

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

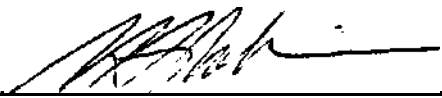
COURSE OUTLINE

Course Title MATHEMATICS
Code No.: MIH 220-4
Program: WATER RESOURCES/PULP AND PAPER ENGINEERING TECHNOLOGY
Semester: TWO
Date: NOVEMBER 1987
Author: K. CLARKE

New

Revision:

APPROVED:



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Date

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Course Name

MTH 220 A

Course Number

PHILOSOPHY/GOALS:

The course consists of Algebra, Trigonometry and Analytic Geometry. The Algebra section takes more than half of the time in the course, and includes Simultaneous and Quadratic Equations, Exponents, Radicals, Exponential and Logarithmic Functions, Ratio, Proportion and Variation. The Trigonometry starts with basics and progresses to the solution of oblique triangles. In Analytic Geometry, straight lines and the conic sections are covered. The course prepares the student for calculus in the subsequent mathematics course.

METHOD OF ASSESSMENT (GRADING METHOD):

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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, than you are probably on target.

Marks allotted to each question on a test are usually shown. Please enquire if they are not. The questions on a test do not necessarily have equal values.

TEXTBOOK(S):

Person - "ESSENTIALS OF MATHEMATICS" (Fourth Edition)

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.

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TOPIC NO.	NO. OF PERIODS	TOPIC DESCRIPTION	REFERENCES
		Algebra review (continued) Functions and graphs Simultaneous equations	Text, Ch. 14, 15
		<u>Quadratic Equations</u>	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 Radical equations	
		<u>Exponential and Logarithmic Functions</u>	Text, Ch. 33-35
		Definitions, graphs of functions, 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 may be omitted when interpolation experience is not required. Also the use of log trig functions is unnecessary. In Ex. 35-3 the instructions should be modified to reflect the use of calculators.

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TOPIC NO.	NO, OF PERIODS	TOPIC DESCRIPTION	REFERENCES
		<u>Ratio, Proportion, Variation</u>	Text, Ch. 23
	12	<u>Review of Basic Trigonometry</u> Angles, trigonometric functions, rt. triangles, trig functions of any angle. Sine Law, Cosine Law, areas, applications. Also the instructions in exercises should be amended to avoid the use of loose approximations for (such as 3.14). For areas of triangles additional problems can be used or text exercises can be altered to require areas.	Text, Ch. 36-39, 42, 44
	12	<u>Analytic Geometry</u> Definitions, straight line, circle, parabola, translation of axes, general second degree equation. Graphical and algebraic solutions of systems of second degree equations.	Ch. 21 and any analytic geom. manuscript

GRADES

Each Mathematics grade is based upon a weighted average of test scores on the following basis:

80%-89%	A
65%-79%	B
55%-64%	C
45%-54%	I, X, OR R (See #5 & 6)
0% -44%	R

First semester students who are proceeding into second semester Electrical, Electronic or Mechanical Technician Programs may have a different set of grade requirements which will be defined in class.

The method of calculating your weighted average will be defined by your instructor. Since grades are based upon averages, it follows that good marks in some tests can compensate for a failing mark in another test. If there are extenuating circumstances, an instructor can make an exception and assign an "I" or "X" grade even if the average is below 45%.

TESTS

While regular tests will normally be scheduled and announced beforehand, there can be an unannounced test on current work at any time. Such tests, at the discretion of the instructor, can be used for up to 30% of the overall mark.

At the discretion of the instructor, there can be a final test which can be used for up to 30% of the overall mark. Anything included in the work of the semester is fair game on such a final test.

ABSENCE FROM CLASS

If you are absent from class, it is your responsibility to find out from another student what work was covered and assigned and to complete this work before the next class. Your absence indicates your acceptance of this responsibility.

TO THE MATHEMATICS STUDENT..continued

4. TEST ABSENCE

Unexcused absence from a scheduled test will result in a zero mark. Absence may be excused on compassionate grounds such as verified illness or bereavement. On return from an excused absence, you should ask your instructor about writing a make-up test.

If your instructor uses short unannounced tests, the following will apply. Unexcused absence from such a test will result in a zero mark. If absence from such a test is excused, then, at your request, the marks for that test will be excluded from the calculation of your course average.

5. MAKE-UP PERIOD (IF APPLICABLE)

An "X" grade may be assigned at the end of the regular semester if you have achieved an overall average between 45%-54% and your attendance and effort on the course have been satisfactory. Satisfactory attendance and effort will include writing all the topic tests and attending at least 80% of the scheduled classes If you are assigned an "X" grade, you may convert it to a "C" grade by passing a make-up test on the whole course. This test will be available only at the time specified by your instructor. At the end of the regular term, it is the student's responsibility to obtain his/her results from his/her instructor and, in the event of an "X" grade, to inquire when the make-up test will be available. At the discretion of the instructor, a topic make-up test may be used instead of an overall test in special circumstances. No student will be permitted more than one such topic make-up test.

6. "R" AND "X" GRADES - AT THE END OF THE SEMESTER

If an "X" grade is not cleared by the specified date, it will become an "R" grade. Except for extenuating circumstances, an "X" grade in Math will not carry on into the next semester.

"R" GRADES DURING THE SEMESTER

A student with a failing grade and poor attendance (less than 80% attendance) may be given an "R" at any time during the semester.