Technical Elective: Quality Management & Six Sigma
Course Syllabus: Fall 2022

Class:

Time: Wednesday 1:50 PM -4:25 PM
Location: 4-201

Instructor:

Rong Yin, Ph.D.
Email: rong.yin@scupi.cn
Office: 4-219

Office hours:

- Right after each class in the classroom or online meeting room.
- Friday 8:30 AM - 11:30 AM, and/or by appointment.
- Online via QQ Group or Tencent Meeting

Credit Hours: 3

Notes:

- This syllabus is subject to change. Please follow updates announced during class and posted on Blackboard website. Lecture slides, reading assignments, course grades and announcements will also be provided through Blackboard.
- When emailing the instructor, please include "Six Sigma" in the subject field of your message. Please use your university email account (student_ID_number@stu.scu.edu.cn), since emails from other accounts might be stopped by the SCU spam filter. Thanks!

Website:

- Blackboard
- Tencent Meeting for online lectures if necessary

Course Description:

This course is designed to introduce the fundamental principles of quality management; technical tools to support design, control, and improvement of quality; and organizational quality and its implementation. Students will gain knowledge of key concepts of quality and quality management as well as practical applications of the technical tools to achieve quality management goals such as applying Six Sigma in process improvement.

Course Objectives:

- To introduce the fundamental concepts of quality and quality management.
- To provide tools and technique to enhance quality design, quality measurement and control, and quality improvement.
- To introduce statistical methods for quality management
- To provide practical experience in applying Six Sigma in quality management.
- To build students' critical thinking skills and problem-solving abilities in quality management.

Textbook:

James R. Evans, William M. Lindsay. (2019). *Managing for Quality and Performance Excellence* (11th ed.)

Course Prerequisites:

IE 1070: Probability, Random Variables, and Distributions

IE 1071: Statistical Testing and Regression

Assessments:

The course grade will be determined as follows:

- Homework: 10%
- Case study: 10%
- Project and presentation: 20%
- Midterm exam: 30%
- Final Exam: 30%

Grades:

Letter grades will be given as follows:

90.00 – 100.00 A	85.00 – 89.99 A-	80.00 – 84.99 B+	76.00 – 79.99 B	73.00 – 75.99 B-
70.00 – 72.99 C+	66.00 – 69.99 C	63.00 – 65.99 C-	60.00 – 62.99 D	0.00 – 59.99 F

Homework:

Homework will be assigned regularly and are due at the start of the next class. All

work will be submitted electronically through the Blackboard. Late submission will **NOT** be accepted. Students are responsible for correctly submitting the homework through Blackboard. Typically, you will be asked to write a **QQTT**, including a **Q**uestion, a **Q**uotation, and **T**wo **T**alking points based on the assigned reading materials. More details about the QQTT will be covered in class.

If you have any problems about your grades, please discuss the issues with me within **ONE week** from the grades are given.

Case studies, Projects and Presentations:

Students will form groups to work on case studies, projects and presentations. For each case studies, each group is required to analyze one case and submit a 500 words case study report. The case study report should properly summarize and discuss the present case, and should provide your insights on that case.

Beginning date and Due date of projects will be announced shortly during our following classes. The project provides you an opportunity to apply the methodologies and skills gained in this course to analyze practical quality management problems. Each group member are required to actively participate and contribute equally to the projects. All groups will submit their final project reports and present their projects at the end of this semester.

Exams:

There will be one midterm exam at the middle of this semester and one final exam at the end of this semester. The exams will be **closed book and closed notes**. If you miss an exam without prior notification, you will receive a score of "**ZERO**" for that exam except for medical emergency (with proof). More details on exams will be presented later in this semester.

Class Policy:

Class attendance is expected and important for your success in this course. Not keeping up with the course will hurt your grade in a general way. Important dates and plans will be announced during class. Each student is responsible for all assigned work in class and for maintaining awareness of all announcements posted to Blackboard and all e-mails sent to his or her SCU e-mail address.

You are free in this course to discuss any aspect of the homework with anyone, such as your classmates and your friends, but the written responses must be your own. Academic dishonesty will not be tolerated.

Course Topics

No.	Topics	Chapters in Textbook
1	Introduction to Quality	Chapters 1
2	Foundations of Quality Management	Chapters 2
3	Customer Focus	Chapter 3
4	Workforce Focus	Chapter 4
5	Process Focus	Chapter 5
6	Statistical Methods in Quality Management	Chapter 6
7	Design for Quality and Product Excellence	Chapter 7
8	Measuring and Controlling Quality	Chapter 8
9	Process Improvement and Six Sigma	Chapter 9
10	Quality Management Systems	Chapter 10
11	Strategy and Performance Excellence	Chapter 11
12	Measurement and Knowledge Management for Performance Excellence	Chapter 12
13	Leadership for Performance Excellence	Chapter 13
14	Building and Sustaining Quality and Performance Excellence	Chapter 14