

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: **Industrial Organization**
Course No.: **IND 100**
Program: **Electrical / Electronics / Instrumentation Technician**
Semesters: **Fourth / Sixth**
Author(s): **A. Gooderham. 7592554eit58l**
Date: **Jan. 1998**
Previous
Outline Dated: **Jan. 1995**

Approved:


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Dean

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Date

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Coarse Name: Industrial Organization
Course No.: Ind 100

TOTAL CREDITS:

PREREQUISITES:

COURSE LENGTH:

TOTAL CREDIT HOURS:

I. COURSE DESCRIPTION

An introduction to the fundamentals of Statistical Quality Control (SQC). Emphasis is placed on the fundamentals of statistics where 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 analysis tools as well as an insight into today's business climate and the need for motivation provides an on-going approach to Quality Assurance in Design/Development, Production, Installation and Servicing.

II. TOPICS TO BE COVERED:

1. Introduction to Quality, TQM
2. Potential Problem Analysis
3. Management Styles (Japanese, Saturn)
4. Quality Improvement Techniques, Deming's 14 Points
5. Fundamentals of Statistics
6. Control Charts for Variables
7. Additional SPC Techniques for Variables
8. Fundamentals of Probability
9. Control Charts for Attributes
10. Lot-By-Lot Acceptance Sampling by Attributes
- 11.** Acceptance Sampling Plan Systems
12. Motivation
13. Quality Costs
14. The ISO 9001/CSA Q9001 Standards

Potential elements of the performance:

- Complete the Motivation Assignment
- Complete the Cost of Quality Quiz
- Complete the Cost of Quality/Motivation Test

IV. REQUIRED STUDENT RESOURCES:

- Quality Control, 4th ed., by Besterfield

V. METHODS OF EVALUATION:

The following Grading System will be used:

- A+ = 90% - 100%
- A = 80% - 89%
- B = 70% - 79%
- C = 55% - 69%
- R = less than 55% (Repeat Course)
- X = Temporary Grade as per College Policy

PP A Assignment	10 %
Test #1	20 %
SPC Assignment	10 %
Test #2	30 %
Motivation T/F	10 %
Cost/Motivation Test	<u>20 %</u>
TOTAL	100%

III. LEARNING OUTCOMES AND ELEMENTS OF PERFORMANCE:

A. Learning Outcomes:

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 2000's;
4. Have a fundamental knowledge of costing implications of Q.M. and the in-depth structure of Total Quality Management;

B. Learning Outcomes with Elements of Performance:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Produce examples of Quality Control approaches, philosophies and implications

Potential elements of the performance:

- Complete the PPA Assignment
- Complete class discussions and case studies
- Complete Test #1

2. Analyse data using statistical methods

Potential elements of the performance:

- Produce charts and graphs, the SPC Assignment
- Complete test #2

3. Produce examples of Costs of Quality and the Motivation Factors required

VI. SPECIAL NOTES:

1. The Instructor reserves the right to modify the course as is deemed necessary to meet the needs of the students.
2. Students with special needs (Physical Limitations, Visual/Hearing Impairments etc.) are encouraged to discuss confidentially, required accommodations with the instructor and/or contact the Special Needs Office, Room E1204, Extension 493, 717 or 491.
3. Attendance to lab activities is compulsory, unless discussed with the instructor in advance of the absence. Your attendance and final grade are directly related.
4. If a student misses a test or quiz without contacting the instructor, the Dean's office or the switchboard prior to the test or quiz, a mark of zero will be granted without a re-write option.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in this course, should consult with the Professor

IND 100 Course Outline Review

The following students attended the class session in which the course outline was reviewed and have been notified that a copy of the outline is listed on the "scorpion" server for their perusal. Should a hard copy be preferred by a student, a printout may be taken from that location.

