Advanced statistical analysis for quality control in a variety of environments and industries; methods for collecting and statistically analyzing process data; graphical representation of process data; experimentation to improve process quality; data driven decision-making; process improvement methods to reduce risk from potential failure modes; implementation of process improvement recommendations; validation of improvements.

Upon completion of this course students will have learned or be able to:

- Quantitatively and qualitatively identify and effectively communicate a process problem.
- Select appropriate statistical analysis and quality methods to analyze a quality defect.
- Quantify and graphically display baseline process performance.
- Interpret statistical analyses to make appropriate recommendations for process requirements to meet or exceed customer expectations.
- Optimize process performance using appropriate advanced statistical analysis.
- Effectively implement process improvement recommendations.
- Quantitatively verify process capability for the improved process.
- Document and quantitatively/qualitatively demonstrate the process improvement.

The class will be divided into teams of three members each. Teams are encouraged to meet together outside of regular class hours to study together, work on the semester project together, and discuss course related issues.

The students’ ability to carry out the course objectives and the final grade will be determined by their performance in the following way:

- In-class tests (20%x3) 60%
- Semester Project
  - Oral presentation 15%
  - Written report 25%
Class Attendance and Participation

Class attendance is required for on-campus students. Students who miss three classes without permission will be dropped on the next absence regardless of grade in the course. Distance students are expected to watch the recorded lecture the same day. Distance students are required to participate in the final semester project presentations via WebEx (dates provided in course schedule).

It is the student’s responsibility to make sure they are dropped from a class if they wish/need to withdraw. Any student still enrolled at the end of the semester who has not been in attendance will receive an “F”.

Academic Dishonesty

http://registrar.mst.edu/academicregs/index.html

Page 30 of the Student Academic Regulations handbook describes the student standard of conduct relative to the System’s Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism, or sabotage. Additional guidance, including a description of the process for dealing with issues related to academic dishonesty, is available on-line at http://ugs.mst.edu.

Personal and corporate integrity is an essential element of any organization. Accordingly, I expect every student to avoid even the appearance of cheating, and to claim credit only for his or her own work. Team assignments will be explicit and teams will share the same grade. Unless otherwise notified, students should assume that individual performance is to be submitted and graded. I promise the same level of personal integrity that I expect. Cheating of any kind simply will not be tolerated! Plagiarism is claiming credit for the work of another. If you have questions on any issue related to academic honesty, please ask so everyone can have a clear picture of my expectations in this area. For more information, please contact Dr. Cudney in 217 EMgt building, (573) 341-7931 (phone), or cudney@mst.edu.

Distance Students

Distance students will take their exams the same date listed in the course schedule. However, the test will be available at 7:00pm CST.

In addition, distance students will be required to virtually attend their semester project presentation. This is the only class distance students are required to virtually attend. Distance students are expected to watch the remaining recorded classes within 24 hours.

Disability Support Services

http://dss.mst.edu

If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation. Disability Support Services is located in 204 Norwood Hall. Their phone number is 341-4211 and their email is dss@mst.edu.

Classroom Exit Procedure

Please familiarize yourself with emergency exit procedures and classroom egress maps posted on-line at http://registrar.mst.edu/links/egress.html