IE 424 - Process Quality Engineering  
Summer 2016

Instructor: M. Jeya Chandra

Course Materials/ANGEL:

The handouts, example problems, announcements and other related materials will be posted on the course management system, ANGEL (https://cms.psu.edu). You will be responsible for downloading and printing the material. The student is expected to check ANGEL for updates at least once per day.

Prerequisites: Math 141 and Math 220

Course Objectives:
This course will provide students with probabilistic and statistical methods required to improve the quality of products and processes.

Grade:
There will be ten quizzes, three labs, one mid-term and a final exam that will be evaluated to determine the course grade. The outcome is measured based on the composite scores from the following components:

- Ten Quizzes (spread throughout the semester): 10%
- Three Labs: 30%
- Mid-term: 30%
- Final Exam: 30%

Homework: Homework will be assigned throughout the semester and will not be collected/graded. Solutions to homework problems will be posted on ANGEL.

Quizzes: There will be 10 quizzes on various topics throughout the semester. These quizzes will be based on coverage from class notes and homework.

Labs: There will be three labs throughout the semester. The labs are a hands-on opportunity to apply the techniques discussed in class to different applications. ANGEL will have a link to the website with videos, data sets, and lab activities. Late lab reports will not be accepted.

All quizzes and labs are to be done independently.

Mid-term and Final Exam: One mid-term and a final exam will be given, each of which is closed book/closed notes. Appropriate formula sheets and required tables will be provided. You will need to find a proctor for these examinations.

These examinations are to be done independently.
Topics Covered:
Quality Culture  Chapter 1
Data Presentation and Interpretation  Chapter 2
Probability  Chapters 3-4
Sampling Distribution and Estimation  Chapter 5
Hypothesis Testing  Chapter 6
Statistical Process Control and Process Capability  Chapter 9
Regression Analysis  Chapter 7

Academic Integrity:
Academic dishonesty includes, but is not limited to, cheating, facilitating acts of academic dishonesty by others, unauthorized prior possession of quizzes or exams, submitting work of another person or work previously used, or tampering with the academic work of other students. Any attempt at academic dishonesty will be prosecuted to the fullest possible extent.

The student must sign the honor pledge on all laboratory assignments.