

COURSE NAME
Industrial Organization

COURSE NO.
IND 10f

TOTAL CREDITS: Four

PREREQUISITE(S): None

I. PHILOSOPHY/GOALS:

The course consists of three relatively distinct topics listed below.

Topic #1
STYLES and STRUCTURES

The traditional management styles and structures found in the businesses and institutions of North America have been severely stressed by the tension created by offshore competition especially from Japan and the Pacific Rim countries. The management philosophies of Dr. Denting, Mr. Toyoda and General Motors have clashed to produce a new spirit of structural creativity to allow North American business to be successful globally. The student will discover the nature of the so-called new economic order through a brief study of old and emerging styles.

Topic #2
PRODUCTIVITY and QUALITY

During the eighties, the Ontario automobile production machine ran out of fuel. The Ontario Government established Technology Centres to help industries change and improve their technology, and productivity. One of these centers promoted the Japanese quality philosophy which led to a change in the way that North Americans achieved productivity improvements. The student will learn of the demands made by the global economy and the mainly successful response from Canadian industry.

Topic #3

INDUSTRIAL ALIENATION and MOTIVATION

Why we work and how we feel when we work are extremely important features of a healthy climate for high productivity. How our needs relate to the corporate needs and fit with the emerging styles of management in North America is an important issue to people entering the job market. This topic addresses the causes of workplace alienation as well as motivational factors at play in the workplace. The student will discover a great deal about his/her nature from learning of the work of the behaviorists.

II. STUDENT PERFORMANCE OBJECTIVES (OUTCOMES):

Upon the completion of Topic #1 the student will be able to:

1. Use a group problem solving strategy based upon the scientific method to resolve an organizational problem.
2. Compare by a number of characteristic features and learn the differences between the typical North American Corporation, the Mondragon Co-operative, the Japanese model, the Saturn model and the German Co-determination model for organizational structure and management style.
3. Evaluate the management model as adopted and adapted by Algoma Steel Inc.
4. Identify the characteristics of power and the need for balance among contervalling forces within organizations.
5. **Appreciate that there are a multiplicity of styles and structures to emulate in designing** the style of a business.

Upon completion of Topic #2 the student **will** be able to:

CPM

6. Use a project management technique (Critical Path) to plan, balance and schedule a simple operation involving under 10 gross work elements

SIMO

7. Employ a technique called "Simo Charting" to illustrate the **variables of Productivity.**

SPC

8. **Organize data from a sample into proper groupings, and display in a histogram form.**

9. Estimate and determine by calculation, the mean, standard deviation and natural spread of any process.

Outcomes cont'd

10. Using upper and/or lower specification limits, determine the number of nonconforming values. ~~
11. Determine the normality of the distribution by plotting the grouped data values on probability paper.
12. Design and apply the control chart method for averages and ranges and evaluate the results according to specification limits as provided.
13. Make determinations of process capability and evaluate results
14. Construct and use a "P^M chart for the control of nonconforming product.

ISO9000

15. Design and write a quality procedure for "student entry into class) in accordance with the relevant element in the ISO standard.
16. Design a flow chart which describes the process followed by a student in progressing from entry to graduation showing test and inspection points along the way.
17. Make a list of items that would constitute nonconformances in your course and make estimates of their" costs of quality."

At the completion of topic #3 the student will be able to:

18. Evaluate his/her basic behavioral style using a behavioral grid technique.
19. List the stages that define Maslow's Hierarchy of Needs.
20. Compare the "techniques of teaching when the teacher has a dedication to either theory X or theory Y behavioral philosophy.
21. Evaluate several of the factors involved in learning according to Hertzberg's motivation theory.
22. Evaluate the worth of money, prestige, leisure time, etc, as a motivator for several differing age groups of similar

people

III	<u>TOPICS TO BE COVERED</u>	<u>APPROXIMATE HOURS</u>
Topic #1	Styles and Structures	23
	1.1 Sole Proprietorship, Partnerships Corporations, Co-operatives	
	1.2 Problem Solving Techniques	
	1.2.1 Survival exercise	
	1.2.2 Dot\star technique	
	1.2.3 Cause and Effect diagrams	
	1.3 Supervisors inbasket	
	1.3.1 Identify symptoms propose short term solutionom solution	
	1.4 Power	
	1.4.1 Identify nature of power Bob White and G.M.	
	1.5 The Japanese model	
	1.6 Mondragon Co-operatives	
	1.7 Co-determination at Algoma	
	1.8 Adam Smith	
	1.9 Long-term solution at Northern Machines	
Topic #2	Productivity and Quality	31
	2.1 Critical Path as a Management planning tool	
	2.2 Simo Charts for designing productivity	
	2.3 Deming's 14 points	4 QuxJUJL, is»o~^-
	2.4 Costs of Quality	° ^
	2.5 Quality Improvement techniques	
	2.6 Statistical Process Control	
	2.6.1 Histograms	
	2.6.3 The Normal Curve	

2.6.3 Measures of center and dispersion

Outcomes cont'd

2.6.4 Control Charts For ranges and Averages

2.6.5 Patterns of Control

2.6.6 Specifications and Chart Values

2.6.7 Probability and Attribute Control Charts

2.6.8 Process Capability and Tolerance

2.7 ISO 9000

Topic #3 Industrial Alienation and Motivation 9

3.1 The great Behaviorists

3.2 The boys from OCAPT(a supervisory game)

3.3 Bahavior grid

3.4 Revisiting Deming's 14 Points

IV. LEARNING ACTIVITIES and RESOURCES

Topic #1

The learning activities in "Styles and Strucures" consist of the following:

- View viedos and movies related to outcomes and make summary notes when not provided
- Participate in small group discussions
- Collaborate in writing group assignments
- Listen to lecture presentations
- Study hand-out materials
- Write Test

Resources:

- Handouts: Supervisors in-basket
- Adam Smith
- The Scientific Method
- The Right Stuff
- Co-Determination
- North American Business Styles
- Japanese Kieritsues

Resources cont'd

- Videos with notes and handouts
- : The Final offer
- The Denting Prize**
- A Yen For Harmony**
- Mondragon
- Power Lab**

TOPIC #2

The learning activities in "Productivity **and** Quality" include:

- Listening to lectures on Critical Path and Simo
- Participation in group assignment (ungraded)
- Listen to lectures and **study text** materials
- Perform group and individual assignments**
- Study videos:

- The Quality **Man**
- Right The First **Time**
- The SPC series
- Continuous Improvement

- Study handouts
 - Air Mail Procedure
 - Costs of Quality
 - Pareto Analysis

- Write Test

Resources.

The resources consist of the video materials listed above, the handouts, test materials and the assignments stated.

TOPIC #3

The Learning activities of this topic consist of the following:

- Listening to lectures on the Behaviorists
- Participating in a Group solution to a behavior problem
- Creating a personal Behavior Grid
- Studying provided handouts
- Writing a test

Topic #3 Resources

The resources consist of provided study materials .
Behavior Grid handout
OCAPT Industrial personnel Behavior Game

Deming's 14 points

V. EVALUATION METHODS:

1.0 GRADING SYSTEM

The three topics are divided in terms of worth as listed here

Topic #1	Styles and Structures		35%
	True False Test	20%	
	Restructuring Assignment	15%	
Topic #2	Productivity and Quality		55%
	True False on Crit Path	5%	
	Histogram Test	15%	
	Xbar and R chart Test	15%	
	True False Test on Quality	20%	
Topic #3	Industrial Alienation and Motivation		10%
	True False on Behavior	10%	
			100%

2.0 ATTENDANCE

There is no rigid policy regarding attendance. Lectures relate to reading assignments from handouts or textbook selections and are the responsibility of a mature student. Missed Video presentations will be made available where practical.

3.0 REWRITES

There are no rewrites provided in this course except under special circumstances and only at the end of the semester.

4.0 LATE ASSIGNMENTS AND MISSED TESTS

The policies regarding late assignments and missed tests are as follows.

Missed Tests

If the reason is medical or otherwise serious, then a date for writing will be negotiated with the instructor.

Late Assignments

An assignment will be accepted late if the assessment sheet has

timeliness as a factor. If not, the general policy is that the assignment loses a grade each day it is late.

VI. REQUIRED STUDENT RESOURCES:

With the exception of Topic #2, all learning materials are provided in handout form. The student is required to purchase the text:

QUALITY CONTROL

Fourth Edition

By Dale H. Besterfield

Prentice Hall

VII. ADDITIONAL RESOURCE MATERIALS:

None recommended

VIII. SPECIAL NOTES:

Classes are held in large classrooms in either the E or K wing. Anyone needing assistance to attend classes should bring this need to the attention of the Instructor.