

# CIVE 543. SYSTEM DYNAMICS FOR CIVIL AND ENVIRONMENTAL ENGINEERING

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Credits: 3

Offered by: Civil Engineering (Faculty of Engineering)

This course is not offered this catalogue year.

## Description

Systems modelling, simulation, and analysis for transportation, energy, structural, construction, and environmental engineering. Overview of common feedback phenomena and their analysis using causal loop diagrams. Simulation using stock-flow, event-based, and agent-based approaches. Network representation and state-space representation of complex systems. Markov decision process. Model calibration and testing. System forecasting and optimization.

- Prerequisites: CIVE 302 and CIVE 320 or permission of the instructor
- (3-0-6)

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