SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: TECHNOLOGY MATHEMATICS

Code No.: MTH 423-4

Program: COMPUTER, ELECTRICAL & ELECTRONICS TECHNOLOGY

Semester: TWO

Date: JULY, 1987

Author: JOHN REAL

New; X Revision:

APPROVED: Chairperson Date July 5/87

TECHNOLOGY MATHEMATICS MTH 423-4

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 stude takes further courses (or employment) in which he is required to apply th material he should then, through practice, be able to develop a good command of this subject matter.

METHOD OF ASSESSMENT (GRADING METHOD);

GRADES:

Grades reported on your transcript are based on a weighted average of tes scores, on the following basis:

90 -	100%	A+
80 -	89%	A
65 -	79%	B
55 -	64%	C
0 -	54%	R or X

The method of calculating a weighted average is described in your student hand-book.

All tests are scheduled in advance. Hence attendance is mandatory. Unexcused absence from a test will result in a mark of zero for that test If a student is prevented from writing a test by illness, the student mus phone the instructor (949-2050) before the time of the test and leave a message for the instructor, at his extension, stating the reason for absence. Upon return to classes, the student must see the instructor immediately to arrange a time and place for a make-up test. The student must have a doctor's certificate or a note from the college nurse.

There will be no rewrites (make-up tests) or supplemental exams during th semester or at the end of the semester.

TRANSFERS

Students who fail the technology math course (MTH 423) will receive an "I grade in that course at semester end (unless given an "X" grade extensior because of extenuating circumstances). Those who are elegible may regist in the next semester's technician course (MTH 219). If they pass this course they will also be given a credit (CR) in the previous semester's technician math course (MTH 119). The "R" grade in the technology math course (MTH 423) will remain as part of the record on their transcript.

MTH 423-4

CREDITS

A credit for this course may be allowed on presentation of proof of standing in the Functions and Relations and Algebra courses of the Ontari" Grade 13 program.

TEXTBOOK(S)t

Washington - "Basic Technical Mathematics with Calculus - Fourth Edition

Floyd - "Digital Fundamentals" - Second Edition

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 tests. The material to be covered i listed on the following pages.

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS	REFEREI
		Number Systems and Boolean Algebra-		
		Binary, octal, hexadecimal Conversions	Ex. 1-30	Ch. 2
		Arithmetic in binary system And, Or, and Not gates	Ex. 1-17	Ch. 3
		Truth tables Boolean algebra	Ex. 1-20	Ch. 4
		Proof of identities Application to circuits	Ex. 1-10 14-18	Ch. 5
		Quadratic Equations-		Ch. 6
		Solution by factoring Completing the square	**Ex. 1**	
		The Quadratic formula	**Ex. 2**	
		Graphs of quadratic functions	**Ex. 3**	
		Review exercies	**Ex. 4**	
			Ex. 5	
		Trigonometric Functions o£ any Angle		Ch<
		Signs of trig functions	**Ex. 1**	
		Radian measure	**Ex. 3**	
		Angular measurements	**Ex. 4**	
		Review exercise	**Ex. 5**	
		Oblique Traingles		Ch- 8
		Vectors	Ex. 1-4	
		Sine law	Ex. 5	
		Cosine law	Ex. 6	
		Review exercise	Ex. 7	
		Graphs o£ Trigonometric Functions		Ch
		Sine and cosine graphs	Ex	
		Graphs of other functions	Ex	

MTH 423-4

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS
6	8	**Bxponential and Logarithmic Functions**	
		Definition of a logarithm	Ex. 1
		Graphs of exponential and logarithmic functions	**Ex. 2**
		Rules for logarithms	**Ex. 3**
		Common and natural logarithms	**Ex. 4-6**
		Exponential and log equations	**Ex. 7**
		Review exercise	**Ex. 9**
7	3	**Variation**	
		Ratio and proportion	**Ex. 1**
		Direct and inverse variations	**Ex. 2**
		Review exercise	**Ex. 3**
8	6	**Additional Trigonometric Topics**	
		Fundamental trig, identities	**Ex. 1**
		Sum and difference formulae	**Ex. 2**
		Double angle formulae	**Ex. 3**
		Trigonometric equations	**Ex- 5**
		Inverse trig* functions	**Ex. 6,7**
		Review exercise	**Ex. 8**