CE 3202: Design of Concrete Structures

3 Credit Hours

Prerequisite: CE 3201

ACI design procedures for reinforced concrete beams, columns, footings, slabs and other members, Introductory to masonry design.

CE 3398: Internship in Civil Engineering

3 Credit Hours

Prerequisite: Dept Chair approval and Engineering Standing

This course allows students to enhance their classroom knowledge through practical application of theories to real-world issues in a real-world work environment. Students explore specific interests within their academic discipline and refine their post-graduation goals.

CE 3501: Materials for Civil & Construction Engineering

3 Credit Hours

Prerequisite: ENGR 3131 and Engineering Standing

A study of different materials used for light and heavy construction projects, such as aggregates, woods, metals, concretes, masonry, and bituminous materials. An overview of materials science will be introduced as well.

CE 3502: Materials for Civil & Construction Engineering Lab

1 Credit Hours

Concurrent: CE 3501

A study of standard laboratory tests (ASTM and/or AASHTO) on the materials commonly used in Civil and Construction engineering field. The lab will reinforce the principles of CE 3501 through laboratory experiments. Developing experimental data into effective laboratory reports will be emphasized.

CE 3701: Geotechnical Engineering

3 Credit Hours

Prerequisite: ENGR 3131 and ENGR 3343

Introduction to fundamental knowledge of soil/foundation engineering for construction projects such as commercial building, highway, bridge, airport, and water/wastewater treatment plant. Course topics will include composition of soils, subsurface investigation, soil classification systems, groundwater flow, permeability, compaction, stress/strain analysis, shear strength, consolidation/settlement, shallow and deep foundations, earth retaining structures, slope stability, and ground modification methods.