THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Advanced Simulation

ISE 7100

Credit Hours:
3.00 - 3.00

Course Levels:
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Advanced course on modeling, programming, and statistical analysis techniques in discrete event simulation. Topics include random variable generation, input/output analysis, variance reduction and simulation optimization.

Prerequisites and Co-requisites:
Prereq: Stat 3278 or equiv.

Course Goals / Objectives:
- Plan and execute defensible data collection and analysis for discrete event simulation modeling
- Implement simulations in both EXCEL and ARENA to offer solutions to customers
- Apply simulation output analysis to get insights over system alternatives
- Apply variation reduction techniques to speed up simulations
- Develop knowledge of contemporary simulation research issues

Course Topics:
- Random Variable Generation
- Input analysis
- Simulation theory including variation reduction techniques
- Advanced topics, at instructor's discretion.
- Simulation software

Designation:
Elective