

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS
Code No.: MTH 120-4
Program: ARCHITECTURAL/CIVIL TECHNICIAN
Semester: ONE
Date: JUNE 1988
Author: K. CLARKE

New: Revision: X

APPROVED: 
Chairperson _____

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Date _____

CALENDAR DESCRIPTION

MATHEMATICS

MTH 120-4 ARCH/CIVIL TN.

course Name

Course Number

PHILOSOPHY/GOALS;

The course begins with an introduction to technical calculations including conversion of units, use of approximate numbers and scientific notation. This is followed by a survey of plane and solid geometry which will enable the successful student of calculate areas, volumes and weights of various plane and solid shapes. The beginning of a review of secondary school algebra completes the course.

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.

As in any other subject, the student is preparing to be a technologist or technician, as well as studying the subject. Hence, on tests, the student is expected to produce neat, legible, well laid out solutions which show clearly how the answer was obtained. If anything less is required, this will be indicated in the test. Failure to show such solutions may render correct answers worthless. As happens in the workplace, if anything you put on paper can be misread, it will be! In addition to loss of marks on individual questions, up to 25% of the marks available on a test can be subtracted as a penalty for untidiness. Marks lost in such penalties can be redeemed by a student willing to put forth the required effort.

Proper solutions, as described above, should be produced for all your assigned work. Such practice will make it easier for you to produce the required quality of work on tests. If, when you look at a page of your work, it makes you feel proud of its appearance, then you are probably on target.

Marks allotted to each question on a test are usually shown. Please enquire if they are not.

MTH 120-4
ARCHITECTURAL/CIVIL/MECHANICAL TECHNICIAN & GAS 1

TEXT BOOK(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.

MATHEMATICS
for
ARCHITECTURAL/CIVIL TECHNICIANS
FIRST SEMESTER
MTH 120-4

Topic No.	No. of Periods	Topic Description	Assignments	Referet
1	6	<u>PRACTICAL CALCULATING</u> r Z ~ Conversion of units, esti- mating, approximate numbers, scientific notation, calculators	Text Exer. 54-1, 3-3, 16-5	
2	20	<u>GEOMETRY AND MENSURATION</u> Principles of geometry as required for the following work: Pythagorean theorem Mensuration of plane figures: triangle, rectangle, square parallelogram, trapezoid, circle, regular hexagon Mensuration of solid shapes: cubes, prisms, cylinders, pyramids, cones, spheres, truncated pyramids and cones	Text Exer. 24-2 (optional), 25-1, 25-2 26-1, 27-1 28-1, 29-1 30-1, 31-1, • . and all Ch. Quizzes	Text, Ch. 24-
3 i	15	<u>ALGEBRA REVIEW ONE</u> Fundamentals, zeros, exponents, roots and radicals, addition, subtraction, multiplication and division of algebraic expressions, elementary equations and their application, manipulation of formulas	Text Ex. All exercises and quizzes of Ch. 6,7,8,9 & 10	Text Ch. 6-1
4	15	<u>ALGEBRA II</u> Special products and factoring, algebraic fractions, fractional equations	All exercises of Ch. 11, 12, and 13	Text C 11,12, 13

NOTE: ARCHITECTURAL DRAFTING STUDENTS CAN OMIT CH. 12 & 13. CIVIL TECHNOLOGY STUDENTS WILL NEED THESE CHAPTERS.