SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE:	**Industrial Organization**
CODE NO. :	IND 100 **SEMESTER:** 4
PROGRAM:	**Electrical / Electronics / Instrumentation Technician**
AUTHOR:	A. Gooderham
DATE:	Jan 2007 **PREVIOUS OUTLINE DATED:** Jan 2006
APPROVED:	

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DEAN   **DATE**

TOTAL CREDITS:	4
PREREQUISITE(S):	None
HOURS/WEEK:	2

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 PPA Assignment
        - Complete class discussions and case studies
        - Complete Test #1
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 test #2
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 (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. 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, 7th ed., by Besterfield

V.   EVALUATION PROCESS/GRADING SYSTEM:

PPA Assignment   5 %
Test #1   20 %
SPC Assignment   5 %
Test #2   40 %
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.

	Grade	Definition	Grade Point Equivalent
The following semester grades will be assigned to students in all credit courses.			
	A+	90 – 100%	4.00
	A	80 – 89%	
	B	70 - 79%	3.00
	C	60 - 69%	2.00
	D	50 – 59%	1.00
	F (Fail)	49% and below	0.00
	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:

Special Needs:
If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

Retention of course outlines:
It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:
Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course outline amendments:
The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII.   PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor.

VIII.   DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.