

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

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New:

Revision:

APPROVED:


Chairperson

Date  11/1/86

CALENDAR DESCRIPTION

MATHEMATICS

MTH 254-4..MECHANICAL
ARCHITECTURAL

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 "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> Special products, factoring, lowest common exponents, formula, manipulation, quadratic and simultaneous equations	Calter Text (unless otherwise noted) Paragraphs: 3.4, 4.8, 7.1-7. 8.6, 9.1, 9.2, 9.5, 11.1- 11.5
	20	<u>Solid Mensuration</u> 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	Kern & Bland Solid Mensuratio Ch.1 Ch.3, 4, 6 Hand-out sheets
		<u>Analytic Geometry - Straight Line</u> Rectangular co-ordinates Distance between points on rect. system Slope Straight line equations and applications	Calter - (Paragraphs) 5.1-5.3, 20.1- 20.3
	10	<u>Analytic Geometry ^ 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