



Engineering and Technology Management

COURSE SYLLABUS

Course Number: E M 580

Course Name: Quality Control and Reliability

Instructor: David Paulus

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Semester Credits: 3

Prerequisites: None

Course Description and Objectives:

This course covers quality improvement analysis for process and product quality; statistical process control, capability studies; acceptance sampling concepts; and reliability models for prediction and testing. The class addresses statistical methods used in quality analysis, and modeling process and product quality.

The objective of this course is to strengthen and improve engineering managers' ability to use detail theory and design and techniques of quality control systems, and to utilize reliability considerations in engineering design.

Course Topics:

- DMAIC Process: Define, Measure, Analyze, Improve, Control
- Modeling Process Quality
- Inferences about Process Quality
- Methods and Philosophy of Statistical Process Control
- Control Charts for Variables
- Control Charts for Attributes
- Process and Measurement System Capability Analysis

Grading:

Exam 1: 22%, Exam 2: 22%, Exam3 : 22%, Final Exam: 22%, Term Paper: 12%