

Product Reliability and Quality

PREPARED BY: Dr. Nourredine Boubekri Boubekri@unt.edu

940 565 2136

OFFICE HOURS: Department of Mechanical Engineering -Discovery Park

F115P: M,W from 1:30pm-2:30 pm by Appointment

COURSE NUMBER, TITLE, CREDIT HOURS:

MSET 5130, 3 credit hours

DESCRIPTION:

Processes and techniques of assuring the quality of industrial products; reliability and maintainability, sampling probability and statistical process control; quality control management

COURSE LEARNING OBJECTIVES:

1-Demonstrate an understanding of processes, techniques, involved in documenting, stabilizing and improving a process

2-Demonstrate an understanding of Reliability and Quality Management principles and relationships

COURSE LEARNING OUTCOMES

The course demonstrates that graduates have:

an ability to identify, formulate and solve engineering problems. g. an ability to communicate effectively.

PREREQUISITES:

MFET 4190 (or equivalent) or consent of department

TEXTBOOKS:

Quality Management; by Howard Gitlow, Rosa Oppenheim, Alan Oppenheim, and David Levine.Hercherpublishing.com

COURSE OUTLINE:

This course outline is the core of what is covered in the course. Research Material added as appropriate by the course instructor.

1 Fundamentals of Quality

2 W. Edwards Deming's Theory of Management

3 Defining and Documenting a Process

4 Stabilizing and Improving a Process with Control Charts

5 Application of Attribute and Variable Control Charts

6 Process Capability and Improvement Studies

7 A Business Example of Policy Management

8 Reliability Analyses

9 Reliability and Quality

GRADING ELEMENTS AND WEIGHTS:

Semester Exams (3) 25 % each; September 28, October 31, December 07

Research paper and presentations (15%) November 28,30,December 05

Homework. (10%)