



COURSE SYLLABUS

COURSE TITLE: Quality Assurance for Manufacturing Technology

TERM & YEAR:

COURSE & SECTION NUMBER: MT 403

TIME & PLACE:

NUMBER OF CREDIT HOURS: 3

INSTRUCTOR:

OFFICE LOCATION/HOURS:

OFFICE PHONE:

EMAIL:

COURSE DESCRIPTION: This course examines the critical nature of quality assurance for producing high reliability and economically produced products. The emphasis is on how quality techniques (especially SPC) can be integrated into manufacturing processes such that products are produced reliably to exacting manufacturing specifications, with minimal scrap and downtime being created. The statistical nature of manufacturing processes is closely examined along with concepts of six-sigma and ISO 9000.

PREREQUISITES: MA 253, MT 113 and MT 313

REQUIRED TEXT:

REFERENCES: various OER resources as specified in the course

OTHER MATERIALS: as assigned by the instructor

LEARNING OUTCOMES: Upon completion of this course, the student should be able to:

- Express the critical relationship of Quality Assurance techniques to Manufacturing
- Describe the importance and need for Customer Satisfaction efforts and procedures
- Apply statistical techniques including SPC to analyze the variability of manufacturing operations
- Use various quality tools to manage manufacturing outputs
- Explain how six-sigma and ISO 9000 are vital to successful manufacturing operations
- Explain how ethical considerations are related to Quality Assurance and manufacturing

COURSE REQUIREMENTS:

ATTENDANCE/PARTICIPATION: Indicate your class attendance policy. (Remember that for Trine University to receive federal financial aid for its students, faculty are expected to take roll and be able to verify when students are and are not attending class.)

GRADING/EVALUATION: Indicate your grading procedure and the type of evaluations you plan to use.

OTHER POLICIES: You may wish to indicate policies such as the consequences of academic misconduct, methods of communication, student expectations, instructor expectations and any other policy that needs to be clarified at the beginning of the course.

Use of electronic devices including smart watches and cell phones is prohibited during exams or quizzes unless directly allowed by the instructor.

ACADEMIC MISCONDUCT

The University prohibits all forms of academic misconduct. Academic misconduct refers to dishonesty in examinations (cheating), presenting the ideas or the writing of someone else as one's own (plagiarism) or knowingly furnishing false information to the University by forgery, alteration, or misuse of University documents, records, or identification. Academic dishonesty includes, but is not limited to, the following examples: permitting another student to plagiarize or cheat from one's own work, submitting an academic exercise (written work, printing, design, computer program) that has been prepared totally or in part by another, acquiring improper knowledge of the contents of an exam, using unauthorized material during an exam, submitting the same paper in two different courses without knowledge and consent of professors, or submitting a forged grade change slip or computer tampering. The faculty member has the authority to grant a failing grade in cases of academic misconduct as well as referring the case to Student Life.

PLAGIARISM

You are expected to submit your own work and to identify any portion of work that has been borrowed from others in any form. An ignorant act of plagiarism on final versions and minor projects, such as attributing or citing inadequately, will be considered a failure to master an essential course skill and will result in an F for that assignment. A deliberate act of plagiarism, such as having someone else do your work, or submitting someone else's work as your own (e.g., from the Internet, fraternity file, etc., including homework and in-class exercises), will at least result in an F for that assignment and could result in an F for the course.

COURSE CALENDAR/SCHEDULE: include the course schedule as required

ADDITIONAL INFORMATION: You may wish to include other information here. Include information that you would repeat in lessons, practices, policies, etc.