DOC. 114

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title:	MATHEMATICS
Code No-:	MTH 128-4
Program:	ELECTRICAL AND ELECTRONIC TECHNICIANS
Semester:	II
Date:	JUNE 1988
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New Revision:

APPROVED: \KWNX^.^ Date 0

Chairperson

CALENDAR DESCRIPTION

MATHEMATICS	MTH 128-4 ELECTRICAL & ELECTRONICS TECHNICIANS SEM II
COQRSE NAME	COURSE NUMBER

PHILOSOPHY/GOALS;

The course begins with number systems and Boolean algebra followed by complex numbers• These topics are needed in certain major subject areas. The course continues with a review of secondary school algebra and trigonometry and extends each of these topics a bit beyond the level of many secondary school programs.

METHOD OF ASSESSMENT (GRADING METHOD):

The student's progress will be assessed by periodic written tests. The studenfs final grade is based upon a weighted average of the test results. A separate handout will include a schedule of tests, a description of the method used to find the weighted average and a number of requirements and suggestions with regard to tests. ATTENDANCE AT ALL TESTS IS REQUIRED. Unexcused absence from a test •will result in a mark of zero for that test. A student may be prevented from attending a test by illness or bereavement. Upon return to classes, the student must see the instructor at the end of the first mathematics class attended to arrange a time and place for a make up test. In addition, if the absence is due to illness the student must present a note from the studenfs doctor or from the College nurse.

Make up tests will not be made available in this course in any other circumstances than those described above.

As in any other subject the student is preparing to be a technologist or technician as well as studying the subject. Hence, on te^ts the student is expected to produce neat, legible, well låid out solutions which show clearly how the answer was obtained. If anything less is required, this will be indicated in the test. Failure to show such solutions may render correct answers worthless. As happens in the workplace if anything you put on paper can be misread it will be. In addition to loss of marks on individual questions, up to 25% of the marks available on a test can be subtracted as a penalty for untidiness. Marks lost in such penalties can be redeemed by a student willing to put forth the required effort.

Proper solutions as described above should be produced for all your assigned work. Such practice will make it easier for you to produce the required quality of work on tests. If when you look at a page of your work it makes you feel proud of its appearance, than you are probably on target.

Marks allotted to each question on a test are usually shown. Please enquire if they are not. The questions on a test do not necessarily have equal values.

TEXTBOOK(S):

Washington: BASIC TECHNICAL MATHEMATICS WITH CALCULUS, 4th Ed. - Metric

ENTRY TO COURSES:

Entry to this course can be earned by passing the first semester math course. A student carrying an X grade in Semester I Math can be admitted to this course (Semester II Technician Math).

ENTRY TO THE SUBSEQUENT COURSES:

Satisfactory completion of this course is required for admission to the third semester technician math course.

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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 in the tests. The material to be covered is listed below:

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	ASSIGNMTS	REP
	11	COMPLEX NUMBERS - Complex Numbers - Operations with Complex Numbers in Rectangular Form - Graphing Complex Numbers - Trigonometric and Polar Forms of Complex Numberx - Alternating-Current Calculations	TEXT EX 11-1,2 3,4,6 (pt), 7,8	TEXT, Ch.ll omitting sec 11-5
	15	MENSURATION – Prineiples of Plane Geomet]-y - Areas & Perimeters of Plane Figures – Surface Areas & Volurnes of Solid[Shapes		App.C & MSS
	10	ANGLES AND OBLIQUE TRIANGLES - Trigonometric Functions of any Angle Radian Measure and Are ~ Length - Law of Sines - Law of Cosines Applications Addition of Vectors	TEXT EX 7-•1 TO 7-5, EX 8-5, 8-6	TEXT CHAPTEURS 7-8

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16 ALGEBRA REVIEW

TEXT CHAPTERS 2,4,5 & 6 and Ch 15 Sec* 1,2

- Functions & Graphs
- Systems of Linear Equations
- Determinants
- Factoring & Fractions
- Ouadratic Equations

EXPONENTS & RADICALS

TEXT Ch. 10

Positive & Negative Integral and Fractional Exponents
Simplest Radical Form
Addition, Subtraction, Multiplication and Division of Radicals