

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: QUALITY MANAGEMENT

CODE NO:

ETM110-5

SEMESTER:

PROGRAM:

ENGINEERING TECHNOLOGY MANAGEMENT

AUTHOR:

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DATE:

DEC. 1, 1993

PREVIOUS OUTLINE DATED:

APPROVED:

Dean, School of Engineering Tech.

Date

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CODE NO.: ETM110-5

TOTAL CREDITS: 5

PREREQUISITE(S): Engineering Technology Diploma

I. PHILOSOPHY/GOALS:

An introduction to the fundamentals of Statistical Quality Control (SQC). Emphasis on the fundamentals of statistics and the use of graphs and charts allows for a more practical approach to Quality Management. Skills in analysis and evaluation will be developed through the use of these standard techniques, as well as an appreciation for the costs involved in Q.M. and the benefits of Total Quality Management. The introduction to the CSA Q9001 Standard prepares the student for an on-going approach to Quality Assurance in Design/Development, Production, Installation and Servicing.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

1. Have fundamental knowledge of Statistical Quality Control (SQC);
2. Be able to conduct basic Quality Control analysis using a variety of statistical charts and graphical approaches.
3. Be able to understand the needs for Quality Assurance in companies operating in the 1990's;
4. Have a fundamental knowledge of costing implications of Q.M. and the in-depth structure of Total Quality Management.

III. TOPICS TO BE COVERED:

1. Introduction to Quality
2. Total Quality Management
3. Quality Costs
4. The ISO 9001/CSA Q9001 Standards
5. Quality Improvement Techniques
6. Fundamentals of Statistics
7. Control Charts for Variables
8. Fundamentals of Probability
9. Control Charts for Attributes
10. Reliability

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6.	Fundamentals of Statistics	Chapter 3
	<ul style="list-style-type: none">. Introduction. Frequency Distribution. Measures of Central Tendency. Measures of Dispersion. Concept of a Population and a Sample. The Normal Curve. Tests for Normality	
7.	Control Charts for Variables	Chapter 4
	<ul style="list-style-type: none">. Introduction. Control Chart Techniques. State of Control. Specifications. Process Capability	
8.	Fundamentals of Probability	Chapter 6
	<ul style="list-style-type: none">. Basic Concepts. Discrete Probability Distributions. Continuous Probability Distributions. Distribution Interrelationship	
9.	Control Charts for Attributes	Chapter 7
	<ul style="list-style-type: none">. Introduction. Control Charts for Nonconforming Units. C.C. for Count of Nonconformities. A Quality Rating System	
10.	Reliability	Chapter 10
	<ul style="list-style-type: none">. Fundamental Aspects. Statistical Aspects. Life and Reliability Testing Plans	

Grading System:

A+ = 90-100%
A = 80-89%
B = 70-79%
C = 55-69%
R = Repeat

Tests x 3	60%
Quizzes/Homework-Assignments	20%
Paper	20%
TOTAL	<u>100%</u>

Notes: If a student misses a test he/she must have a valid reason (i.e. medical or family emergency). In addition the school must be notified before the scheduled test sitting. The student should contact the instructor involved. If the instructor cannot be reached a message must be left on the instructor's voice mail, or with the Dean's office (or Con. Ed. office), or the college switchboard. If this procedure is not followed the student will receive a mark of zero on the test with no rewrite option.

Late papers are not acceptable. Ample time and instruction on the format and timing will be given, as well as suggested reference materials and locations.

Students will be given advance notice of test dates (1 week minimum) but quizzes worth a maximum of 5% may be given without notice. There will be no rewrites for students missing quizzes without prior notice and valid reasons as outlined above.

VI. REQUIRED STUDENT RESOURCES

Text Book: Quality Control, 4th Ed., Dale H. Besterfield

VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:

Book Section (title, publisher, edition, date, library call number if applicable - see attached example)

Periodical Section (Magazines, Articles)

Audiovisual Section (Films, Filmstrips, Transparencies)

VIII. SPECIAL NOTES

Students with special needs (eg. physical limitation, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of the students.