

Iowa State University
Department of Industrial and Manufacturing Systems Engineering
IE 561: Continuous Quality Improvement of Process
Fall 2016

Instructor: Dr. Cameron MacKenzie
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Meeting Times: Tue Thur 9:30-10:50
Marston 3300

Office Hours: 3029 Black Engineering Tue 11:00-12:30 Wed 3:00-4:00
or by appointment

This course focuses on improving quality within different organizations, to include manufacturing firms, service industries, the non-profit sector, and government agencies. We will discuss the various dimensions of quality to include focusing on the customer, the workforce, and processes. Since quality can be defined differently, we will explore how to define quality within an organization and ensure the definition corresponds with the organization's ultimate goals. Different ways to measure quality will be explored. A portion of the course will concentrate on statistical elements of quality control, but this will not be a major focus of the course. Other topics related to quality, such as reliability and performance measurement, may also be discussed. Students will be required to apply quality concepts and tools to problems and issues that interest them or their employers.

Learning outcomes:

1. Ability to define quality and connect quality to an organization's goals and objectives.
2. Ability to measure quality and use those metrics to make good decisions.
3. Ability to improve quality within an organization.
4. Ability to read articles critically and respond to them thoughtfully.

Prerequisites: Undergraduate course in statistical quality assurance (IE 361), primarily the basics of probability, confidence intervals, and control charts

Textbook (optional):

Evans, J. R. and Lindsay, W. M. *Managing for Quality and Performance Excellence*, 10th edition. Boston: Cengage Learning, 2017. [7th edition will be on reserve at the library]

The textbook is optional, but there will be required readings from journal articles. Most of the assigned reading for this course will be from these journal articles. These articles will be available through the Iowa State library course reserves.

Participation and discussion: Much of the class will revolve around class discussion. If you are an in-person student, class discussion means that you should be prepared to discuss the readings and answer questions about the readings. If you are a distance-learning student, class discussion

means that you should participate in the Blackboard online discussion forum. You may be graded on your participation.

Assignments and grading: To be determined. There will be a writing requirement (perhaps multiple writing requirements). There will likely not be a formal written exam. Further details will be provided on the types of assignments and grading.

Use of Blackboard: I will be using Blackboard to make announcements about the class and post reading assignments and any homework. If you are a distance-learning student, you should submit your homework via Blackboard, and I will grade it and post your grade on Blackboard. If you are an in-class student, you can either submit your homework in person or via Blackboard.

If you have a question that is appropriate for the entire class (e.g., questions about homework or lectures), please post that question on Blackboard in the discussion section, and I will answer it there. If you have a question that is private (e.g., request for an extension on a homework, questions about grading an assignment), please email me. You can always ask me any type of question in person or via phone.

My commitment to you: I will do my best to respond to your questions quickly, whether you email me, post a question on Blackboard, or leave a phone message. You are welcome to contact me by any of these methods, and you can come to my office or call me at any time (not just during office hours). I will also come to class prepared and work to give stimulating lectures and generate thoughtful class discussion. I will keep you updated on the course schedule verbally and via Blackboard.

I will assign readings and homework at least a week in advance. I will strive to grade homework within a week, and I will provide feedback on your written papers. In summary, I am committed to helping you learn the material and improve your critical thinking and communication skills.

Academic Dishonesty: The class will follow Iowa State University's policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office. <http://www.dso.iastate.edu/ja/academic/misconduct.html>

Disability Accommodation: Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact me to set up a meeting within the first two weeks of the semester or as soon as you become aware of your need. Before meeting with me, you will need to obtain a SAAR form with recommendations for accommodations from the [Disability Resources Office](#), located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-7220 or email disabilityresources@iastate.edu. Retroactive requests for accommodations will not be honored.

Dead Week: This class follows the Iowa State University Dead Week policy as noted in section 10.6.4 of the Faculty Handbook <http://www.provost.iastate.edu/resources/faculty-handbook>.

Harassment and Discrimination: Iowa State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment. Any student who has concerns about such behavior should contact me, [Student Assistance](#) at 515-294-1020 or email dso-sas@iastate.edu, or the [Office of Equal Opportunity and Compliance](#) at 515-294-7612.

Religious Accommodation: If an academic or work requirement conflicts with your religious practices and/or observances, you may request reasonable accommodations. Your request must be in writing, and I will review the request. You may also seek assistance from the [Dean of Students Office](#) or the [Office of Equal Opportunity and Compliance](#).

Contact Information: If you are experiencing, or have experienced, a problem with any of the above issues, email academicissues@iastate.edu.