

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

COURSE OUTLINE

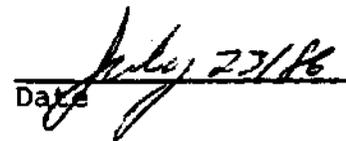
Course Title: MATHEMATICS  
Code No, : MTH 370-3  
Program MECHANICAL TECHNOLOGY (YEAR 3)  
Semester:  
Date: JULY, 1986  
Author: K. CLARKE

New:

Revision

APPROVED:

  
Chairperson

  
Date

MATHEMATICS

MTH 370-3

COURSE NAME

COURSE NUMBER

PHILOSOPHY/GOALS;

In this course the study of calculus continues. The topics covered are: Methods of Integration, Infinite Series, and First Order Differential Equations.

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** perhaps, some unannounced short quizzes on current **work**, the **latter** being given at the discretion of the instructor. A final test **oo 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 "To the Mathematics Student" for further details. This publication appears as the last two pages of this course outline.

As in any other subject, the student in 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 bel. 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 370-3**

**TENTATIVE SCHEDULE OF INSTRUCTION AND TESTS**

TOPIC NO,	NO, OF PERIODS	TENTATIVE TEST DATE	TOPIC WEIGHT
1	14	To be	56
2	10	announced	40
3	15	early in '	60
TOTALS	39		156

Before recording, test results will be adjusted to reflect the value indicated under "Topic Weight". The minimum total required for each letter grade is listed below for your convenience. Please note that in addition to a minimum total mark there are additional requirements to qualify for a grade of I or X.

LETTER GRADE	MINIMUM TOTAL REQ'D
A+	140
A	125
B	101
C	86
I or X	70

The notes on the last two pages, entitled "To the Mathematics Student are applicable to all mathematics courses at Sault College.

TEXTBOOK{S):

BASIC TECHNICAL MATHEMATICS WITH CALCULUS; Washington

MTH 370-3

MECHANICAL TECHNOLOGY MATHEMATICS

TOPIC NO.	NO. OF PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS	REFERE
1	14	<u>Methods of Integration</u> - Integration by substitution.	Ex. 1	Ch. 2
		Substitution leading to Exponential form.	2 3	
		Trigonometric forms	4,5	
		Inverse trigonometric forms	6	
		Integration by parts	7	
		Trigonometric substitution (optional)	8	
	10	<u>Table of integrals</u> <u>Series</u>	9	Ch. 2
		Maclaurin series	Ex. 1, 2, 3	
		Power series expansions		
		Use of series in computations, integrations		
		Taylor's series	4	
	15	<u>Differential Equations</u> - (First Order)		Ch. 2
		Direct integration, separation of variables	Ex. 1, 2	
		Special integrable combinations	3	
		Linear differential equations	4	
		Exact equations (use of integrating factor)		
		Applications (word problems)	5	
			Hand-out	