

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

COURSE OUTLINE

Course Title: MATHEMATICS
Code No.: MTH 426
Program MECHANICAL TECHNOLOGY
Semesters: TWO
Date JUNE 1985
Author J, REAL

New:

Revision:

APPROVED:


ChairYperson

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Date

MATHEMATICS
Course Name

MTH 426
Course Number

PHILOSOPHY/GOALS:

When the student has successfully completed this course he will have demonstrated an acceptable ability to pass tests based upon the course contents as listed elsewhere, if, after completing the course, the student takes further courses (or employment) in which he is required to apply this material he should then, through practice, be able to develop a good command of this subject matter,

METHOD OF ASSESSMENT (GRADING METHOD):

The students will be assessed by tests. These tests will include periodic tests based upon blocks of subject matter and may, at the instructors discretion include unannounced surprise tests on current work and/or a final test on the whole course. A letter grade will be based upon a student's weighted average of his test results. See also the mathematics department's annual publication "To the Mathematics Student" which is presented to the students early in each academic year.

TEXTBOOK(S):

Calter - "Technical Mathematics with Calculus"

OBJECTIVES:

The basic objective is for the student to develop an understanding of the methods studied, knowledge of the facts presented and an ability to use these in the solution of problems. For this purpose exercises are assigned. Tests will reflect the sort of work contained in the assignments. 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 on the following pages.

MTH 426

TOPIC NO.	NO. OF PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS	REFERENCE
		Quadratic Equations- Solution by factoring. Completing the square. Quadratic formula. Radical equations. Graphs of quadratic functions. Equations of quadratic type, Systems of equations.	Ex. 1-5,7, 8,10	Ch • 11
	20	Trigonometry - Oblique Triangles, Graphs of Trig Functions, identities, and Equations - Large angles • Radian measure and circular motion Sine law. Cosine law. Sine and cosine curves. Fundamental identities• Sum or difference of two angles . Double angle identities. Trigonometric equations. inverse functions .	Ex. 1-3 Ex. 1-3 Ex. 1,2 Ex. 1-6	Ch. 12 Ch. 13 Ch. 14 Ch. 15
	10	Exponential and Logarithmic Fns.- The exponential function. Properties of logarithms. Common and natural logarithms . Exponential equations. Logarithmic equations.	Ex 1-4	Ch. 17
		Functional Variation Direct and inverse variations. Joint variations. Functions of more than one variable	Ex 1-7	Ch. 16
		Straight Line Length, slope of line segment Equation of straight line.	Ex, 1-3	Ch, 20

TOPIC NO.	NO. OF PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS	REFERENCE
6	7	Conic Sections - Circle. Parabola. Ellipse. Hyperbola.	Ex. 1-4	Ch. 21
7		Derivatives of Algebraic Fns, (if time permits) Limits. Delta method. Rules for derivatives • Product and fraction rule. Implicit relations. Higher order derivatives.	Ex. 1-7	Ch, 22