



Course Syllabus
SEAS371: Quality Assurance
Spring 2023

INSTRUCTOR CONTACT INFORMATION

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Professor
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COURSE PREREQUISITES: MATH116

CATALOG DESCRIPTION

A study of quality assurance techniques. Application of Statistical Process Control (SPC), acceptance sampling, military standards 105D & 414. Quality organizations and standards.

TEXTBOOK

Required Book

Quality and Performance Excellence by James R. Evans, 8th edition, 2016, South-Western Cengage Learning. ISBN-13: 9781305662223



Optional Book

Quality by Donna C. S. Summers, 6th edition, 2018, Pearson Education, Inc. ISBN-13: 9780134413273

LEARNING OBJECTIVES

By the end of this course, students should be able to:

- Discuss the basic principles associated with total quality.
- Describe techniques and tools for quality and process improvement, including kaizen, Deming cycle, Six Sigma DMAIC, lean thinking, 7 QC tools, and statistical process control.
- Demonstrate the use of analytical tools in Quality Control.
- Discuss the importance of teamwork, employee engagement and leadership for quality improvement.

COURSE TOPICS

Topics will include:

Total Quality Management and Quality Philosophies
Frameworks for Quality

Malcolm Baldrige National Quality Award (MBNQA)
ISO 9000
Six-Sigma
Tools and Techniques for Quality Design and Control
Process Management
Design for Six-Sigma (DFSS)
Design Failure Mode and Effects Analysis (DFMEA)
Product Design Processes
Design for Agility
Poka-Yoke
Statistical Process Control
Tools and Techniques for Quality Improvement
Process Improvement
The Deming Cycle
Six Sigma DMAIC Methodology
The Seven QC Tools
Lean Thinking and Tools
Quality in Customer-Supplier Relationships
Principles for Customer-Supplier Relationships
Practices for Dealing with Customers
Managing Customer Relationships
Practices for Dealing with Suppliers
Quality Planning and Leadership for Quality Improvement
Teamwork and Types of Quality Teams
Engagement, Empowerment, and Motivation for Quality Improvement
Organization Culture and Total Quality

GRADING/COURSE EVALUATION

- | | |
|---------------|-----|
| ▪ Exams | 60% |
| ▪ Quizzes | 20% |
| ▪ Assignments | 20% |

- All deliverables **MUST** be completed in order to pass the course.
- *See course schedule for weekly activity details and due dates*

GRADING SCALE (%): A = 90-100, B = 80-89.99, C = 70-79.99, D = 60-69.99, F =<60.

EXAMS

There are three regular exams and one final exam for this course. The exams will cover materials discussed in the class and reading assignments. More details about the exams will be given in class.

QUIZZES

There will be a set of announced or unannounced quizzes for this course. The purpose of the quizzes is to assess the understanding of the material covered in previous

lectures and reading assignments and to prepare you for the exams. There are no make-ups for quizzes.

ASSIGNMENTS

There will be several activity assignments for this course. More details about the specific requirements of the assignments will be given in class. The assignments have specific due dates and must be submitted on time.

COURSE AND UNIVERSITY POLICIES/PROCEDURES

BLACKBOARD

This course will use Blackboard, so you must be committed to learn to use the technology required to participate in Blackboard course management system. The course materials can be found at the course [Blackboard](#) website. If you experience technical problems or need assistance with Blackboard, you may contact the WKU IT Helpdesk at (270) 745-7000.

CLASS EXPECTATIONS

Students are expected to complete the class work individually, unless stated otherwise. You are expected to thoughtfully complete the assigned readings, to bring questions and offer thoughtful and constructive comments to discussions, and to actively participate in discussions and class activities. You are expected to do all required assignments and turn them in on time, as late assignments are not accepted. I also expect you to act honestly and ethically at all times and to treat one another with respect.

ATTENDANCE & CLASS PARTICIPATION

Attendance is very important because missing classes can have a significant impact on your grades. Attendance during scheduled classroom meetings is directly correlated to your performance on assignments and exams and the potential to earn higher grades. Additionally, if you do not regularly attend class, you are missing important information about course topics, due dates, and assignment details that are crucial to your success in the course. Therefore, you are expected to attend every class meeting and to come fully prepared to actively participate. There are many ways to participate, including reading class materials, asking questions, joining in class discussions, volunteering to answer questions raised during class, and being fully engaged and part of classroom demonstrations. You are highly expected to read the indicated lecture materials and reading assignments prior to class so that you will be actively engaged in the classroom discussions.

MAKE-UP EXAMINATIONS POLICY

Make-up examinations will only be granted under extenuating circumstances and at my discretion. It is your responsibility to inform me (ahead of time, whenever possible) of extenuating circumstances that might prevent you from completing work by the assigned deadline. Please note that evaluation of extenuating circumstances is at my discretion and documentations are required for verification of the extenuating circumstances. In

case of a medical emergency, a doctor's note or a statement from a medical professional must be submitted.

LATE SUBMISSION POLICY

All assignments have specific deadlines and must be submitted via blackboard on time. In general, a late submission will not be graded and receive a score of zero. With prior arrangements, students may be allowed to submit their late assignments after the due date. However, students who submit assignment up to 3 days late will be penalized by 10 percent per day applied to the grade achieved on the late assignment. Students who submit assignments more than 3 days late will receive a grade of zero on the assignment.

COMMUNICATION POLICY

Email is the preferred method of communication. My response time is within 24 hours Monday – Friday, and 48 hours on the weekends.

Email Subject Line: Please start your subject line in email correspondence with Course Number-name: Subject_Of_Message (**for example, MFGE371: Question regarding A1**)

HOW TO LABEL YOUR WORK

All assignments should be labeled as follows: name-class#-assignment#.doc. For example, a student named John Hilltopper would name his assignment **JHilltopper-MFGE371-A1.doc**. Your name and the assignment number must be included in the text of the document attached.

Failure to follow these guidelines could result in loss of points.

COURSE WITHDRAWAL

Students should refer to the Drop/Add deadlines and to information for withdrawing from a class for the particular term. It is the student responsibility to officially withdraw from the class if you wish no longer to continue in the course. The university policy states "Nonattendance does NOT release students from the responsibility to officially drop any course for which they have enrolled and choose not to complete."

ACADEMIC HONESTY

All Western Kentucky University policies are in effect. Academic dishonesty will not be tolerated in any form. Plagiarism is defined as the use of the words and ideas of another as one's own without crediting the source. References must be cited and quotation marks used in direct quotes. Academic dishonesty includes cheating on exams, quizzes, assignments and representing someone else's work as your own work. Plagiarism and cheating are serious offenses and may be punished by failure on the exam, assignment, paper or project.

WKU COVID-19 MASK STATEMENT

All students are strongly encouraged to get the COVID-19 vaccine. In accordance with WKU policy, all students must call the WKU COVID-19 Assistance Line at 270-745-2019 within 4 hours of testing positive for COVID-19 or being identified as a close contact to someone who has tested positive. The COVID Assistance Line is available to

answer questions regarding any COVID-19 related issue. This guidance is subject to change based on requirements set forth by federal, state, and local public health entities. Please refer to the Healthy on the Hill website for the most current information. www.wku.edu/healthyonthehill

STUDENT ACCESSIBILITY RESOURCE CENTER

In compliance with the University policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, Room 1074. The SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please do not request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center.

TITLE IX MISCONDUCT/ASSAULT STATEMENT

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Title IX Sexual Misconduct/Assault Policy (#0.2070) at <https://wku.edu/eoo/documents/titleix/wkutitleixpolicyandgrievanceprocedure.pdf> and Discrimination and Harassment Policy (#0.2040) at https://wku.edu/policies/hr_policies/2040_discrimination_harassment_policy.pdf.

Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Andrea Anderson, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121.

Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and **MUST** report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.

REGULAR AND SUBSTANTIVE INTERACTION

In this course, regular and substantive interaction will take place in the following ways:

- Providing feedback on the discussions
- Responding to questions about the course material
- Providing timely and detailed feedback on assignments provided within one week of submission
- Sending weekly announcements
- Conducting zoom sessions