SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title	MATHEMATICS
Code No.	MTH 577-4
Program	ELECTRICAL/BLECTRON^ TECHNOLOGY/COMPUTER ENGINEERING
Semester:	IV
Date:	JUNE, 1986
Author:	J. REAL

New

Revision:

APPROVED /7 'f^ . . ^

Ch^i^fpe^l^on 'y^

ate u^-]Z7/^

MATHEMATICS MTH 577-4

COURSE NAME COURSE NUMBER

PHILOSOPHY/GOALS:

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

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 Mathematics department's annual publication "To The Mathematics Student" which is presented to the students early in each academic year.

TEXTBOOK(S):

TECHNICAL MATHEMATICS WITH CALCULUS - Calter

t

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS	REFERENCES
	18	Derivatives of Trigonometric, Logarithmic, and Exponential Functions -		Ch. 25
		Review identities Sine and cosine functions	Ex. 1	
		Tangent, secant, cotangent, and cosecant functions	2	
		Inverse trigonometric functions	3	
		Review rules for exponents and logarithms Logarithmic functions	4	
		Exponential functions	5	
	18	Integration -		Ch. 26
		Indefinite integral Antiderivatives	1	
		Power functions Integration by substitution	2	
		Integration constants Exponential and Trigonometric functions;	3	
		Integrals leading to logarithmic functions	4	
		Velocity and acceleration	5	
	12	Applications of Integration -		Ch. 27
		The definite integral	1	
		Area under a curve Area between curves	2	
		Volumes by integration	1	Ch. 28
		Work	7	
		Average and RMS values	8	
	^	Methods of Integration -		Ch. 29
		Use of table of integrals Additional applications of integral tables	1	