#

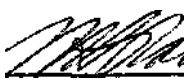
SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title	MATHEMATICS
Code No.:	MTH 370-3
Program:	MECHANICAL TECHNOLOGY (YEAR 3)
Semester:	
Date:	JULY 1983
Author:	J. REAL

New; Revision:

APPROVED: 

Chairperson Date''

MATHEMATICS — Course Name
MTH 370-3 — Course Number

PHILQSOPHY/GOALS:

When the student has successfully completed this course he/she will have demonstrated an acceptable understanding of the course material as listed elsewhere.

The student should then be able to apply this knowledge in his/her studies of other courses in the program where there are applications of these mathematical concepts.

Upon graduation, the student should be able to develop a good command of this subject matter through additional practice.

METHOD OF ASSESSMENT (GRADING METHOD):

The student will be assessed by written tests only. There will be periodic topic tests at times mutually agreed upon (usually) by students and instructor. A letter grade will be assigned for the student's progress report based upon a weighted average of the student's test results. See also the Mathematic's departments annual publication "To The Mathematical Student" which is presented to the students early in each academic year.

TEXTBOOK(S):

TECHNICAL CALCULUS WITH ANALYTIC GEOMETRY; Washington,

MECHANICAL TECHNOLOGY MATHEMATICS

Topic No,	Periods	Topic Description	Reference
1	15	Methods of Integration Substitution, trigonometric identities, inverse trigonometric forms, integration by parts, trigonometric substitution, partial fractions, table of integrals	Washington Ch. 8
2	15	Partial Derivatives and Double Integrals Functions with more than one independent variable, total differential, total derivatives and application to rates, higher order partial derivatives, composite differentiation, partial integration and double integration, area, volume, centroids and moment of inertia by double integration	Washington Ch, 9
3	10	Differential Equations (First Order) Solution by direct integration, separation of variables, special integrable combinations, exact equations, use of integrating factor, homogeneous equations, linear equations, applications.	Washington Ch. 13 Douglass & Zeldin, Ch. 1