UF Herbert Wertheim College of Engineering
UNIVERSITY of FLORIDA

ENGINEERING SCHOOL OF SUSTAINABLE INFRASTRUCTURE & ENVIRONMENT

DEPARTMENT OF CIVIL & COASTAL ENGINEERING
DEPARTMENT OF ENVIRONMENTAL ENGINEERING SCIENCES

GRADUATE PROGRAMS

The Engineering School of Sustainable Infrastructure & Environment (ESSIE) continues to improve and advance sustainability through a nexus of the civil, coastal, environmental and oceanographic programs.

ESSIE is comprised of the **Department of Civil and Coastal Engineering** and the **Department of Environmental Engineering Sciences**.

ESSIE BY THE NUMBERS

#4

CIVIL AND ENVIRONMENTAL PROGRAM IN GRADUATING WOMEN AND UNDERREPRESENTED MINORITIES, ACCORDING TO ASEE

#18

BEST PUBLIC CIVIL ENGINEERING GRADUATE PROGRAM, ACCORDING TO THE 2020 U.S. NEWS & WORLD REPORT

#20

BEST PUBLIC ENVIRONMENTAL ENGINEERING GRADUATE PROGRAM, ACCORDING TO THE 2020 U.S. NEWS & WORLD REPORT

For more information, please visit:
essie.ufl.edu/graduate

POWERING THE NEW ENGINEER
TO TRANSFORM THE FUTURE

ESSIE.UFL.EDU

Admissions Checklist

- Graduate Admissions Application:
  admissions.ufl.edu/apply/graduate
- Include the following information:
  1. **College:** EG
  2. **Program:** Civil Engineering (CE); Coastal and Oceanographic Engineering (COA); or Environmental Engineering Sciences (EES)
  3. **Research/Specialization** (required)
  4. Approximately 24-48 hours after submitting an application, you will receive an email with information on how to set-up the check status page.
- Statement of Purpose
- Three Letters of Recommendation
- 3.0 Upper-Division GPA
  ***NOTE:** We recommend international applicants use the **Foreign Credits, Inc. GPA Calculator**.*
- Official Transcripts
- Official Test Scores or FE/PE Verification
- Resume (optional)
- Background courses

APPLY TODAY

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Building Tomorrow's Leaders

ESSIE is uniquely comprehensive in its ability to address new research on civil, coastal, environmental, infrastructure and community needs. Our suite of academic and research programs foster the multidisciplinary collaborations needed to address today's and tomorrow's challenges. Our research thrusts fall into several broad areas.

HAZARDS ENGINEERING
- Flooding and Wind
- Traffic Congestion
- Geosystem Hazards
- Pollution (Air/Water/Soil)
- Blast

SUSTAINABLE MATERIALS MANAGEMENT
- Water and Wastewater Systems
- Nutrients and Solid Waste
- Air, Soil, and Hydraulic Systems
- E-Waste

TRANSPORT SYSTEMS
- Transport Systems for People, Vehicles, Water, Wastewater, Stormwater, and Solid Waste
- Design Transportation System Elements

21ST CENTURY ENGINEER
- Sensors for the Natural and Built Environment
- Data Analytics and Machine Learning

HEALTH ENGINEERING
- Modeling Brain Cognition
- Aerosol Hazards
- Transport of Waterborne Pathogens

COASTAL ECOSYSTEM DYNAMICS
- System Ecology
- Wetlands and Saltmarshes
- Ecological Engineering
- Estuaries and Aquifers

AREAS OF SPECIALIZATION

Each of our research thrusts requires contributors from the traditional civil, coastal and environmental disciplines. Graduate students may seek academic training and research opportunities in one or more of the following disciplines. Visit **essie.ufl.edu/research** to learn more.

AIR RESOURCES
The group studies how air pollutants are created, designs measurement techniques, devises control technologies, models the fate of the pollutants, evaluates health effects, and characterizes composition of past, present, and future atmospheres.

COASTAL & OCEANOGRAPHIC ENGINEERING
The program is composed of faculty with a wide range of research interests in coastal physical processes. Faculty teach a variety of graduate courses while implementing state-of-the-art pedagogic methods.

COASTAL ECOSYSTEM DYNAMICS (CESD)
This program is striving to advance fundamental science, provide solutions for resilient coastal communities, and train the next generation of scientists and engineers to succeed in academic and non-academic careers.

ENGINEERING EDUCATION COLLABORATIVE
The program is a group of faculty who conduct research around all aspects of engineering formation. Research ranges from fundamental studies on the engineering education ecosystem to implementation of new approaches for the education of students.

ENVIRONMENTAL NANOTECHNOLOGY
The group investigates the implication of manufacturing and tailoring of nanomaterials to environmental ecosystems as well as the development of nanodevices and nanostructured materials for environmental remediation, energy production, and sustainable manufacturing.

GEOSYSTEMS ENGINEERING
This program focuses on geotechnical and geoenvironmental solutions through collaborative efforts of multidisciplinary faculty in five interdependent and mutually reinforcing areas: soil structure interaction, geophysical testing and nondestructive evaluation, computational poro-geomechanics, smart waste management, and beneficial use of waste materials.

MATERIALS & PAVEMENT
The group is devoted to promoting sustainable practices in pavement engineering, enhance understanding of distress mechanisms and failure modes, develop testing and conditioning procedures to improve material characterization, and develop design approaches for pavement systems that optimize performance.

NEW INFRASTRUCTURE PLANNING
Research focus areas include smart cities, community solar, smart meters, mitigating the impacts of wastewater infiltration, vehicle charging stations, high-speed rail, climate change, facilitative decision making, infrastructure management, work zone safety, in-situ pipe repair, oil spill, radon mitigation, flowable fill, quality control and assurance.

STRUCTURAL ENGINEERING
This program includes infrastructure system response to extreme-event loading, durability of infrastructure and materials, health monitoring, evaluation and strengthening of existing structures, and the development of construction methods to improve long-term sustainability of new infrastructure.

SUSTAINABLE CONSTRUCTION ENGINEERING
Our academic and research focus is on the delivery of heavy civil infrastructure projects. Graduates are prepared to plan, manage, and provide engineering support on heavy civil projects.

SUSTAINABLE MATERIALS MANAGEMENT
This program focuses on reduction, resource and energy extraction, recycling and beneficial reuse, and sustainable disposal of domestic solid waste streams and industrial byproducts.

SYSTEMS ECOLOGY & ECOLOGICAL ENGINEERING
Our program provides students with an integrative education in science, engineering and policy that prepares them to develop interdisciplinary solutions, design novel engineering tools, and articulate creative policies to address a range of environmental challenges.

TRANSPORTATION ENGINEERING
Transportation engineers pursue innovative solutions to meet urban and regional mobility needs. Current research initiatives focus on autonomous and connected vehicles, big data in transportation, safety analysis, and infrastructure. The UF Transportation Institute (UFTI) provides extensive and transdisciplinary research opportunities.

WATER SYSTEMS
This group develops the science and engineering for conveyance, treatment and reuse of potable, wastewater and stormwater, manage water resources, model and measure chemicals, particulate matter and pathogens impacting water resources, and assess the human and environmental health impacts while modeling the components of the hydrologic cycle and the impacts of climate on water resources, human and environmental health.

Graduate Degree Programs

DEPARTMENT OF CIVIL & COASTAL ENGINEERING

As a department with a strong emphasis on social consciousness, we continue to graduate students who make outstanding contributions to the public through business, industry, education, and government.

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DEPARTMENT OF ENVIRONMENTAL ENGINEERING SCIENCES

The department is a leader in interdisciplinary programs aimed at solving environmental problems and as a major on campus crucible for identification, conceptualization and resolution of environmental issues.

ESSIE.UFL.EDU/EES

Application Deadlines

U.S.
Master's & Doctorate

- **Fall:** June 1
- **Spring:** November 15
- **Summer (only EDGE program):** March 31

Doctorate Priority Funding Consideration

- **Fall:** December 5

INTERNATIONAL
Master's & Doctorate

- **Fall:** March 1
- Spring: September 1
- Summer (only EDGE program): March 1

Latin American Caribbean Scholarship

We participate in the Latin American Caribbean Scholarship award program. Under Florida statute 1009.21, full-time students who are a citizen of a Latin American or Caribbean country (including Puerto Rico and the U.S. Virgin Islands) and who receive scholarships from the federal or state government shall be classified as residents for tuition purposes.

"I CHOSE THIS PROGRAM BECAUSE OF THE STRONG SENSE OF COMMUNITY AND SUPPORT FROM BOTH THE FACULTY AND THE STUDENTS WHICH HAVE ALLOWED ME TO GROW PROFESSIONALLY AND PERSONALLY."

- Chad Spreadbury, E.I.
Department of Environmental Engineering Sciences