SAULT COLLEGE OF APPLIED ARTS St TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title   MATHEMATICS

Code No.:   MTH 413-4

Program: MECHANICAL TECHNOLOGY

Semester:

Date: JULY, 1987

Author: J. REAL

                                                              X
                    New: R e v i s i o n :

APPROVED: ___^_^_^_^_^_y_^_____Ly^f^___^^./J___r
           Chaj^perBoff ^^ ^   Da/Ce   /   ^

MATHEMATICS   MTH 413-4

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
this 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 ext 562) before the time of the test and
leave a message for the instructor 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.

TRANSFERS

Students have the option of taking technician or technology mathematics :
Semester 1. Your high school math background and results of the college
pre-test should indicate the appropriate choice.

MTH 413 MECHANICAL TECHNOLOGY

Students who fail the technology math course (MTH 413) will receive an "R" grade in that course at semester end (unless given an "X" grade extension because of extenuating circumstances). Those who are elegible may register in the next semester's technician course (MTH 220). If they pass this course they will also be given a credit (CR) in the previous semester's technician math course (MTH 120). The "R" grade in the technology math course (MTH 413) will remain as part of the record on their transcript.

CREDITS

A credit for this course may be allowed on presentation of proof of standing in the Functions and Relations course of the Ontario Grade 13 program, A score of 70% or better in the pre-test must be achieved as well.

MTH 413 MECHANICAL TECHNOLOGY

TOPIC NO.	NO. OF PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS Exercise	REF Chapter
		Introduction		Appendix A,B,C,D
		Study aids - read		
		Metric system	B-1	
		Approximate numbers and significant digits	B-2,3	
		Geometry review	C-3	
		Scientific calculator	D-4	
		Fundamental Concepts and Operations		
		Fundamental laws of algebra	1-4	
		Rules for exponents	5	
		Scientific notation	6	
		Roots and radicals	7	
		Basic operations on algebraic expressions	8—10	
		Equations	11	
		Formulas and literal equations	12	
		Review exercise	14	
		Functions and Graphs		
		Functional notation	1	
		Rectangular coordinates	2	
		The graph of a function	3,4	
		Solving equations graphically	5	
		Review exercise	6	
		Trigonometry		
		Angles, definitions of functions	1-3	
		The right triangle	4	
		Applications	5	
		Review exercise	6	

MTH 413 MECHANICAL TECHNOLOGY

TOPIC NO.	NO. OF PERIODS	-TOPIC DESCRIPTION	ASSIGNMENTS Exercise	REF. Chapter
		Systems of Equations		
		Graphing linear equations	1,2	
		Graphical solutions	3	
		Algebraic solutions	4	
		Solutions using determinants	5	
		Systems in three unknowns	6,7	
		Review exercise	8	
		Factoring and Fractions		
		Special products	1	
		Factoring	2,3	
		Equivalent fractions	4	
		Multiplication and division	5	
		Addition and subtraction	6	
		Equations	7	
		Exponents and Radicals	8	10
		Rules for exponents	1	
		Fractional exponents	2	
		Radicals - reducing to simplest form	3	
		Operations with radicals	4-6	
		Review exercise	7	
		Variation		17
		Ratio and proportion		
		Variations, direct and indirect		
		Review exercise		