

CE 4343: Solid Waste Engineering

3 Credit Hours

Prerequisite: CE 3702 and Engineering Standing

This course introduces the concepts of generation, storage, collection, transfer, treatment, and disposal of solid waste. Students also address related engineering and management issues.

CE 4353: Air Pollution Control

3 Credit Hours

Prerequisite: CE 3702 and Engineering Standing

This course focuses on fundamental concepts of air pollution, emission sources, atmospheric dispersion, ambient concentrations, adverse effects, governmental regulations, emission standards, air-quality standards, processes and equipment for controlling emissions, and noise pollution.

CE 4363: Environmental Engineering Chemistry

3 Credit Hours

Prerequisite: CE 3702 and Engineering Standing

Students learn the chemical principles and applications needed to develop advanced problem-solving techniques involved with many water/wastewater treatment processes, air pollution, ionization, and natural systems.

CE 4371: Environmental Engineering Laboratory

1 Credit Hours

Prerequisite: CE 3704

Students study the application of basic chemistry and chemical calculations to measure chemical and bacteriological parameters of water, wastewater, and soil. Laboratory methods and interpretation of results with regard to environmental engineering applications such as design and operation of wastewater treatment processes, soil and sediment remediation, and environmental health are also explored.

CE 4373: Environmental Engineering Microbiology

3 Credit Hours

Prerequisite: CE 3702 and Engineering Standing

This course is intended to provide fundamental knowledge about microorganisms in the natural and engineered environment and their role in the cycling of elements, both natural and anthropogenically introduced into the environment. The course focuses on understanding their role in the biodegradation of contaminant chemicals and the application of processes that take advantage of the microbiological biodegradation processes.