

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

COURSE OUTLINE

Course Title: MATHEMATICS

Code No.: MTH 099-4

Program: G.A.S. (TECHNOLOGY ORIENTED)

Semester: ONE

Date: JUNE:, 1986

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New:

Revision:

APPROVED:


Chairperson

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CALENDAR DESCRIPTION

MATHEMATICS

MTH 099-4 TECHNOLOGY

COURSE NAME

COURSE NUMBER

PHILOSOPHY/GOALS;

The G.A.S. Program serves to allow the individual to investigate the various academic and technological fields open at the college, rather than directly enrolling in a program which is neither suitable nor comfortable for the student. After a year of exploration in courses from the various programs, the student should be stronger academically to succeed in their chosen field of study.

OBJECTIVES;

Since logic and reasoning skills are very important in the study of technology oriented programs, the value of a mathematics education is evident. The objectives, through upgrading, will be to develop **these** skills so that they can feel some degree of confidence and proficiency in them. Emphasis should be placed on the art of reasoning in pursuing a problem rather than simply obtaining **the** answer.

Wherever possible, the student should not memorize mathematics, but be able to "feel" it. This simply translates to mean that the student has indeed understood the problem, rather than solving it from memory.

METHOD OF ASSESSMENT;

Test should be frequent, yet not numerous. But since this type of testing involves only freshly learned material, hence challenging short-term memory, it is important that each test overlap in content. That is, material from a previous test appear on the next one. Also, a comprehensive exam should be given at the end of the course after the student is given a thorough review of all topics covered. The importance of this, especially to the upgrading student, is to have an overall view of all the material covered, and to be able to see how some of the various topics are related to each other. The exam should be lightly weighted in determining the final grade in order to minimize the anxiety caused by writing exams. This in turn will increase their confidence in the material that was covered, and in writing comprehensive tests.

TEXTBOOK;

Palmer, Mracher, - PRACTICAL MATHEMATICS, 7th Edition, McGraw-Hill

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TOPIC NO.	PERIODS	TOPIC DESCRIPTION	REFERENCES
		<u>FRACTIONS</u>	pp. 12-28
		- reducing to lowest terms - reducing an improper fraction - converting whole or mixed numbers to improper fractions - obtaining a common denominator - addition, subtraction, multiplication and division of fractions - complex fractions	
		<u>DECIMAL FRACTIONS</u>	pp. 29-43
		- conversion of fractions to decimals and vice versa - addition, subtraction, multiplication and division of fractions - rounding off	
		<u>RATIO AND PROPORTION</u>	pp. 63-68
		- principles of ratio and proportion	
		<u>MEASUREMENT</u>	PP. 74-85
		- introduction to Metric system - conversion from Metric to Imperial systems	
		<u>SIGNED NUMBERS</u>	pp. 112-122
		- addition and subtraction of signed numbers, literal algebraic expressions and polynomials - signs of grouping	

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TOPIC NO.	PERIODS	TOPIC DESCRIPTION	REFERENCES
		<u>EQUATIONS</u> - solving linear equations - checking the unknown - setting up equations	pp. 123-131
		<u>MULTIPLICATION OF SIGNED NUMBERS</u> - multiplication of a monomial by a monomial, polynomial by a polynomial - solving equations involving multiplication	pp. 132-140
	10	<u>DIVISION OF SIGNED NUMBERS AND FACTORING</u> - law of exponents - division fo a monomial by a monomial, and polynomial by a polynomial - factoring (omit Factor Theorem)	pp. 142-161