SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS

Code No.: MTH 254-4

Program: ARCHITECTURAL/MECHANICAL/MECHANICAL DRAFTING TECHNICIANS

Semester:

Date: SEPTEMBER, 1986

Author: W. MACQUARRIE

                                                           X
                    New: Revision:

CALENDAR DESCRIPTION

MATHEMATICS   MTH 254-4..MECHANICAL
                                                   ARCHITECTURAL

Course Name   Course Number

PHILQSOPHY/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);

Calter, P., Technical Mathematics with Calculus

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/ARCHITECTURAL

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	REFERENCES
		<u>Algebra Review</u>	Calter Text (unless otherwise noted) Paragraphs:
		Special products, factoring, lowest common exponents, formula, manipulation, quadratic and simultaneous equations	3.4, 4.8, 7.1-7.i 8.6, 9.1, 9.2, 9.5, 11.1- 11.5
	20	<u>Solid Mensuration</u>	Kern & Bland Solid Mensuratior Ch.l
		Mensuration of plane figures 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	Ch.3, 4, 6 Hand-out sheets
		<u>Analytic Geometry</u> ^. <u>Straight Line</u>	Calter - (Paragraphs)
		Rectangular co-ordinates Distance between points on rect. system Slope Straight line equations and applications	5.1-5.3, 20.1- 20.3
	10	<u>Analytic Geometry</u> ^ <u>Conic Sections</u> Person	
		Introduction - the four sections through a cone The Circle - equations and graphs The Parabola - equations and graphs - <u>applications</u> - reflector The Ellipse - equations and graphs Translation of axes General Second Degree equation	21.1 21.2 21.3

MTH 254-4
MECHANICAL/ARCHITECTURAL

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	REFERENCES
5	5	<u>Introduction to Empirical Equations</u>	Rice & Knight 2nd Edition
		Linear empirical equations	Chapter 6
		Non-linear empirical equations methods	pp. 334-352