

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS
Code No.: MTH 254-4
Program: CIVIL/CONSTRUCTION TECHNICIANS
Semester: III
Date: DECEMBER, 1983
Author: W. MACQUARRIE

New:

Revision:

APPROVED:

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Date

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CIVIL/CONSTRUCTION TECHNICIANS
MTH 254-4
MATHEMATICS

CALENDAR DESCRIPTION

<u>MATHEMATICS</u>	MTH 254-4
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 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 annual publication "To The Mathematics Student" for further details. This publication is made available to the students early in each academic year.

TEXTBOOK(S):

Calculus with Analytic Geometry - Person
Analytic Geometry - College Manuscript (optional)

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 page(s):

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PERIODS	TOPIC DESCRIPTION	REFERENCE
	<u>Algebra Review</u> Special products, factoring exponents, radicals, formulas simultaneous equations	Manuscript Available
	<u>Analytic Geometry - Straight Line Rectangular Co-ordinates</u> Distance between points on rect. system Slope Angle between two lines Straight line equations Distance from a point to a line	Person - by paragraph 1.1 - 1.10 1.11, 1.13 1.17 3.1 - 3.5,3 3.7
10	<u>Analytic Geometry - Conic Sections</u> Introduction - section through a cone The Circle - equations and graphs - tangent to a circle The Parabola - equations & graphs - applications - reflector The Ellipse - equations & graphs General Second degree equations Calculating point(s) of inter- section of two curves	Person 7.10 4.1 - 4.5 5.1 - 5.5 6.1 - 6.8
12	<u>Empirical Equations</u> Linear empirical equations Non-linear empirical equations	Rice and Knight 2nd Edition Ch. 6 - p. 131-136 Ch. 14 p. 334-352
17	<u>Annuities</u> Accumulated value of an amount and an annuity Present value of an amount and an annuity Use of amortization tables	Handouts Available