

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS
Code No.: MTH 551
Program: ELECTRICAL/ELECTRONIC TECHNOLOGY; COMPUTER ENGINEERING
Semester: III
Date: JULY, 1983
Author: J. REAL

New

Revision

APPROVED:


Chairperson

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Date/

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MATHEMATICS
Course Name

MTH 551
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 inathematical 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 will be assessed by written tests only. There will be periodic topic tests at times mutually agreed upon (usually) by students and instructor. A letter grade will be assigned for the student's test results.

See also the Mathematic's department annual publication "To the Mathematic Student" which is presented to the students early in each academic year.

TEXTBOOKS

Calculus for Engineering Technology: W.R. Blakeley

ELECTRICAL/ELECTRONIC TECHNOLOGY: COMPUTER ENGINEERING MATHEMATICS

MTH 551

| <u>TOPIC NO.</u> | <u>PERIODS</u> | <u>TOPIC DESCRIPTION</u> | <u>REFERENCE</u> |
|------------------|----------------|--|--------------------|
| 1 | 10 | <u>Number Systems and Boolean Algebra</u> Binary, Octal, Lexadecimal and binary coded decimal systems Conversions Addition, Subtraction, multiplication and division in binary systems And gates. Or Gates and complementing circuits Truth Tables Rules of Boolean Algebra including DeMorgan Theorems Simplifications | Major Subject text |
| 2 | 6 | <u>Graphs and Analytic Geometry</u> Power functions Straight line Conic sections | Ch. 1,2 |
| 3 | 14 | <u>Differentiation</u> Del tan notation Derivatives by delta method Derivatives by rule Applications (electrical) Maximum and Minimum Higher Order derivatives Applications of maximum/minimum | Ch. 3,4 |
| 4 | 14 | <u>Differentials, Implicit Differentiation</u> The differential Implicit Differentiation Product rule • | Ch. 5, 6 |

