MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING

The Master of Science in Environmental Engineering is a research and thesis-based graduate degree program oriented toward students who wish to develop more knowledge in multiple areas of environmental engineering. The program provides students with opportunities to gain experience in a variety of environmental engineering domains, including water and wastewater treatment, water resources engineering, indoor and outdoor air quality, hazardous waste management, environmental health and safety and industrial hygiene, and environmental sustainability.

The program is intended for preparation for advanced engineering practice rooted in the principles of physics, chemistry, biology, and mathematics to develop and analyze solutions to environmental problems, including air and water pollution control, water and wastewater treatment systems design, climate change, resource depletion, and more. Students are expected to conduct research at a rigorous level above and beyond the coursework-only Master of Engineering in Environmental Engineering degree program. Students must complete an oral defense of their written thesis to satisfy program requirements.

Students with a variety of academic backgrounds are eligible to apply for the program, including those with undergraduate degrees in engineering disciplines (e.g., civil, chemical, or mechanical engineering) and also non-engineering but related disciplines (e.g., environmental science, biology, chemistry, geology, or others). All admitted students are expected to have completed undergraduate coursework or equivalent in chemistry, physics, mathematics through differential equations, and fluid mechanics. If students have not completed these courses, they may be required to take proficiency courses in their first year of study or in the summer before their first year of study. Each applicant will be evaluated on a case-by-case basis during the application review process to determine any proficiency course requirements.

Up to 9 credit hours of 400-level undergraduate coursework may be included in the program with adviser approval.

Curriculum

Code	Title	Credit Hours
Core Courses		**(12)**
CAE 523	Statistical Analysis of Engineering Data	3
ENVE 501	Environmental Chemistry	3
ENVE 506	Chemodynamics	3
ENVE 542	Physicochemical Processes in Environmental Engineering	3
Major Electives		**(6)**
Select a minimum of 6 credit hours of major electives in CAE or ENVE [1]		6
General Electives		**(6-8)**
Select 6 to 8 credit hours of general electives [1,2]		6-8
Thesis Research		**(6-8)**
ENVE 591	Research and Thesis M.S.	6-8
		Total Credit Hours: 32

[1] Up to 9 credit hours of 400-level courses can be applied to the degree program

[2] General electives can be taken in CAE, CHE, CHEM, EG, EMS, ENVE, MMAE or other disciplines with advisor approval