DOC. 3!

S^ULT COLLEGE OF i^PPLIED i^RTS & TECHNOLOGY

S^iULT STE. Mi^RIE, ONTi^RIO

COURSE OUTLINE

Course Title:	M^THEM^^TICS
Code No.:	MTH 577-4
Program	ELECTRICAL/ELECTRONIC TECHNOLOGY/COMPUTER ENGINEERING
Semester:	IV
Date:	JUNE 1989
Author	J. REAL

New; Revision

i^PPROVED: Chairperson Date ^ ^

CI^LENDI^R DESCRIPTION

OLCULUS — MTH 577-4

COURSE NI^ME — **COURSE NOMBER**

PHILOSOPHY/GOJ^LS:

Students studying mathematics at this level are those individuals where 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 cour; serves to exercise these three requirements and to also give them a theorei 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 th* in the solution of problems. For this purpose exercises are assigned. Te; will reflect the sort of work contained in other assignments. The level o] competency demanded is the level required to obtain an overall passing avei in the tests. The material to be covered is listed on the following page.

METHOD OF J^SSESSMENT (GRADING MKTHOD):

1. Three - four tests per semester.

2, Final Grade is a weighted average of these tests.

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

>11 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.

TEXTBOOK(S)

Washington, ;^llan, J., Basic Technical Mathematics with Calculus Fourth edition.

TOPIC NUMBER	PERIODS	TOPIC DESCRIPTION	^ASSIGNMENTS	REFERENC
	10	**^applications of Integration**		**Ch. 25**
		applications of indefinite integral	Ex. 1	
		i^reas by integration	Ex. 2	
		Volumes by integration	Ex. 3	
	22	**Differentiation of Transcendental Functions**		**Ch. 26**
		Derivatives of sine and cosine functions	Ex.	
		Derivatives of other Trigonometric functions	Ex.	
		Inverse Trigonometric Functions	Ex.	
		^Applications	Ex,	
		Derivatives of logarithinic functions	Ex.	
		Derivatives of exponential functions	Ex.	
		Applications	Ex.	
		Review exercise	Ex.	
	21	**Methods of Integration**		**Ch. 27**
		General power formula	Ex. 1	
		Basic logarithmic forms	Ex. 2	
		The exponential form	Ex. 3	
		Trigonometric forms	Ex. 4, 5	
		Inverse trigonometric forms	Ex. 6	
		Integration by parts	Ex. 7	
		Integration *by* trigonometic subst.	Ex. 8	
		Integration by partial fractions	Hanid-out	
		Use of integration tables	Ex. 9	