EMgt 6710
Design for Six Sigma

Course Syllabus

Spring 2017

Format
Product development methodology for the development of robust products; methods for collecting and statistically analyzing the voice of the customer; development of product concepts; experimentation for designing in quality; product modeling to reduce risk through robust design; data driven decision-making for continuous improvement in products, service design, and process design.

Required Text
The required text for the course is:
E.A. Cudney and T.K. Agustiady
Design for Six Sigma: A Practical Approach through Innovation
CRC Press, 2016
ISBN 978-1498742559

Course Objectives
Upon completion of this course students will have learned or be able to:
- Quantitatively and qualitatively identify and effectively communicate a product concept.
- Select appropriate statistical analysis and quality methods to analyze the voice of the customer.
- Interpret the results and make recommendations for new product requirements to meet customer expectations.
- Design baseline functional performance of a proposed product concept.
- Optimize design performance of a proposed product concept.
- Quantitatively verify system capability of a proposed product concept.
- Document and quantitatively/qualitatively demonstrate improvement in the product design.

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Office Hours:
Tuesday and Thursday
10:00-11:00am CST

Semester Project Teams
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.

Grades
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%
Homework 10%
Semester Project
- Oral presentation 10%
- Written report 20%
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 University of Missouri System’s Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism, or sabotage.

Additional guidance, including the University’s Academic Dishonesty Procedures, is available online at http://academicsupport.mst.edu. Other informational resources for students regarding ethics and integrity can be found online at: http://academicsupport.mst.edu/academicintegrity/studentresources-ai.

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.

Accessibility and Accommodations

It is the university’s goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please contact Disability Support Services at (573) 341-6655, dss@mst.edu, or visit http://dss.mst.edu/ for information, or go to mineraccess.mst.edu to initiate the accommodation process.

Please be aware that any accessible tables and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Classroom Exit Procedure

Please familiarize yourself with emergency exit procedures and classroom egress maps posted on-line at http://designconstruction.mst.edu/floorplan/
Missouri University of Science and Technology is committed to the safety and well-being of all members of its community. US Federal Law Title IX states that no member of the university community shall, on the basis of sex, be excluded from participation in, or be denied benefits of, or be subjected to discrimination under any education program or activity. Furthermore, in accordance with Title IX guidelines from the US Office of Civil Rights, Missouri S&T requires that all faculty and staff members report, to the Missouri S&T Title IX Coordinator, any notice of sexual harassment, abuse, and/or violence (including personal relational abuse, relational/domestic violence, and stalking) disclosed through communication including but not limited to direct conversation, email, social media, classroom papers and homework exercises.

Missouri S&T’s Title IX Coordinator is interim chief diversity officer Neil Outar. Contact him (naoutar@mst.edu; (573) 341-6038; Temporary Facility A-1200 N. Pine Street) to report Title IX violations. To learn more about Title IX resources and reporting options (confidential and non-confidential) available to Missouri S&T students, staff, and faculty, please visit http://titleix.mst.edu.

S&Tconnect

https://canvas.mst.edu (S&Tconnect icon on left toolbar)
S&Tconnect provides an enhanced system that allows students to request appointments with their instructors and advisors via the S&Tconnect calendar, which syncs with the faculty or staff member’s Outlook Exchange calendar. S&Tconnect will also facilitate better communication overall to help build student academic success and increase student retention. S&Tconnect Early Alert has replaced the Academic Alert system used by Missouri S&T. If training is needed, please contact Rachel Morris at rachelm@mst.edu or 341-7600.

The Burns & McDonnell Student Success Center

The Student Success Center is a centralized location designed for students to visit and feel comfortable about utilizing the campus resources available. The Student Success Center was developed as a campus wide initiative to foster a sense of responsibility and self-directedness to all S&T students by providing peer mentors, caring staff, and approachable faculty and administrators who are student centered and supportive of student success. Visit the B&MSSC at 198 Toomey Hall; 573-341-7596; success@mst.edu; facebook: www.facebook.com/SandTssc; web: http://studentsuccess.mst.edu/