

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

COURSE OUTLINE

Course Title: MATHEMATICS
Code No.: MTH 277-4
Program: ELECTRICAL AND ELECTRONICS TECHNICIAN
Semester: FOUR
Date: JUNE 10, 1983
Author: K.G. CLARKE

New:

Revision:

APPROVED:


Chairperson

Date

MATHEMATICS

MTH 277-4

ELECTRICAL & ELECTRONIC TECHNICIAN

CALENDAR DESCRIPTION

MATHEMATICS

Course Name

MTH 277-4

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PHILOSOPHY/GOALS:

When the student has successfully completed this course he will have demonstrated an acceptable ability to pass tests based upon the course contents as listed elsewhere. If, after completing the course, the student takes further courses (or employment) in which he is required to apply this material he should then, through practice, be able to develop a good command of this subject matter.

METHOD OF ASSESSMENT (GRADING METHOD):

The students will be assessed by tests. These tests will include periodic tests based upon blocks of subject matter and may, at the instructor's discretion include unannounced surprise tests on current work and/or a final test on the whole course. A letter grade will be based upon a student's weighted average of his 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):

Calculus with Analytic Geometry
- Person

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

Topic No.	No. of Classes	Topic Description	Assignments	Reference
		Applications	Text Exercise 15.1	Ch. 15
		Distance, Velocity, Acceleration		
		Slope, Maxima, Minima, Inflection Points	Text Exercises 16.1 - omitting #15 to #18 and 21 to 26 & 28	Text Ch. 16 omitting Ex. 6 on p.2
			17.1 omitting 25, 26 17.2 omitting 33 to 36	Ch. 17
			18.1 1 to 3 7 to 10,13,14, 18,34,35,39	Ch. 18
		Differentiation Method, Product Rule, Quotient Rule, Inversion, Implicit Differentiation	Text Exercises 14.2,16.1: 15 to 18, 21 to 26, 28 17.1: 23 24, 26 17.2: 33 to 36 18.1: 4, 40, 19.1: 1 to 13	Text 14.3 to 14.5
		Differentiation of Trig. Functions with applications in A.C. Theory	Text Exercises 28.1: 1,2,7,8 28.2: 1,2,7,13, 14,16,18,20 to 26 20.1: 1,9,10,14, 15,17,18,19 21.1: 1,6 to 9, 15 to 18 Printed Sheets	Text Ch. 28 to 28.8 only Ch. 20 Ch. 21
		Introduction to Integration, Indefinite Integrals, Definite Integrals, Areas	Text Exercises 22-1, 22-3, 23-1, 23-2, 23-3, 24-1, 24-2	Text Ch. 22, 23, & 24.1 24.4
		Integration of Trig. Functions Application of Integration to Acceleration, Velocity and Distance	Text Exercises 26.1, 26.2 32.1 Printed Sheets	Text parts of Ch. 26, 32 plus electrical applications

Topic No.	No. of Classes	Topic Description	Assignments	Reference
7	8	Logarithmic and Exponential Functions	Text Exercises 30.1, 30.2, 30.4 Printed Sheets	Text part of Ch. 30 plus electrical applications
8	7	Areas and Volumes Average and RMS Values of electrical quantities by integration	Text Exercises 25.1, 25.2 printed sheets	Text Ch. 25 plus electrical applications
9		Electrical Applications		