



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Construction Intelligent System and Simulation I

CIVILEN 8810

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate

Course Components:

Lecture

Course Description:

Applications of intelligent system to construction systems and operations. Simulations include mathematics and computer modeling. Knowledge about computer programming recommended.

Prerequisites and Co-requisites:

Prereq: 2810 and 5810, or permission of instructor.

Course Goals / Objectives:

- Learn to perform logic analysis and inference for evaluating problems of construction operations
 - Create intelligent and logic models of aspects related to construction operations
 - Use these models to make decisions of optimum construction strategies
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Course Topics:

- Binary Logic; Logical Inference; Predicates and Quantifiers; Premises and Conclusions.
 - Classical Set Theory Revisited; Probabilistic Logic.
 - Expert System; Components of a knowledge base system; Decision support system; Neural Network System.
 - Fault Tree Analysis; Types of Events; Qualitative Analysis; Quantitative Analysis; Minimal Cut Sets and Importance.
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Designation:

Elective