SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS

Code No.: MTH 278-4

Program: CIVIL/MECHANICAL

Semester:

Date: OCTOBER, 1985

Author: K. CLARKE

New: Revision:

APPROVED: ChafrftersSn Date gjk^. j//&

CIVIL/MECHANICAL
SEMESTER IV

CALENDAR DESCRIPTION

MATHEMATICS (CALCULUS) — COURSE NAME

MTH 278-4 — 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 com as listed elsewhere. If, after completing the course, the student takes further courses (or employment) in which he is required to apply this mate] 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 assess by tests. These tests will include periodic ti based upon blocks of subject matter and may, at the instructor's discretioi include unannounced surprise tests on current work and/or a final test on whole course. A letter grade will be based upon a student's weighted aver, of his test results. See also the mathematics department's annual publica "To the Mathematics Student" which is presented to students early in each academic year.

TEXTBOOK(S);

Washington, "Basic Technical Mathematics with Calculus", Benjamin Cum

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 th in the solution of problems. For this purpose exercises are assigned. Te will reflect the sort of work contained in the assignments. The level of competency demanded is the level required to obtain an overall passing ave on the tests. The material to be covered is listed on the following page(

PERIODS	TOPIC DESCRIPTION
18	The Derivative
	Limits, slope, derivative, Delta Method, derivatives of polynomials, Product Rule, Quotient Role, Chain Rule
10	Applications of the Derivative
	Tangents and normals
	Curve sketching Maximum and minimum problems
16	Integration
	Differentials, antiderivatives, indefinite integral, area under a curve, definite integral
20	Applications of Integration
	Applications of indefinite integral, area, volumes
	Pressure on a submerged plate, work, flow over a weir