File Name:

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

New:
Revision:

APPROVED:
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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 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

| TOPIC NO. | PERIODS | TOPIC DESCRIPTION | REFERENCE |
| :---: | :---: | :---: | :---: |
| 1 | 10 | Number Systems and Boolean Algebra | Major Subject text |
|  |  | 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 |  |
| 2 | 6 | Graphs and Analytic Geometry | Ch. 1,2 |
|  |  | Power functions |  |
|  |  | Straight line |  |
|  |  | Conic sections |  |
| 3 | 14 | Differentiation | Ch. 3,4 |
|  |  | Del tan notation |  |
|  |  | Derivatives by delta method |  |
|  |  | Derivatives by rule |  |
|  |  | Applications (electrical) |  |
|  |  | Maximum and Minimum |  |
|  |  | Higher Order derivatives |  |
|  |  | Applications of maximum/minimum |  |
| 4 | 14 | Differentials, Implicit Differentiation | Ch. 5, 6 |
|  |  | The differential |  |
|  |  | Implicit Differentiation |  |
|  |  | Product rule |  |

