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

COURSE OUTLINE

Course Title: MATHEMATICS
Code No.: MTH 251-4
Program: ELECTRICAL AND ELECTRONIC TECHNICIANS
Semester: THREE
Date: JUNE 1984
Author: K.G. CLARKE

New: Revision:

APPROVED:



Chairperson

Date^"

CALENDAR DESCRIPTION

ELECTRICAL & ELECTRONIC TECHNICIANS

<u>MATHEMATICS</u>	<u>MTH 251-4</u>
Course Name	Course Number

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):

"Basic Technical Mathematics with Calculus"

- Washington

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 Number	Periods	Topic Description"	Reference
	13	<u>Number Systems and Boolean Algebra</u> Binary, octal, hexadecimal Change of base, algebra of elements Addition and multiplication tables Definition of elements and operators Truth tables, derivation of simple identities: Negation - the not operator Applications to logic and switching circuits	Printed Sheets
		<u>Algebra Review</u> Special products, factoring, exponents, radicals, and equations	Review Sheets
		<u>Straight Line, Equations & Graphs</u> Review distance between points, slope of the line, inclination, equation of a line	Text p. 492-503
		<u>Analytic Geometry-Conic Sections</u> Equations and graphs of conies (brief coverage)	Text p. 504-518
		<u>Introduction to Differential Calculus</u> Functional notation, limiting value differentiation Differentiation by delta method applications	Text p. 575-597
		<u>Differentiation of Power Functions by Formula</u> Derivatives of Polynomials The Chain Rule	Text p. 597-602 p. 606-612 p. 614-616 (part)