SAULT COLLEGE
of Applied Arts and Technology
Sault Ste. Marie

COURSE OUTLINE

MATHEMATICS

MTH 262-4

r S V I S S d   June, 1979 by B. Maki

MATHEMATICS
MTH 262-4

TEXT:

Richard Levin   Statistics for Management
                                      - Prentice Hall

REFERENCES:

J. E. Freund & F. J. Williams   Modern Business Statistics
                                 - Prentice Hall

Tanus & Others   Statistics: A Guide to the Unknown
                                 - Hoiden-Day

Croxton, Cowden & Klein   Applied General Business Decision
                                 - Prentice Hall

Spurr and Bonini   Statistical Analysis for Business Decision
                                 - Richard Irwin

Yamane   Statistics: An Introductory Analysis
                                 - Harper & Row

Clark and Schkade   Statistical Methods for Business Decisions
                                 - South Western Publishing Co.

McElroy   Applied Business Statistics
                                 - Hoiden-Day

NOTES:

This is the first semester of Business Statistics and most
of the term is spent en descriptive statistics. Hence, a fair
amount of time should be spent on topics such as Summation Notation;
Mean, median and mode; Standard Deviation and other measures of
Variation.
The graphs of distribution, such as histograms, frequency
polygons etc. should be studied in depth, since these refer again
throughout the course.

The chapter on probability is time consuming and can become
complicated especially if problems from other texts are used.

The study of the Theoretical Distributi.ons will take up the
latter one-third of the term and since this topic is difficult and
the basis of future work; much time should be allowed for it.

Use of calculators is almost essential in working the
problems. The students should be encouraged to buy calculators
with square root and square keys.

TOPICAL OBJECTIVES;

The students are expected to learn the following:

Introduction: definition of statistics, differences between
                inductive and descriptive statistics, some
                applications of statistics, the use of summation
                notation in writing formulas.

Frequency Distributions: how to construct a frequency table, the
                          graphical presentation of distributions
                          such as histograms frequency polygons,
                          ogives.

Measures of Location: the calculation and usage of the arithmetic
                       mean, median and mode, the short cut method
                       is preferred in these calculations, the cal-
                       culation and usage of quartiles, deciles and
                       percentiles.

Measures of Spread on Variation: The calculation and interpretation
                                  of standard deviation and some know-
                                  ledge of other measures of variations
                                  the short cut method is preferable
                                  in calculations of grouped data.

Probability: the meaning and history of probability. Its application
              to the games of chance. The rules of probability such
              as addition and multiplication rules are necessary.
              Mathematical expectation is studied as an example of-
              applications of probability.

Theoretical Distributors: an understanding of binomial distribution
                           is necessary before a study of normal dis-
                           tribution is undertaken, normal distributior
                           applications should be understood as it pla^
                           an important role in statistics.

'Sampling Distributions: the usage of randcn number tables and sanplinc
                          methods should be understood, also the Central
                          Limit Theorem and its applications.

Interval Estimation: this section involves the calculation of confid-
                      ence intervals for means (large and small) and
                      proportions, calculation of the sample size and
                      standard error are also included.

11   <u>Estimation</u>   Pages 208 - 2.

Point and internal estimation,
  criteria of good estimator,
  large and small sample estimation
  for mean and the proportions.
  Determination of sample size.