SAULT COLLEGE

of Applied Arts and Technology

Sault Ste. Marie

COURSE OUTLINE

MATHEMATICS

MTH 114-5

r 6 V i S 6 C l   June, 1979 by B. Maki

MATHEMATICS

MTH 114-5

<u>TEXT</u>;

Mathematics of Finance   -Hummel & Seebeck
      (McGraw-Hill)

<u>REFERENCES</u>:

Mathematics of Finance   -Grenshaw
      (Prentice-Hall)

Mathematics for Management
and Finance   -Shao
      (South-Western)

NOTES;

The objectives of the course are:

a) to develop logical reasoning and the ability to estimate
   approximate answers;

b) to develop the student's knowledge and skill in the com-
   putation of financial problems in business;

c) to promote accuracy and the use of formulae for problem
   solving.

Each student should keep a separate sheet for all formulae, as they
are introduced. This sheet may be used for all tests. For most
tests the textbook should be used for table purposes only.

At the end of each topic, homework problems should be given from
the test questions on page 237.

Emphasis should be placed on interpolation in the Compound Interest
chapter, as this method is widely used throughout the text.

The importance of using the correct number of significant digits of
the "factor" to obtain the required accuracy in the answer should be
emphasized continually.

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<u>TOPICAL OBJECTIVES</u>;

The student should:

1. Be able to estimate and then solve any simple interest and discount problem.

2. Be able to easily interpolate, as this technique is used throughout the course.'

3. Draw time diagrams for all problems and set up an equation of equivalence.

4. Become thoroughly familiar with the following terms, their symbols, and when they are used: compound interest, present value, simple and general annuities, ammortization and sinking funds, perpetuities.

5. Be able to calculate the yield rate and purchase price of bonds.

Topic	Periods	Topic Description	Referen
1	5	<u>Simple Interest.</u> -simple interest fcrr.ula -simple discount fcrr.ula -time between dates -notes . -discount formulae	p.
2	7	<u>Compound Interest</u> -basic formulae -tables - use of tables - interpolation -equivalent rates -finding rate or tine	P.
3	8	<u>Equations of Equivalence</u> -dated values -sets of dated values -equivalent sets of payments	P.
4	8	<u>Simple Annuities</u> -present value and amount -annuities due -deferred annuities -finding the interest rate	P.
5	8	<u>Ordinary General Annuities</u> -converting to simple annuities -amount and present value -converting to general annuities -finding the rate -finding the term	P.
6	6	<u>Amortization and Sinking Funds</u> -amortization of debts -finding outstanding principle -equity -installment buying -sinking funds -comparison of sinking fund and amortization for retiring a debt.	P.

Topic	Periods	Tooic Description
		Perpetuities
		-ordinary simple and general
		-perpetuities
		-perpetuities due
		-capitalization
		-comparison of assets
		Bonds
		-purchase - price formula
		-bond schedules
		-evaluating bond between interest dates
		-purchasing bonds on the market
		-finding the yield rate