Work alongside distinguished faculty in an internationally recognized environmental engineering program known for its research in water treatment.

The environmental engineering Ph.D. program at Stevens engages students in the pursuit of research at the forefront of the field with faculty experts in water and wastewater treatment, arsenic and heavy metals, environmental remediation, physicochemical processes, and more.

In this program, Ph.D. students and researchers collaborate with international organizations and contribute to the development of solutions to global issues such as the fate, transport, and treatment of arsenic and heavy metals in water and solids, the environmental compatibility and effect of consumer products, and the development of environmentally sustainable and cost-effective technologies utilizing natural products, recycled wastes, plants, and microbes.

The environmental engineering program maintains state-of-the-art laboratories and has a vibrant sponsored research program in environmental science and technology. Ph.D. students in the program have the opportunity to publish papers in peer-reviewed journals, carry out research in well-funded, well-equipped analytical and process laboratories, and participate significantly in research around water treatment and the conversion of wastes into biofuel.

THE STEVENS ADVANTAGE

Stevens’ location is advantageous for the study of environmental engineering. The state of New Jersey is noted for its many environmental firms and remediation activities, which lead to learning opportunities and potential job possibilities for our Ph.D. candidates.

PROGRAM FEATURES

- Opportunities to participate in government- and industry-funded research at the Center for Environmental Systems, helping to solve real-world problems
- Collaboration with other universities and experience working in or with national research centers
- Involvement in research projects that receive federal funding
- Networking and recruitment events, job fairs, and guest speaker series

RESEARCH AREAS

- Water and Wastewater Treatment
- Adsorption of Contaminants at Solid/Water Interfaces
- Soil Remediation
- Phosphorus Sustainability
- Nonlinear Empirical Modeling
- Heavy Metals and Inorganics
- Biological Wastewater Treatment
- Groundwater and Wastewater
- Nanotechnology
- Environmental Sustainability
- Green Technology Development
RESEARCH IN THE DEPARTMENT OF CIVIL, ENVIRONMENTAL, & OCEAN ENGINEERING

As host to the Davidson Laboratory and the Center of Environmental Systems (CES), the civil, environmental, and ocean engineering (CEOE) department facilitates research in fields such as marine monitoring; forecasting and experimental ship design; new environmental technologies; sustainability; and structural health monitoring and high-performance construction materials.

RESEARCH PILLARS
- Resilience and Sustainability

RESEARCH CENTERS
- Davidson Laboratory: Focuses on marine monitoring and forecasting and experimental marine hydrodynamics (ship design and evaluation).
- Center for Environmental Systems: Aims at creating basic scientific knowledge, advanced technology, and innovative management practices that lead to novel solutions for a sustainable utilization of our environmental resources.

SHARED FACILITIES
- SES Machine and Electronic Shop: Enables design ideas and engineering solutions.
- High Performance Computing Cluster: Provides advanced computing infrastructure and services for research.
- Laboratory for Multiscale Imaging: Provides imaging capabilities to study both synthetic and biological materials from macroscopic to microscopic length scale.
- MicroDevice Laboratory: Explores military systems applications of emerging nanotechnologies.
- Mass Spectrometry Laboratory: Utilizes six mass analyzers that incorporate time-of-flight and quadrupolar techniques, and a variety of inlets such as electrospray, MALDI, ApCI, EI and CI.
- Prototype Object Fabrication Laboratory: Enables rapid prototyping of ideas and provides know-how for creating parts, assemblies, mechatronic and IOT enabled systems, and programming for devices/robots.