

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: Mathematics

CODE NO. : MTH 151-3 **SEMESTER:** Fall

PROGRAM: Aviation Machining

AUTHOR: Mathematics Department

DATE: 2006 **PREVIOUS OUTLINE DATED:** 2005
May Sept

APPROVED:

	_____	_____
	DEAN	DATE

TOTAL CREDITS: 3

PREREQUISITE(S): None

HOURS/WEEK: 3

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COURSE DESCRIPTION:**I.**

In this course, emphasis will be placed on teaching mathematics at a level that will help the student in Aviation Machining. Some theoretical concepts and topics in algebra, geometry and trigonometry will be covered. These concepts and topics will be reinforced by the use of practical problems to make the current topic relevant to the students' needs.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

Topic 1

1. Solve problems involving whole numbers including prime and composite numbers
2. Calculate problems involving common fractions including finding lowest common denominator
3. Convert decimal fractions to common fractions and the reverse process.
4. How to Measure and include its error factors
5. The SI metric and the Imperial system

Topic 2

1. Use direct and inverse proportion
2. Use variation
3. Use percent in dimensioning

Topic 3 : Geometry

1. Solve practical problems to find the sides and angles of right triangles
2. Solve practical problems to find the areas of a triangle or quadrilateral
3. Solve problems involving the circumference, diameter, area or tangent to a circle

Topic 4:

1. Compute surface areas and volumes of spheres, cylinders, cones and other solid figures

Topic 5: Right angle trigonometry

1. Define the trigonometric functions
2. Solve the missing parts of a right angle triangle using trigonometric functions

III. LEARNING ACTIVITIES

TOPIC NUMBER	TOPIC DESCRIPTION	REFERENCE CHAPTER ASSIGNMENTS
1.0	Whole Numbers, Fractions, & Decimals	
1.1	Whole Numbers	Chapter 1, pp. 1-18
1.2	Fractions	Chapter 2, pp. 19-40
1.3	Decimals	Chapter 3, pp. 51-69
2.0	Ratio, Proportion, and Percent	Chapters 4 & 5, pp. 87-98, pp. 101-114
3.0	Plane Geometry	Chapters 7 & 8, pp. 137-180, pp. 181-238
4.0	Solid Geometry	Chapter 9, pp. 239-274
5.0	Right Angle Trigonometry	Chapter 15, pp. 373-394

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Mathematics For Technical and Vocational Students, 10th Edition, by Boyce, Margolis, and Slade
2. Calculator: (Recommended) EL531W. *The use of some kinds of calculators, cell phones, and other electronic devices may be restricted during tests.*

V. EVALUATION PROCESS/GRADING SYSTEM:

There will be three tests. Each test will be 1/3 of the final grade.

The first two tests will occur after topics 1 and 2 then after 3 and 4 are completed. The final test will be after topic 5

The following semester grades will be assigned to students in postsecondary courses:

Grade	Definition	Grade Point Equivalent
A+	90 – 100%	
A	80 – 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	

S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

VI. SPECIAL NOTES:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 493 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.