

REVIEWED
Aug 85
CLARKE

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title MATHEMATICS

Code No. : MTH 220-4

Program ARCHITECTURAL/CIVIL **ENGINEERING TECHNICIAN**

Semester: TWO

Date: OCTOBER, 1985

Author: J. MCGAULEY

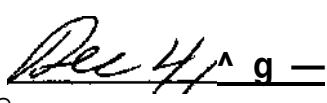
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Revision

APPROVED



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Date

CALENDAR DESCRIPTION

MATHEMATICS

MTH 220-4

Course Name

Course Number

ARCHITECTURAL AND CIVIL

PHILOSOPHY/GOALS;

When the student has successfully completed this course he will have demonstrated an acceptable ability to pass tests based upon the course contents 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 of this subject matter.

METHOD OF ASSESSMENT (GRADING METHOD):

The students will be assessed by tests. These tests will include periodic tests based upon blocks of subject matter and may, at the instructor's discretion include unannounced surprise tests on current work and/or a final test on the whole course. A letter grade will be based upon a student's weighted average of his test results. See also the mathematics department's annual publication "To the Mathematics Student" which is presented to the students early in each academic year.

TEXTBOOK(S):

Person, R. "Essentials of Mathematics", (4th Edition), Wiley

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.

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MTH220-ARCH. AND CIVIL
TOPIC

| NO. | PERIODS | TOPIC DESCRIPTION | REFERENCE |
|-----|---------|---|--|
| | 23 | ALGEBRA REVIEW | Text, Ch. 11-15 |
| | | Graphing, solution of systems of two or three linear equations Special products and factoring Algebraic fractions Fractional equations (Determinants may be omitted) | |
| | | QUADRATIC EQUATIONS | Text, Ch. 18 |
| | | Factoring, completing the square, formula | |
| 10 | | <u>EXPONENTS AND RADICALS</u> | Text, Ch. 16, 17 |
| | | Integral and fractional exponents Simplest radical form Addition, subtraction, multiplication and division of radicals | |
| | 8 | LOGARITHMS | Text, Ch. 33-1 to 33-7, 33-11 omit 12-6 and 12-9 34, 35 |
| | | Definitions Properties of logarithms Logarithms to Base 10 using a calculator, computations using logarithms, natural logarithms using a calculator Logarithms to other bases, exponential and logarithmic equations Note: Since each student is expected to have a scientific calculator, the use of tables should be omitted. Also the use of log trig functions is unnecessary | |
| | | RATIOS, PROPORTIONS, VARIATION | Text, Ch. 23 |

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MTH220-ARCHITECTURAL AND CIVIL

| <u>TOPIC NO.</u> | <u>PERIODS</u> | <u>TOPIC DESCRIPTION</u> | <u>REFERENCE</u> |
|------------------|----------------|--|-------------------------------|
| 6 | 12 | <u>REVIEW OF BASIC TRIGONOMETRY</u> Angles, trigonometric functions, rt• triangles, trig functions of any angle, radian measure. Sine Law, cosine Law, areas (optional), applications Note: Since the student is expected to have a scientific calculator, the use of tables should be omitted. Also the instructions in exercises should be amended to avoid the use of loose approximations- | Text Ch- 24-26, 36-39, 41, 44 |