**As of Fall 2019, the Environmental Engineering Program has been renamed the Civil and Environmental Engineering Program. Students enrolled in the Environmental Engineering Program will be automatically switched to the new Civil and Environmental MS.**

# MS Environmental Engineering

## Program Description

Environmental solutions require a rigorous foundation in the life and physical sciences along with the ability to contribute in creative ways to solving interdisciplinary problems. Priority areas of faculty research include: integrated water resource management, waste management and assimilation through biological processes, environmental externalities of energy production, and coastal and urban systems. The program enables students to both gain in-depth knowledge and opportunities to seek creative interdisciplinary solutions.

## Admission

M.S. requirements

## Program of Study

The M.S. in Environmental Engineering requires a subset of Masters coursework to be taken from classes in discipline specific areas. The M.S. in Environmental Engineering requires a minimum of 33 semester hours in the Program of Study, which consists of:

- A minimum of 24 semester hours of coursework, which must include
    - 23 hours of graduate-level coursework, including
        - 9 hours of which must be selected from the Environmental Engineering Emphasis course list.
        - 12 hours of which must be from UGA courses open only to graduate students and exclusive of thesis (7300) and research (7000, 7010).
    - 1 hour of ENGR 8950 Graduate Seminar *
- A minimum of 6 hours of master's research (7000) or project-based research (7010). A typical student's research hours will exceed this minimum; however, at most 6 hours of 7000/7010 may be listed on the Program of Study.
- 3 hours of MS Thesis (7300)

** Only 1 hour of Graduate Seminar may apply on the Program of Study. Students are strongly encouraged to continue regular attendance of speaker series presentations even if not formally registered in the seminar.*

# Environmental Engineering Course List

As a requirement of the M.S. Environmental Engineering degree, students must complete a minimum of 9 credit hours selected from the list below. Students will work with their graduate advisor to select the most appropriate specialty area and coursework to ensure breadth of understanding as well as mastery of knowledge in a specific subject area. In addition to completing 9 credit hours selected from the list below, students may work with their graduate advisor to develop an interdisciplinary plan of coursework drawing from the extensive graduate course offerings available at UGA.

## Energy Systems

- ENGR 6490 Renewable Energy Engineering
- ENGR 8103 Computational Engineering
- ENVE 6230 Energy in Nature, Civilization and Engineering
- ENVE 6530 Energy and Environmental Policy Analysis
- ENVE 6250 Energy Systems and the Environment
- ENVE 8110 Ecological Energetics

## Environment and Water

- ENVE 6230 Energy in Nature, Civilization, and Engineering
- ENGR 6440 Environmental Engineering Unit Operations
- ENGR 6450 Environmental Engineering Remediation Design
- ENGR 8103 Computational Engineering
- ENVE 6410 Open Channel Hydraulics
- ENVE 6430 Advanced Open Channel Design
- ENVE 6440 Computer Modeling in Water Resources
- ENVE 6450 Engineering Hydrology and Hydraulics
- ENVE 6460 Groundwater Hydrology for Engineers
- ENGR 8160 Advanced Fluid Mechanics
- CVLE 8110 Environmental River Mechanics
- CVLE 8140 Mixing & Transport
- CRSS(GEOL) 8710 Watershed-Scale Modeling
- WASR 8200 Hillslope Hydrology
- GEOL(WASR) 8740 Hydrologic Flow and Transport Modeling
- STAT 6315 Statistical Methods Researcher

## Sustainable Coastal Engineering

- ENGR 8103 Computational Engineering
- ENGR 8160 Adv. Fluid Mechanics
- CVLE 8140 Mixing & Transport
- CVLE 8160 Jets & Plumes
- MARS 8030 Physical Oceanography
- MARS 8100 Estuarine and Coastal Oceanography
- MARS 7380 Quantitative Methods in Marine Science
- MARS 8150 Ocean Waves
- MARS 8510 Modeling Marine Systems