

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: INDUSTRIAL ORGANIZATION

CODE NO. : IND100 **SEMESTER:** FOUR

PROGRAM: ELECTRICAL PROCESS AUTOMATION/ POWER
GENERATION/ INSTRUMENTATION TECHNICIAN

AUTHOR: A. GOODERHAM / RAYMOND BONE

DATE: JANUARY 2012 **PREVIOUS OUTLINE DATED:** JANUARY 2011

APPROVED: *"Corey Meunier"*
CHAIR DATE

TOTAL CREDITS: 4

PREREQUISITE(S): NONE

HOURS/WEEK: 2

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For additional information, please contact Corey Meunier, Chair
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(705) 759-2554, Ext. 2610

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 insight into an on-going approach to Quality Assurance in Design/Development, Production, Installation and Servicing. Augmenting these techniques is an analysis of, and practical experience with, Project Scheduling, Timelines, Critical Path and spreadsheets.

II. LEARNING OUTCOMES AND ELEMENTS OF THE 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 Problem Analysis Assignment
- Complete class discussions and case studies

2. *Analyse data using statistical methods*

Potential Elements of the Performance:

- Work with Excel spreadsheets and raw data
- Produce charts and graphs, the SPC Assignment
- Complete mid-term test

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

Potential Elements of the Performance:

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

4. *Produce scheduling documentation using computer simulation software.*

Potential Elements of the Performance:

- Complete the MS Project Assignment
- Complete test questions relating to scheduling

III. TOPICS:

1. INTRODUCTION TO QUALITY, TQM
2. POTENTIAL PROBLEM ANALYSIS
3. MANAGEMENT STYLES (N.A. ,JAPANESE, SATURN MODEL)
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.ACCEPTANCE SAMPLING PLAN SYSTEMS
- 11.MOTIVATION
- 12.QUALITY COSTS
- 13.THE ISO 9001/CSA Q9001 STANDARDS
- 14.MICROSOFT PROJECT PLANNING AND CRITICAL PATH

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Quality Control, 8th ed., by Besterfield

V. EVALUATION PROCESS/GRADING SYSTEM:

PPA Assignment	8%
Excel Assigns	7%
SPC Assignment	5%
Mid-Term test	50%
MS Project Assign.	10%
Cost/Motivation Test	20%
TOTAL	100%

NOTES: If a student misses a test or surprise quiz (maximum 5% of final grade) 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.

Surprise Quiz's may be given for a maximum of 5% of the final grade and are attributed toward the next test percentage value.

No rewrites are given for any test attempted.

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

VI. SPECIAL NOTES:

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be granted admission to the room.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.