Technician, U.S. Geological Survey
- Code Compliance Inspector, Roanoke County Community Development
- Environmental Compliance Project Manager, DFM Development Services
- Middle School Science Teacher, Dinwiddie Middle School
- GIS Analyst at Collier Engineering Co., Inc.
- Stormwater Inspector at Roanoke County

GRADUATE PROFILE

DJ Lettieri, class of 2015



DJ works as First Mate aboard the M/V OCEARCH, a shark research vessel that carries teams of scientists out to tag and sample great white sharks and tiger sharks. His responsibilities include taking care of the 130ft vessel as well as helping in the capture, tag, and release of the sharks.

DJ studied with several environmental science faculty members as an undergraduate. He mentions that working in Dr. Fortino's lab helped him decide

that he really wanted to do field work and research after graduation. "My Longwood experience helped me in my professional role by putting me in many field work situations as both an individual and as a member of a team. The education and experience I gained allowed me to work side-by-side with scientists who are experts in their respective fields. My preparation allows me to be a more productive steward to the scientific community because my colleagues trust me to help them retrieve, capture, and process samples for their studies."

COMMON MINORS

Most minors require about 18 credits, or 6 classes. Some of these classes will also count for Core Curriculum requirements, making the addition of a minor as simple as enrolling in one class per semester.

Common minors for students of Integrated Environmental Sciences include:

- Biology
- Chemistry
- Communication Studies
- Economics
- Geography
- Geographic Information Science (GIS)
- Outdoor Education
- Photography
- Political Science

GRADUATE PROFILE

Kaitlyn Dobyens, class of 2018

Kaitlyn is a GIS analyst (Team Lead) at Collier Engineering Company. She says that the environmental science program, especially the senior capstone project with Dr. Gee and the field components related to a class called Watershed Monitoring & Assessment, prepared her for her professional role by teaching her how to think of information in terms of application: "Most of my upper-level courses had free-response exams where I had to defend my solution depending on the scenario. I have learned in my time after graduating that the workforce functions just the



same. There hardly ever is a right answer, especially when it comes to the environmental or engineering sector. It's more about selecting the best solution that works for a client and supporting that choice."

Kaitlyn also speaks highly of her internship experience: "I took a position as a GIS Intern in Nashville, TN during the summer between my last two years at Longwood. That experience gave me an opportunity

to work for the company post-graduation and to really expand upon my own knowledge of what GIS is and what it can do."