

t

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

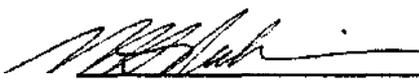
COURSE OUTLINE

Course Title: CALCULUS
Code No.: MTH 578-4
Program MECHANICAL TECHNOLOGY
Semester IV
Date: JUNE 1989
Author: J. REAL

New

Revision:

APPROVED


Chairperson

7" ^^/9

jjj^~si^^~^

\ JUL ~^ 1>^

LSAULT GuicLut \M#M
| SAULT STf MATg

CALENDAR DESCRIPTION

CALCULUS

MTH 578-4

COURSE NAME

COURSE NUMBER

PHILOSOPHY/GOALS:

Students studying mathematics at this level are those individuals who have a certain degree of originality, a sense of logic and an ability to learn independently are required of them in their major subject area. This course serves to exercise these three requirements and to also give them a theoretical knowledge for their academic subjects,

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 other assignments. The level of competency demanded is the level required to obtain an overall passing average in the tests. The material to be covered is listed on the following page.

METHOD OF ASSESSMENT (GRADING METHOD):

1. Three - four tests per semester.
2. Final Grade is a weighted average of these tests.

90 - 100%	= A+
80 - 89%	= A
65 - 79%	= B
55 - 64%	= C
0 - 54%	= X OR R

All tests are scheduled in advance. Hence, attendance is mandatory. Unexcused absence from a test will result in a mark of zero for that test. If a student is prevented from writing a test by illness, the student must phone the instructor (759-6774) before the time of the test or leave a message for the instructor, stating the reason for absence. Upon return to class, the student must see the instructor immediately to arrange a time and place for a make-up test. The student must have a doctor's certificate or a note from the college nurse.

There will be no rewrites (make-up tests) or supplemental exams during the semester, or at the end of the semester.

TEXTBOOK(S):

Washington/ Allan, J., Basic Technical Mathematics with Calculus
Fourth edition.

MTH 578-4

TOPIC NUMBER	PERIODS	TOPIC DESCRIPTION	REFERENC
15		Applications of Integration	
		Applications of indefinite integral	Ex
		Areas by integration	Ex
		Volumes by integration	Ex
		Centroids	Ex
		Moments of Inertia	Ex
		Other applications	Ex
20		Differentiation of Transcendental Functions	
		Derivatives of sine and cosine functions	Ex
		Derivatives of other Trigonometric functions	Ex. 2
		Inverse Trigonometric Functions	Ex. 3
		Applications	Ex. 4
		Derivatives of logarithmic functions	Ex. 5
		Derivatives of exponential functions	Ex, 6
		Applications	Ex. 7
		Review exercise	Ex. 8
21		Methods of Integration	Ch
		General power formula	Ex. 1
		Basic logarithmic forms	Ex. 2
		The exponential form	Ex. 3
		Trigonometric forms	Ex. 4,-
		Inverse trigonometric forms	Ex. 6
		Integration by parts	Ex. 7
		Integration by trigonometric subst.	Ex. 8