

COURSE SYLLABUS E M 580

Course Name: Quality Control and Reliability

Course Number: E M 580

Semester Credits: 3

Instructor/Contact Information: David Paulus, PhD, PE, CHFEP, CQE, CPEM, Jonah

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Office Hours: TBD

Meeting Time: 6:15-8:45 Pacific

Prerequisites: EM 503 or Statistics

Textbook *Introduction to Statistical Quality Control, 7th Edition, Douglas C. Montgomery*, ISBN 978-1-118-14681-1

Course Description: This course covers quality improvement analysis for process and product quality; statistical process control, and capability studies. The class addresses statistical methods used in quality analysis, and modeling process and product quality.

Learning Outcomes:

Students will:

- apply the DMAIC Process: Define, Measure, Analyze, Improve, Control
- model process quality
- make inferences about process quality
- learn methods and philosophy of statistical process control
- create and use control charts for variables
- create and use control charts for attributes
- perform process and measurement system capability analysis

Assessed Learning Outcomes:

1b) Demonstrate problem solving abilities and rational, effective decision making.

3b) Apply ETM principles learned to real world situations.

1c) Demonstrate the ability to analyze, understand and improve company practice