SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE: MATHEMATICS

CODE NO. MTH 122-4   **SEMESTER:** II

PROGRAM: BUSINESS MANAGEMENT

lAUTHOR: J. GLOWACKI

DATE: JUNE 1991   **PREVIOUS OUTLINE DATED:** JUNE 1989

APPROVED: DEAN   7   DATE

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MATHEMATICS   **MTH 122-4**

  COURSE NAME   **COURSE NUMBER**

TOTAL CREDIT HOURS: 64

PREREQUISITES) : MTH 111

I. **PHILOSOPHY/GOALS**:

This course presents the mathematics needed in computer programming.
Concepts taught will also assist in other computer courses. Emphasis
is placed on how to interpret a problem and to develop a solution
algorithm. The computer will be used to obtain output for specified
problems.

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. Sets and Venn Diagrams
2. Integers and Real Numbers
3. Format Arithmetic
4. Algorithms
5. Algebraic Applications for Programming
6.   Number   Base   Concepts

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IV. LEARNING ACTIVITIES: **REQUIRED** RESOURCES:

TIME   UNIT   TOPIC   EXERCISES

Chapter 17, 18

BINARY SYSTEMS   Pg. 246-292
- number base concepts
- binary, octal and hexadecimal

Chapter 1, 2, 3

NUMBER SYSTEMS   Pg. 1-52
- sets and Venn diagrams
- integer and real number sets
- format arithmetic

Chapter 4, 5

ALGORITHMS   Pg. 53-79
- input, process and output
- repeating steps and decisions

10   **Chapter** 7, **8,** 9, **10**

ALGEBRAIC APPLICATIONS FOR   Pg. 96-136
PROGRAMMING
- order of operations
- inequalities
- exponents
- equation solving

Chapter 11, 12

ADVANCED ALGEBRA CONCEPTS   Pg. 202-245
- arithmetic and geometric
  sequences
- matrices

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

The final mark will be based on four unit tests, each representing 25% of the final mark.

GRADING:

    A+ - 90-100%
    A - 80-89%
    B - 65-79%
    C - 55-64%
    R - 0-54%

A passing grade will be based on a minimum grading of 55%. Students obtaining a grade of 45-54% may be allowed to write a rewrite test. However, only students who have attended at least 80% of the math classes will be considered for a rewrite test.

VI. REQUIRED STUDENT RESOURCES:

Introduction to Statistics - 2nd ed.
Concepts & Applications
- Anderson, Sweeney & Williams

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 the right to modify the course as he/she deems necessary to meet the needs of students.