

1. Introduction

1.1. *Environmental Engineering Graduate Program Overview*

Environmental Engineering is an interdisciplinary field concerned with the scientific and technological aspects of environmentally related processes and systems. Environmental engineers play a critical role in assessing the impacts of existing contamination problems, devising strategies for managing polluted ecosystems, developing new guidelines for the treatment and disposal of wastes, and modifying manufacturing and other activities to minimize the generation of pollutants. Environmental engineers apply scientific principles to these areas in order to improve environmental quality, to protect public health, and to promote the advancement of sustainable development.

The Environmental Engineering graduate program emphasizes the mastery of fundamental scientific and socioeconomic principles in the solution of environmental quality problems. Graduate education in Environmental Engineering provides students with a sound foundation in basic engineering concepts, and the technological training and research expertise necessary to apply these concepts to the solution of a variety of problems.

Environmental Engineering degree programs are offered as an interdisciplinary Field of Study through the School of Engineering. Because of the broad scope of Environmental Engineering and its association with other University departments and research institutes, it offers a wide range of academic focus areas based in the natural and engineering sciences. Active research areas include:

1. biochemical and physicochemical processes in environmental systems,
2. combustion and air pollution,
3. environmental geophysical techniques,
4. environmental interfacial processes,
5. groundwater modeling and remediation optimization,
6. hazardous waste remediation,
7. hydrological processes,
8. pollution prevention, and
9. water resources.