THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Design of Engineering Experiments

ISE 5110

Credit Hours:
3.00 - 3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate

Course Components:
Lecture

Course Description:
Plan and analyze experiments relevant to system design. Also, students will learn regression and alternative approaches for on-hand data analysis.

Prerequisites and Co-requisites:
Prereq: 4210; or Stat 3470 or equiv, and Grad standing.

Course Goals / Objectives:
- Develop evidence based on parametric and nonparametric hypothesis testing
- Plan and analyze economical experiments using standard screening experiments
- Perform regression-based analysis including using response surface-based
- Optimization to support system design decision-making
- Perform system optimization in the presence of noise factors
- Plan and analyze experiments involving human subjects
- Plan and analyze computer experiments using nonlinear modeling techniques

Course Topics:
- Hypothesis Testing.
- Screening Experiments.
- Response Surface Methods (RSM).
- Advanced Topics: Robust Design and Nonlinear Modeling.

Designation:
Elective