

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

COURSE OUTLINE

COURSE TITLE: STATISTICS  
CODE NO.: MTH 262-4 SEMESTER: III  
PROGRAM: BUSINESS (ACCOUNTING, COMPUTER PROGRAMMING)  
AUTHOR: W.O. MAKI  
DATE: JULY 1992 PREVIOUS OUTLINE DATED: JUNE 1991

APPROVED:

DEAN



DATE

STATISTICS

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TOTAL CREDIT HOURS: 64

PREREQUISITE(S): MTH 111

**I. PHILOSOPHY/GOALS:**

The student will study definition and scope; tabular and graphic presentation of data; measures of location and dispersion; probability and probability distribution; sampling and sampling distributions; and methods of estimation.

**II. STUDENT PERFORMANCE OBJECTIVES:**

The basic objectives are that the student develop an understanding of the methods studied, demonstrate a knowledge of the facts presented and show an ability to use these in the solution of problems. To accomplish these objectives, exercises are assigned. Test questions will be of near equal difficulty to questions assigned in the exercises. The level of competency demanded is the level required to obtain an overall passing average on the tests. The material to be covered is listed below.

**III. TOPICS TO BE COVERED:**

1. Introduction - 1 period
2. Frequency Tables and Graphs - 4 periods
3. Measures of Location: Mean, Median & Mode - 5 periods
4. Measures of Dispersion: Range, Standard Deviation - 6 periods
5. Probability and Probability Laws - 6 periods
6. Probability Distributions: Binomial, Poisson & Normal - 15 periods
7. Sampling Methods and Distribution - 8 periods
8. Estimation: Interval & Point Estimate - 8 periods (if time permits)

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**IV. LEARNING ACTIVITIES:**

**REQUIRED RESOURCES:**

1.0 Introduction

Text: Ch. 1  
pp. 2-4

**Upon successful completion of this unit the student will be able to:**  
understand and appreciate the scope of statistics.

2 0 Frequency Tables and Graphs

Text: Ch. 2

- 2 1 Arrange data
- 2.2 Construct frequency tables
- 2 3 Graph frequency tables

Questions: 17-33: pp. 23-27  
34-43: pp. 36-39

3 0 Measures of Location and  
& 4.0 Dispersion

Text: Ch. 3

- 3 1 Calculate mean, median & mode for ungrouped data
- 3 2 Calculate mean, median & mode for grouped data & weighted mean

Questions: 6-15: pp. 72-74  
16-21: pp. 76-77  
30-36: pp. 84-86  
61-73: pp. 105-107

4 .1 Calculate range & standard deviation for grouped & ungrouped data

5.0 Probability & Probability Distribution

Text: Ch. 4

- 5.1 Types of probability
- 5.2 Probability laws

Questions: 5^10: p. 138  
11-16: pp. 142-143  
33-37: pp. 167-163

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**IV. LEARNING ACTIVITIES:**

**REQUIRED RESOURCES:**

6.0 Probability Distributions

Text: Ch. 5

6.1 Binomial Distribution

Questions: 18-26 pp, 212-213

6.2 Poisson Distribution

27-36 pp, 218-219

6.3 Normal Distribution

37-50 pp. 232-233

7.0 Sampling and Sampling Distribution

Text: Ch. 6

7.1 Random sampling & others

Questions: 8-18: pp. 265-266

7.2 Sampling distributions & Central Limit Theorem

19-26 pp. 268-269

7.3 Standard error & sample size

27-39 pp. 278-279

40-49 pp. 282-283

8.0 Estimation

Text: Ch. 7

8.1 Point estimate

Questions: 7-11: 306

8.2 Interval estimate

12-18 pp 309-310

8.3 Confidence intervals from large samples & proportions

19-26 pp 312-313

27-34 pp 315-316

35-43 pp 319-320

8.4 T-distribution & interval estimates

44-50 p- 325-326

8.5 Sample size

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**V. EVALUATION METHODS: (INCLUDES ASSIGNMENTS, ATTENDANCE REQUIREMENTS ETC.)**

4 tests:

- weighting may differ according to instructor

- grades and attendance policy supplied on handout as per college policy

Grading: A+ = 90-100%

A = 80-89%

B = 65-79%

C = 55-64%

R = Repeat

**VI. REQUIRED STUDENT RESOURCES:**

"STATISTICS FOR MANAGEMENT" - 5th ed., Levin & Rubin, Prentice-Hall.

**VII. SPECIAL NOTES:**

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

Your instructor reserves<sup>1</sup> the right to modify the course as he/she deems necessary to meet the needs of students.