SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: Applied Resource Calculations

CODE NO. : MTH107-3   **SEMESTER:**   One

PROGRAM: Forestry, Fish and Wildlife,Parks and Recreation

AUTHOR: J. McGauley

DATE: August 2005   **PREVIOUS OUTLINE DATED:** May 2004

APPROVED:

_____   _____
                        DEAN   **DATE**

TOTAL CREDITS: 3

PREREQUISITE(S): None

HOURS/WEEK: 3

I.　COURSE DESCRIPTION:
This course includes a review of fundamental algebraic processes, estimation, reduction and conversion of units, practical applications in plane and solid geometry, ratio, proportion and percent.

II.　LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1.　Determine the significant digits of a number.
　　Approximate measurement calculations using accuracy and precision.
　　Convert between the Metric, Imperial and the U.S. systems of measurement using dimensional analysis.

2.　Determine the area and perimeter of a circle, a triangle, a quadrilateral, and a trapezoid.
　　Use the Pythagorean theorem to solve right angled triangles.

3.　Determine the surface area and volume of:
　　- A rectangular prism
　　- A triangular prism
　　- A cylinder, cone, frustrum, sphere and pyramids.

4.　Add,subtract, multiply and divide algebraic expressions
　　Solve linear equations
　　Add, subtract ,multiply and divide fractional algebraic expressions
　　Solve fractional equations.

5.　Factor, multiply and divide algebraic expressions.

6.　Solve worded problems involving ratio, proportion and variation.

7.　Convert decimals into fractions and percent and vice versa.

IIL.　TOPICS:

1.　Estimation, Dimensional Analysis, and the Metric, Imperial and U.S. System of measurement: Chapters 2, 3   (3.1 to 3.4, 2.4, handout)
2.　Plane Geometry: Chapter 12 (12.1 to 12.3, 12.5, handout)
3.　Solid Geometry :   Chapter 12 (12.4)
4.　Algebra Review : Chapters 5, 9 (5.1 to 5.5, 9.1 to 9.3)

5.   Products and Factors: Chapter 10 (10.1 to 10.4)
6.   Ratio, Proportion and Variation: Chapter 6 (6.1 to 6.3, handout)
7.   Percent: Chapter 2 (2.5 to 2.7)

IV.   REQUIRED RESOURCES / TEXTS / MATERIALS :
1. **Essentials of College Mathematics, second edition**, by Cleaves and Hobbs
2. Calculator: (Recommended) SHARP Calculator EL-531. *The use of some kinds of calculators and other electronic devices may be restricted during tests.*

V.   EVALUATION PROCESS/GRADING SYSTEM:
Test One :   Topic 1   (20%)
Test Two: Topics 2, 3   (30%)
Test Three: Topics 4, 5   (30%)
Test Four: Topics 6, 7   (20%)
Final grade will be a weighted average of these four tests.

The following semester grades will be assigned to students:

Grade	**Definition**	*Grade Point Equivalent*
A+	90 – 100%	4.00
A	80 – 89%	
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 703 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.