THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

# Quality and Reliability Engineering

## ISE 4120

**Credit Hours:**
3.00

**Course Levels:**
Undergraduate (1000-5000 level)

**Course Components:**
Lecture

**Course Description:**
Techniques associated with the Total Quality Management and Lean Six Sigma as well as the foundations of reliability engineering.

**Prerequisites and Co-requisites:**
Prereq: Jr or Sr standing in Engineering and Stat 3470, or permission of instructor

**Course Goals / Objectives:**
- Analyze and standardize systems based on quality concepts
- Apply quality tools to identify system improvement opportunities of greatest importance to the customer
- Evaluate process capability and monitor systems using control charts
- 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

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

**Designation:**
Required