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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

t Semester:       III

Date:             JUNE, 1984

Author:           J. REAL

                              New;              Revision


APPROVED            -'^-
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          Chairperson                           Date


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MATHEMATICS                                           MTH  551
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 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 mathematics department's 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

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| TOPIC NO. | PERIODS | TOPIC DESCRIPTION | REFERENCE |
|---|---|---|---|
| 1 | 12 | **Graphs and Analytic Geometry** | Ch. 1, 2 |
| | | Power functions | |
| | | Straight line | |
| | | Conic sections | |
| | 18 | **Differentiation** | Ch, 3, 4 |
| | | Delta notation | |
| | | Derivatives by delta method | |
| | | Derivatives by rule | |
| | | Applications (electrical) | |
| | | Maximum and minimum | |
| | | Higher order derivatives | |
| | | Applications of maximum/minimum | |
| | 16 | **Differentials, Implicit Differentiation** | Ch. 5, 6 |
| | | The differential | |
| | | Implicit differentiation | |
| | | Product rule | |
| | | Quotient rule | |
| | | Related rates | |
| | | Composite functions | |
| | | Applications | |