

CE 4383: Sustainability for Engineers

3 Credit Hours

Prerequisite: Engineering Standing

This course emphasizes the concept of sustainability as an extension of current practices and standards by addressing new concerns and constraints of engineering projects. It also emphasizes the new holistic approach of sustainability that requires some new ways of thinking and frameworks.

CE 4400: Directed Study in Civil and Environmental Engineering

1-6 Credit Hours

Prerequisite: Approval of Instructor and Department Chair

This course covers special topics and seminars of an advanced nature, external to regular course offerings that allow a student to work individually with an instructor. A Directed Study may include original research projects and/or practicum experiences.

CE 4490: Special Topics in CE/CnE

1-9 Credit Hours

Prerequisite: Junior standing, Engineering Standing and consent of the Department Chair.

Special topics offered by the program on a demand basis.

CE 4703: Engineering Hydrology

3 Credit Hours

Prerequisite: ENGR 3343 and Engineering Standing

The course presents the hydrological processes and their relationship to the design of structures for control and management of water resources, rainfall-runoff relationships, and probability and frequency analysis as they relate to surface and groundwater hydrology.

CE 4704: Engineering Hydraulic Analysis and Design

3 Credit Hours

Prerequisite: ENGR 3343 and Engineering Standing

The course applies principals of fluid mechanics to the design and analysis of hydraulic systems. The course emphasizes open channel flow and addresses topics of interest to the Civil Engineer. Topics include hydraulic grade line calculations, pump design, culvert analysis and design, based flood elevation studies using HEC-RAS, non-uniform flow, gutters and inlets, water distribution, open channel design.