

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS

Code No.: MTH 577-4

Program: ELECTRICAL/ELECTRONIC TECHNOLOGY/COMPUTER ENGINEERING

Semester: IV

Date: NOVEMBER, 1988

Author: J. REAL

New: Revision: X

APPROVED INN - ^   
Chairperson

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MTH 577-4  
Electrical, Electronics,  
Computer Sem II

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. A student may be prevented from attending a test by illness or bereavement. 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, the percentage of marks on individual questions, up to 25% of the

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marks available on a test can be subtracted as a penalty for 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, A. J., "Basic Technical Mathematics with Calculus", Fourth Edition.

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Electrical, Electronic, Computer  
Sem IV

TOPIC WO.	PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS	REFERENCES
	10	<b>Applications of Integration</b>		Ch. 25 (Ch. 5 )
		Applications of indefinite integral	Ex.1	
		Areas by integration	Ex.2	
		Volumes by integra- tion	Ex.3	
	22	<b>Differentiation of Transcendental Functions</b>		Ch 26 (Ch 6,7)
		Derivatives of sine and cosine functions	Ex.1	
		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	<b>Methods of Integration</b>		Ch 27 (Ch 8,9)
		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 trig. subst.	Ex.8	
		Integration by partial fractions	Hand-out	
		Use of integration tables	Ex.9	