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: JUNE, 1988

Author: W. MACQUARRIE

New: Revision;   X

APPROVED: _____   Date itlaiMa
Chairperson

CIVIL/MECHANICAL
SEMESTER IV

CALENDAR DESCRIPTION

MATHEMATICS (CALCULUS)   MTH 278-4

     COURSE NAME   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
contexts 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 assess by tests. These tests will include periodic
tests based upon blocks of subject matter and may, at the instructor's   J
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 students early in each academic year.

TEXTBOOK(S);

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

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 page(s):

PERIODS	TOPIC DESCRIPTION	REFERENCE
18	The Derivative	Text, Ch. 22
	Limits, slope, derivative, Delta Method, derivatives of polynomials, Product Rule, Quotient Role, Chain Rule	Exercises 22-1 to 22-7 22-9 (part)
10	Applications of the Derivative	Text, Ch. 23
	Tangents and normals	Exercises 23-1, 23-4
	Curve sketching	to 23-6
	Maximum and minimum problems	23-7 (part)
16	Integration	Text, Ch. 24
	Differentials, antiderivatives, indefinite integral, area under a curve, definite integral	Exercises 24-1 to 24-5 24-7 (part)
20	Applications of Integration	Text, ch. 25
	Applications of indefinite integral, area, volumes	25-1 to 25-3 25-6 (part) 25-7 (part)
	Pressure on a submerged plate, work, flow over a weir	Printed Sheets