



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Advanced Quality Control and Improvement

ISE 7120

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate (5000-8000 level)

Course Components:

Lecture

Course Description:

Students learn techniques associated with the Total Quality Management and Lean Sigma and additional advanced quality technology. These techniques facilitate measurements of system quality, data-driven system design, and system control/standardization.

Prerequisites and Co-requisites:

Prereq: Grad standing, or permission of instructor.

Course Goals / Objectives:

- Analyze and standardize systems based on quality concepts and advanced techniques.
 - Apply quality tools to identify system improvement opportunities of greatest importance to the customer.
 - Evaluate process capability and monitor systems using control charts including using advanced charting.
 - Develop evidence based on parametric hypothesis testing.
 - Plan and analyze economical experiments using standard screening experiments.
 - Perform regression-based analysis to support system design decision-making.
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Course Topics:

- Quality Concepts/Tools.
 - Statistical Process Control (SPC) and Capability.
 - Design of Experiments.
 - Linear Models.
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Designation:

Elective