SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: MATHEMATICS

Code No: MTH 613-4

Program: AVIATION

Semester:

Date: JUNE, 1986

Author: J. REAL

New: Revision:

APPROVED: _____ Chairperson

Date: June 27/86

AVIATION
MTH 613-4
MATHEMATICS

CALENDAR DESCRIPTION

MATHEMATICS	MTH 613-4
COURSE NAME	COURSE NUMBER

PHILOSOPHY/GOALS:

Students studying mathematics at this level are those individuals where a certain degree of originality, a sense of logic and an ability to learn independently are required of them in their major subject area. This course serves to exercise these three requirements and to also give them a theoretical knowledge for their academic subjects.

METHOD OF ASSESSMENT (GRADING METHOD):

1. Three - four tests per semester.
2. Final Grade is a weighted average of these tests.
3. A failing grade at the end of the semester can be upgaded by writing a two-hour comprehensive examination.

TEXTBOOK(S)!

Washington, Allan, J., Technical Calculus With Analytic Geometry 3rd 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 other assignments. The level of competency demanded is the level required to obtain an overall passing average in the tests. The material to be covered is listed on the following page.

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TOPIC	PERIODS	TOPIC DESCRIPTION	ASSIGNMENTS	REFERENCES
	^^	PJ-^^^6 Analytic Geometry -		Ch. 1
		Straight line, slope, graphs, length, intersections	Ex. 1-4	
		Circle	5	
		Parabola	6	
		Brief review of ellipse and hyperbola	7-10	
	14	The Derivative -		Ch
		Functional notation	1	
		Limits	2	
		Slope of tangent to curve	3	
		Derivative - delta method	4-5	
		Derivative of polynomial - by rule	6	
		Product and quotient rule	7	
		Composite functions - chain rule	8	
		Implicit functions	9	
		Higher derivatives	10	
	14	Applications of Derivatives -		Ch
		Tangents and Normals	1	
		Curvilinear motion	3	
		Related rates	4	
		Curve sketching	5-6	
		Maximum/minimum applications	7	
	12	Integration -		Ch
		Differentials	1	
		Antiderivatives	2	
		Indefinite integral	3	
		Area under a curve	4	
		Definite integrals	5	