

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



COURSE OUTLINE

COURSE TITLE: Mathematics

CODE NO. : MTH153-3 **SEMESTER:** 2

PROGRAM: Truck and Coach / Heavy Equipment Technician

AUTHOR: The Mathematics Department

DATE: January 2007 **PREVIOUS OUTLINE DATED:** January 2006

APPROVED:

TOTAL CREDITS: 3

DEAN

DATE

PREREQUISITE(S): None

HOURS/WEEK: Three (3)

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*For additional information, please contact C. Kirkwood, Dean
School of Technology, Skilled Trades & Natural Resources*

(705) 759-2554, Ext.2688

I. COURSE DESCRIPTION:

This course includes a review of arithmetic and fundamental algebraic processes. Topics include percent and percentages, conversion of units, ratio and proportion, exponents, powers and roots, and formula applications.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Add, subtract, multiply and divide whole numbers, fractions and decimals with and without the use of a calculator
2. Evaluate roots and powers of whole numbers, fractions and decimals using a calculator. Simplify arithmetic and algebraic exponential expressions.
3. Convert whole numbers, fractions, and decimals to percent and vice-versa. Evaluate percentage of a number and be able to evaluate percent increase and decrease.
4. Solve worded problems using ratio and proportion
5. Solve simple linear and fractional equations
6. Re-arrange formulas and evaluate formulas
7. Convert between Imperial, Metric and the U.S. System of measurement using dimensional analysis.

III. TOPICS:

1. Whole numbers, fractions, and decimals: handout
2. Exponents powers and roots: handout.
3. Percent: handout.
4. Ratio and proportion: handout.
5. Formulas and equations: handout.
6. Metric, Imperial and the U.S. system of measurement: handout.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

1

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

V. EVALUATION PROCESS/GRADING SYSTEM:

Test 1 Topics 1 and 2 25%

Test 2 Topics 3 and 4 25%

Test 3 Topic 5 25%

Test 4 Topic 6 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:**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 2703 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.