Quality Management and Auditing
MFG 200
Section D01
Spring 2016 Syllabus

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Office Hours: Call for appointment

Class Time: MFG 200 Lecture Tuesdays 5:30 - 7:30 pm. MTC 301
MFG 200 Laboratory Tuesdays 7:45 - 10:45 pm. MTC 301

Course Duration: Thirteen class periods from January 19 through April 19 with a final exam on
April 26. Some classes may be experienced as field trips. Class will not be held
on March 8 due to the mid-semester break

Course Description
This course covers the elements of modern quality systems such as terms, definitions, philosophies and
strategies for implementation. The purpose of a quality audit, audit concepts and quality audit
reporting are presented. The dual concepts of customer focus and continuous improvement are integral
to every phase of the course. Two lecture hours and three laboratory hours per week.

Textbooks
- Summers, Donna C. S., Quality Management: Creating & Sustaining Organizational
- Arter, Dennis, Quality Audits for Improved Performance, American Society for Quality, 3rd ed.
  (Loaned to the student by the college)

Course Objectives, Assessment Goals, and Assessment Strategies
1. Describe what key elements make an organization effective and describe the benefits of an
effective organizational.
   a) Explain how and why an effective organization is created.
   b) Know four key things an organization should do to be effective.
      • Explain why establishing a customer focused organization is crucial.
      • Examine how utilizing continuous improvement results in an ever more effective
        organization.
      • Describe how cultivating people-based management creates a superior organization.
      • Understand why encouraging management by facts is essential.
   c) Explain and describe the benefits of an effective organization and their relationship to
2. Name and describe major attributes of five philosophers and how they affect modern quality management.
   a) Match the philosophies of major theorists to their names.
   b) Describe how major philosophies from the field of quality blend to form modern quality systems.
   c) Report on the details of the roles of Dr. W. Edwards Deming and one other quality advocate in the shaping of modern quality theory.
   Assessment Strategy: Quizzes, homework, exam questions

3. Understand how formalized quality management systems/philosophies contain standards and criteria on which effective organizations can build a quality management foundation.
   a) Investigate the history of the modern quality movement and describe how it affects the global and American marketplace.
   b) Examine and analyze the criteria on which an effective organization can build a quality management foundation and discuss each in the framework of three quality management systems.
   c) Examine and analyze industry standards on which an effective organization can build a quality management foundation.
   Assessment Strategy: Quizzes, homework, exam questions

4. Demonstrate an understanding of key management elements and how they contribute to the effectiveness of an organization.
   a) Describe how effective leaders and managers translate organization vision and mission in day-to-day activities.
   b) Describe the role of strategic planning for effective organizations regarding a competitive edge.
   Assessment Strategy: Exam questions, quizzes and homework

5. Understand the human factors associated with effective organizations.
   a) Describe how management should interface with human resources both inside and outside the organization, including management of the supply chain.
   b) Describe how education and training are critical to enable employees to create value for the organization’s customers.
   c) Explain how effective organizations use teams and other group activities to improve processes.
   Assessment Strategy: Quizzes, homework, exam questions

6. Demonstrate an understanding of the process approach.
   a) Define "process" and how to identify key processes.
   b) Define and compare value-added processes versus non-value-added processes.
   c) Describe and compare two types of variation and explain what can be done to address variation.
   d) List the Universal Process Forces and identify them in any given process.
   e) Create a procedure and flow chart of an actual process and follow the documentation to assure the quality of the process.
MFG 200 Syllabus for 2016

Assessment Strategy: Exam questions, quizzes and homework, lab work

7. Understand lean tools and techniques and problem solving tools and techniques which can be utilized along the journey of continuous improvement.
   a) Understand how the utilization of lean thinking, value stream process mapping, Five S methodology and other techniques improve quality.
   b) Examine and understand how the Plan-Do-Study-Act improvement cycle utilizes the seven classical tools of quality and other techniques to contribute to continuous improvement.
   c) Apply one or more of the problem solving tools to solve an actual problem.

Note: Statistical tools and techniques are covered in greater depth in MFG 210.

Assessment Strategy: Exam questions, quizzes and homework, evaluation of lab work

8. Understand why audits are a part of modern quality systems.
   a) Describe what types of audits exist and the purpose of each type.
   b) Describe internal audit procedures.
   c) Describe an external audit and how to prepare for it.
   d) Describe the difference between a conformance audit and a compliance audit.
   e) Draw a flow chart describing a theoretical audit.
   f) Audit a process.

Assessment Strategy: Exam questions, quizzes and homework, evaluation of lab work

Blackboard
Blackboard is being used as a supplementary site in this course. To use course content in Blackboard you need to have access to a computer with an Internet connection (other requirements may apply). Computers that meet these requirements are available for your use on campus. Please follow these directions to access any materials posted for this course:

Login Information
1. From Wor-Wic home page, point to "Quick Links" (top-right) and click the “Blackboard Login" link.

2. Enter your Wor-Wic user ID and password (same as your Wor-Wic email user ID and password).

Electronic Research Assignment
Students are required to complete an electronic research assignment, which will contribute substantially to the final grade. The material must be located using electronic media either in class or at home. A specific requirement of the electronic project is to cite and list the electronic media used in the paper at the bottom of the report. Students must go beyond Wikipedia for their material and relate information from more reliable and professional sources. The report must be in the student's own words. Students are allowed to paraphrase, restate and summarize articles that are reviewed; however, students may not copy paragraphs verbatim without restatement or attribution. A student who does not turn in this assignment cannot receive an “A” grade. A thorough and informative treatment of the subject is expected. Topics must be approved by the instructor.

Labs
Labs are designed to apply the basic concepts of the lecture material or to investigate examples of the subject that are not presented in class. Students are encouraged to participate in labs and to help each other benefit from the overall experience.

**Field Trip**
A field trip to a major area manufacturer may be scheduled. If so, students will be required to prepare for the experience by researching the manufacturer and will be required to write a paper describing their observations and experience.

**Guest Lecturers and Class Exercise**
During the semester, one or more guest lecturers will be invited to address the class with an inspirational message or practical real-life examples of their work in industry.

**Grading/Exams**
Grading will be determined on the basis of tests, homework assignments, quizzes, electronic research assignment, class participation, laboratory assignments, mid-term and final exam. This course will include a comprehensive final exam. The final grade will be weighted as follows:

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Attendance...................................................................................................................... 10%
Accumulated log of quality postings............................................................................. 5%
Homework.................................................................................................................... 10%
General Lab Participation ........................................................................................... 5%
Labs with Scores (includes field trip reports) ......................................................... 15%
Electronic Research Assignment............................................................................... 15%
Quizzes on lecture and texts (Quality Essentials and Quality Audits)....................... 15%
Mid-Term Exam .......................................................................................................... 10%
Final Exam .................................................................................................................. 15%
Total ............................................................................................................................ 100%
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**Conversion of Numeric Average to Final (Letter) Grade**

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**Attendance Policy**
Absence and tardiness are discouraged. College is like a job; it is a commitment, and absence or lateness is not acceptable as it would not be acceptable in the workplace. Students who are absent or tardy for class will miss important material which will cause the student to fall behind. It is the RESPONSIBILITY OF THE STUDENT to make up any missed work.

**Weather Related Absences**
Never assume class will be canceled due to inclement weather. Always check with the Wor-Wic Community College office or web site to determine if college officials have canceled classes.

**Flu**
In the event of a flu epidemic or other emergency that results in the suspension of classes, faculty will be communicating with students about their courses and course requirements, such as assignments, quiz and exam dates, and class and grading policies, via faculty websites or Blackboard. Students will be responsible for completing all these assignments in accordance with class policies. Information about the resumption of classes will be communicated via the College's website and e-mail system.

**Late Assignment Policy**
All homework, laboratories and reading assignments must be submitted on time for full credit. Credit for late work will be given at the sole discretion of the instructor depending on the circumstances. The instructor cannot slow down to accommodate students who fall behind because they are not committed to attend every class and do all of the homework, labs, and readings as assigned. The instructor cannot check that students have done their reading, but it will show up in the student's weekly quiz grades.

**Quizzes and Tests**
There will be a quiz at the beginning of every class, and there will be two major tests during the semester. If a student misses a quiz or a test, the instructor will determine (based on his sole discretion) if the quiz or test can be made up. If a student misses a quiz, he or she may receive ZERO (0) points for that quiz. All quizzes and tests will be based on the text, lecture material, lab exercises, team work issues, and handouts. Quiz questions that are missed are likely to be repeated on subsequent quizzes, so students should review all quizzes and strive to relearn the missed material.

**Academic Honesty Policy**
Students are required to maintain a high level of academic performance. Cheating and plagiarism are defined in Wor-Wic's Student Conduct Policy found in the College Catalog. Infractions of this policy will result in the student's failure for the assignment or test. Egregious cheating or plagiarism will result in disciplinary procedures.

**Classroom Behavior**
Students are expected to treat others involved in the classroom experience with respect. Abusive language and profanity are not acceptable in the classroom environment. The college discrimination and harassment policy applies and complaints will be taken seriously. Students should strive to impress others with their kindness, civility and good character.