

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Mathematics

CODE NO. : MTH151 -3 **SEMESTER:** Fall

PROGRAM: Mechanical Certificate

AUTHOR: The Mathematics Department

DATE: June 2010 **PREVIOUS OUTLINE DATED:** August
2009

APPROVED:

	"B. Punch"	
	_____	_____
	CHAIR	DATE

TOTAL CREDITS: 3

PREREQUISITE(S): None

HOURS/WEEK: Three (3)

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For additional information, please contact Brian Punch, Chair
School of Natural Environment/ Outdoor Studies & Technology Programs
(705) 759-2554, Ext. 2681

I. COURSE DESCRIPTION:

In this course, emphasis will be placed on teaching mathematics at a level that will help the student in mechanical procedures. 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:

Unit 1

1. Solve problems involving whole and decimal numbers including prime and composite numbers.
2. Solve problems involving common fractions including finding lowest common denominator.
3. Convert decimal fractions to common fractions and the reverse process.
4. Measure and include its error factors.

Unit 2

1. Use direct and inverse proportion.
2. Use variation.
3. Use percent in dimensioning.
4. Utilize metric system prefix names and symbols.
5. Reduce units of measurement within systems.
6. Convert units of measurement from one system to another.

Unit 3

1. Solve practical problems to find the areas of a triangle or quadrilateral.
2. Solve problems involving the circumference, diameter, area or tangent to a circle.
3. Compute surface areas and volumes of spheres, cylinders, cones and other solid figures.

Unit 4

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

III. TOPICS

1. Review of Arithmetic
2. Units of Measurement
3. Ratio, Proportion, and Variation
4. Percentages
5. Perimeter, Area, and Volume
6. Right Angle Trigonometry

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1. Calculator: *(Recommended)* SHARP Scientific Calculator EL-531W. *The use of some kinds of calculators, cell phones, and other electronic devices may be restricted during tests.*

V. EVALUATION PROCESS/GRADING SYSTEM:

- Unit 1 – 25%
- Unit 2 – 25%
- Unit 3 – 25%
- Unit 4 – 25%

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
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:

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.