

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  
AND CIVIL TECHNICIANS

Semester:

Date: JUNE 1989

Author: W. MACQUARRIE

New: Revision: X

APPROVED:

  
Chairperson

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CALENDAR DESCRIPTION

MATHEMATICS

MTH 254-4..MECHANICAL/  
ARCHITECTURAL/CIVIL TN

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);

Person, R., "Essentials of Mathematics", (5th Edition), Wiley Publ.

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 pages.

MTH 254-4  
ARCHITECTURAL/CIVIL/MECHNAICAL TECHNICIANS

TOPIC NO.	PERIODS	TOPIC DESCRIPTION	REFERENCES
1	9	<u>Algebra Review</u> Special products, factoring, LCM, exponents, formula manipulation, quadratic and simultaneous equations	Person Text (unless otherwise noted) pp. 157-80; 269- 289; 203-218; 309-323; 227- 240
2	20	<u>Solid Mensuration</u> Mensuration of plane figures and solid figures, cubes, prisms, cylinders, pyramids, cones, and spheres Applications involving the various figures in both metric (SI) and English units using <u>COMPOSITE</u> shapes	Kern & Bland Solid Mensuratio Ch.1 Ch.3, 4, 6 Hand-out sheets
3	5	<u>Analytic Geometry</u> ^ <u>Straight Line</u> Rectangular co-ordinate system Distance between points. Slope Straight line equations and applications	College Manu- script pp. 253-268
4	10	<u>Analytic Geometry</u> ^ <u>Conic Sections</u> <u>Person</u> The four sections of a cone The Circle - equations and graphs The Parabola - equations and graphs - <u>applications</u> The Ellipse - equations and graphs Translation of axes General Second Degree equation	College Manuscript
5	5	<u>Introduction to Empirical</u> <u>Equations</u> Linear empirical equations Non-linear empirical equations methods	Rice & Knight 2nd Edition Chapter 6 pp. 334-352