

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 1989

AUTHOR: W. O. MAKI

New: Revision: X

APPROVED: Chairperson

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CALENDAR DESCRIPTION

Mathematics

MTH 120-4 ARCH/CIVIL TN.

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I. 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.

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TEXT BOOK(S) :

Person. R. "Essentials of Mathematics", (5th 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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Topic No.	No. of Periods	Topic Description	Assignments	References
		<u>PRACTICAL CALCULATING</u>	Appendix	Text Ch
		Conversion of units, estimating, approximate numbers, scientific notation, calculators	Ex. 6-1,6-2 6-3,6-4,6-5	
	20	<u>GEOMETRY AND MENSURATION</u>		Text, Ch. 27-
		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	Exercises: 27-1,27-2, 28-1,29-1, 30-1,31-1, 32-1,33-1 and all Ch Quizzes	
	15	<u>ALGEBRA REVIEW ONE</u>	Text Ex.	Text Ch. i...
		Fundamentals, zeros, exponents, roots and radicals, addition, subtraction, multiplication and division of algebraic expressions, elementary equations and their application, manipulation of formulas	All exercises and quizzes of Ch, 8,9,10,11,12	
	15	<u>ALGEBRA II</u>	All exercises of Ch. 13,14, and 15	Text Ch 13,14,1
		Special products and factoring, algebraic fractions, fractional equations		