SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS

Code No. MTH 254-4

Program: MECHANICAL/MECHANICAL DRAFTING TECHNICIANS

Semester:

Date: OCTOBER, 1985

Author: W. MACQUARRIE

                                                          X
                         New: Revision:

APPROVED: _____
          Chairperson   Date

CALENDAR DESCRIPTION

MATHEMATICS   MTH 254-4..MECHANICAL

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
topics as listed elsewhere. If, after completing the course, the student
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 in this subject matter.

METHOD OF ASSESSMENT (GRADING METHOD):

The students will be assessed by written tests, including major periodic
tests based upon large blocks of the subject matter and some unannounced
short quizzes on current work, the latter being given at the discretion of
the instructor. A final test on the whole course may also be included. A
letter grade will be based upon a student's weighted average of all his
test results. See also the mathematics department's annual publication "TO
THE MATHEMATICS STUDENT" for further details. This publication is made
available to the students early in each academic year.

TEXTBOOK(S);

"Basic Technical Mathematics with Calculus" - 3rd Edition, Washington

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

MTH 254-4
MECHANICAL

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	REFERENCES
		<u>Algebra Review</u>	Washington Text (unless otherwise noted)
		Special products, factoring, lowest common exponents, formula, manipulation, quadratic and simultaneous equations	Paragraphs: 1-8, 5-1, 5-2, 5-5-7, 1-4, 10-1, 10-2, 1-10, 1-11, 6-2, 4-1, 4-2, 4-
	20	<u>Solid Mensuration</u>	Kern & Bland Solid Mensuration Ch.1
		Mensuration of plane figures	Ch.3, 4, 6
		Mensuration of solid figures, cubes, prisms, cylinders, pyramids, cones, and spheres	
		Applications involving the various figures in both metric (SI) and English units using COMPOSITE shapes	
		<u>Analytic Geometry</u> -_ <u>Straight Line</u>	Washington (Paragraphs)
		Rectangular co-ordinates	2-2, 20-1 - 20-2
		Distance between points on rect. system	
		Slope	
		Straight line equations and applications	
	10	<u>Analytic Geometry</u> -_ <u>Conic Sections</u> Person	
		Introduction - the four sections through a cone	20-3
		The Circle - equations and graphs	20-4
		The Parabola - equations and graphs	20-5
		- <u>applications</u>	
		- reflector	
		The Ellipse - equations and graphs	
		Translation of axes	20-7
		General Second Degree equation	20-8

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MECHANICAL

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	REFERENCES
		Introduction to Differential Calculus	
		Functional notation, limiting values	2-1, 2-3, 22-1

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