SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE, MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS

Code No.: MTH 551-4

Program: ELECTRICAL/ELECTRONIC TECHNOLOGY/COMPUTER ENGINEERING

Semester: III

Date: JUNE, 1988

Author: J. REAL

New: Revision: X

APPROVED: _____   /Ju-Qcc^r 3/ys^
           Chairperson   Date

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MATHEMATICS

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 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's progress will be assessed by periodic written tests.
The student's final grade is based upon a weighted average of the test
results. A separate handout will include a schedule of tests, a
description of the method used to find the weighted average and a
number of requirements and suggestions with regard to tests.
ATTENDANCE AT ALL TESTS IS REQUIRED. Unexcused absence from a test
will result in a mark of zero for that- test* If a student is
prevented from attending a test by illness or bereavement, the student
must phone the instructor before the time of the test and leave a
message for the instructor, at his extension, stating the reason for
absence. The number to call is 949-2050. Upon return to classes, the
student must see the instructor at the end of the first mathematics
class attended to arrange a time and place for a make up test. In
addition, if the absence is due to illness the student must present a
note from the student's doctor or from the College nurse.

Make up tests will not be made available in this course in any other
circumstances than those described above.

As in any other subject the student is preparing to be a technologist
or technician as well as studying the subject. Hence, on tests the
student is expected to produce neat, legible, well laid out solutions
which show clearly how the answer was obtained. If anything less is
required, this will be indicated in the test. Failure to show such
solutions may render correct answers worthless. As happens in the
workplace if anything you put on paper can be misread it will be- In
addition to loss of marks on individual questions, up to 25% of the
marks available *on* a test can be subtracted as a penalty for

MTH 551-4 '

untidiness. Marks lost in such penalties can be redeemed by a student
willing to put forth the required effort. Proper solutions as
described above should be produced for all your assigned work. Such
practice will make it easier for you to produce the required quality
of work on tests. If when you look at a page of your work it makes
you feel proud of its appearance, than you are probably on target.

Marks allotted to each question on a test are usually shown. Please
enquire if they are not. The questions on a test do not necessarily
have equal values.

TEXTBOOK

Washington, "Basic Technical Mathematics with Calculus" - Fourth
Edition. ,

MTH 551-4
ELECTRICAL ELECTRONINCS, COMPUTER
SEMESTER III

TOPIC NO,	PERIODS	TOPIC DESCRIPTION	ASSIGNMENT	REFERENCE
1	11	ANALYTIC GEOMETRY		Ch. 20
		Straight line	Ex, 1,2 '	
		Circle	Ex. 3	
		Parabola	Ex. 4	
		Ellipse	Ex. 5	
		Hyperbola	Ex. 6	
		Offset curves	Ex. 7,8	
	12	DERIVATIVES OF ALGEBRAIC FUNCTIONS		Ch• 22
		Limits	Ex. 1	
		Slope of tangent to a curve	Ex. 2	
		The derivative, delta process	Ex. 3	
		The meaning of a derivative	Ex. 4	
		Derivatives of polynomials	Ex. 5	
		Products & Quotients	Ex. 6	
		Power (Chain) rule	Ex. 7	
		Implicit functions	Ex. 8	
		Review exercise	Ex. 9	
	10	APPLICATIONS OF DERIVATIVES		Ch, 23
		Tangents and Normals	Ex. 1	
		Curvilinear motion	Ex. 3	
		Related rates	Ex. 4	
		Curve sketching	Ex. 5,6	
		Applied maximum & minimum probs.	Ex. 7	
		Review exercise	Ex. 8	
	10	INTEGRATION		Ch. 24
		Differentials	Ex. 1	
		Antiderivatives	Ex. 2	
		Indefinite integral	Ex. 3	
		Area under curve	Ex. 4	
		Definite integral	Ex. 5	