SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON

COURSE OUTLINE

Course Title: Windows to Mathematics

Code No.:   MTH103   Semester: Two

Program: General Arts and Science

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Date: June, 1997   Previous Outline Date: June, 1996

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Total Credits: 3   Prerequisite(s):   MTH097
Length of Course: 4Hrs/Wk   Total Credit Hours: 45

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I. PHILOSOPHY/GOALS:

The objectives of this course include a survey of the basic operations on algebraic expressions and the solutions to systems of linear equations. This course will also include the use of a personal computer using Windows 3.1 and Maple V in mathematical solutions.

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 test. The material to be covered is listed below.

TOPICS TO BE COVERED:	Approximate Time Frame
1. Personal Computer	9 periods
2. a) Reviewing Arithmetic Rules	9 periods
b) Exact and Approximate Numbers	
3. Elementary Algebra	28 periods

IV. LEARNING ACTIVITIES:

TOPIC NUMBER	NO. OF PERIODS	TOPIC DESCRIPTION	REQUIRED RESOURCES
1.		Introduction to Computers	
1.1		The Calculator	Sharpe EL-531G
1.2		The Personal Computer	
1 3		Operating systems and Windos 3.1 on network	Lab A-2090
2.		Fundamental Concepts and Operations	Calculator
2.1		Exact Numbers	Text pp 105

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IV.	LEARNING	ACTIVITIES (cont.)	

2.2		Approximate numbers and rounding off procedures	Text pp 6 - 8
2.3		Estimation, Dimensional Analysis, and Units of Measure	
2.4		Scientific and Engineering Notation	
2.5		Graphs	Text pp 9-10
2.6		Introduction to Maple V and fundamental operations	Handout
3.		Review of Elementary Algebra	
3.1		Operations with a signed number	Chapter 4 (pp 53 - 73)
3.2		Basic Operations Monomial and Polynomials	Chapter 5 (pp 74 - 95)
3.3		Equations of the first degree in one unknown	Chapter 6 (pp 96 -117)
3.4		Solutions and properties of linear equations	Chapter 8 (pp 152 -176)
3.5		Equations of the First Degree in Two Unknowns Formulae manipulation	Chapter 9 (pp 177 -183)
3.6		Special Products and Factoring	Chapter 11 (pp 233 - 253)
3.7		Fractions	Chapter 12 (pp 254 - 276)
3.8		A total of 11 Maple assignments of which numbers 5,7,9 and 11 must be handed in.	

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V. REQUIRED RESOURCES / TEXTS / MATERIALS:

Text: "Elementary Algebra" Schaum's Outline Series Second Edition (or most current edition), Rich, B. and Schmidt, P.A.

VI. EVALUATION PROCESS/GRADING SYSTEM:

MAJOR ASSIGNMENTS AND TESTS

While regular tests will normally be scheduled and announced beforehand, there may be an unannounced test on current work at any time. Such tests, at the discretion of the instructor, may be used for up to 30% of the overall mark.

At the discretion of the instructor, there may be a mid-term exam and there may be a final exam, each of which can contribute up to 30% of the overall mark.

The instructor will provide you with a list of test dates. Tests may be scheduled out of regular class time.

ATTENDANCE

It is your responsibility to attend all classes during the semester. Research indicates there is a high correlation between attendance and student success.

If you are absent from class, it is your responsibility to find out from your instructor what work was covered and assigned and to complete this work before the next class. Your absence indicates your acceptance of this responsibility.

Unexcused absence from a test may result in a **mark of zero ("0").** Absence may be excused on compassionate grounds such as verified illness or bereavement. On return from an excused absence, you should ask your instructor to schedule the writing of a make-up test. Failure to do so will be considered as an unexcused absence.

METHOD OF ASSESSMENT (GRADING METHOD)

A+	Consistently outstanding	**(90% ➡ 100%)**
A	Outstanding Achievement	**(80% ➡ 89%)**
B	Consistently above average achievement	**(70% ➡ 79%)**
C	Satisfactory or acceptable achievement in all areas subject to assessment	**(55% ➡ 69%)**
X or R	A temporary grade, limited to situations with extenuating circumstances, giving a student additional time to complete course requirements **(See below)**	**(45% ➡ 54%)**

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  METHOD OF ASSESSMENT (GRADING METHOD

  R Repeat - The student has not achieved (0% - 44%)
     the objectives of the course, and the
     course must be repeated
  CR Credit exemption

The method of calculating your weighted average will be defined by your instructor. Since grades are based upon averages, it follows that good marks in some tests can compensate for a failing mark in another test.

Make-Up Test (if applicable)
An "X" grade may be assigned at the end of the regular semester if you have met _ALL_ of the following criteria:

- an overall average between 45% and 54% was achieved
- at least 50% of the tests were passed
- at least 80% of the scheduled classes were attended
- ail of the topic tests were written

If you are assigned an "X" grade, you may convert it to a "C" grade by writing a make-up test on topics agreed to by the instructor. This test will be available at the time agreed to by your instructor.

At the end of the regular term, it is your responsibility to obtain your results from your instructor and, in the event of an "X" grade, to inquire when the make-up test will be available.

The score you receive on this make-up test will replace your original test score and be used to re-calculate your weighted average. If the re-calculated average is 55% or greater, a "C" grade will be assigned. If the re-calculated average is 54% or less, an "R" grade will be assigned.

"R" and "X" Grades at the end of the Semester
If an "X" grade is not cleared by the specified date, it will become an "R" grade. Except for extenuating circumstances, an "X" grade in Math will not be carried into the next semester.

"R" Grades during the Semester
A student with a failing grade and poor attendance (less than 80% attendance) may be given an "R" at any time during the semester.

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VII.   SPECIAL NOTES:

Students with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities), are encouraged to discuss required accommodations with the professor and/or contact the Special Needs Office.

Advanced Standing

Students who have completed an equivalent post-secondary course must bring relevant documents to the Coordinator, Mathematics Department:
• a copy of course outline
• a copy of the transcript verifying successful completion of the equivalent course
Note: A copy of the transcript must be on file in the Registrar's Office.

VIII.   PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the instructor or the Prior Learning Assessment Office (H0240).