CE 4709: Advanced Structural Analysis

3 Credit Hours

Prerequisite: CE 3201 and Engineering Standing

The course offers computer oriented methods for solving determinate and indeterminate structures including matrix analysis of two-and three-dimensional trusses, continuous beams, and frames. The class emphasizes on the displacement method and stiffness matrix development. Matrix analysis method will be applied to problems in structural engineering and mechanics using the Structural Analysis Program 2000.

CE 4800: Senior Project

3 Credit Hours

Prerequisite: Engineering Standing, Senior Standing, and (CE 4703 or CE 3703)

This course is the capstone design experience for graduating students in the Civil and Environmental Engineering department.

CSCH 4010: Applied Leadership in Business

3 Credit Hours

Prerequisite: Business Majors: Admission to Coles College of Business and admission to the Coles College Scholars program; Non-business Majors: Not available to non-business majors.

This course focuses on leadership as an inward and personal journey of service to others and requires students to engage in an in-depth self-examination of skills, personality, and attitudes to increase self-awareness of leadership competencies. Students will be exposed to leadership cases as well as interact with business community leaders to develop insights and then apply this for their personalized leadership development.

Notes: This course is the first of the five required courses for the Coles Scholars Program.

CSCH 4020: Critical Thinking and Decision Making

3 Credit Hours

Prerequisite: Business Majors: Admission to Coles College of Business, admission to the Coles College Scholars program, and CSCH 4010; Non-business Majors: Not available to non-business majors.

In this course, students are exposed to critical thinking and decision-making theory, methodology and tools. In addition to the theory of knowledge and the "ways of knowing," students will learn to identify key assumptions, evaluate, and develop and test appropriate hypotheses within the context of large and small problem-solving situations. There is an emphasis on a variety of problems, including those that deal with uncertainly, equivocality, and factors that are measurable and hard to quantify.