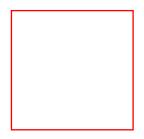
THE SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY SAULT STE. MARIE, ON



COURSE OUTLINE

Course Title: Applied Resource Calculations

Code No.: OEL 815 Semester:

Program(s): Forestry Technician, Fish & Wildlife Technician, Parks and Outdoor Recreation

Author: The Mathematics Department

Date: Aug 2005 Previous Outline Dated: Jan 2003

Approved: _____

I.

Dean

Date

Total Credits: 3

Prerequisite(s): None

Length of Course: 3 hrs./week Total Credit Hours: 48

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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

- 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:

Course Outline OEL815

- 1. Estimation, Dimensional Analysis, and the Metric, Imperial and U.S. System of measurement
- 2. Plane Geometry
- 3. Solid Geometry
- 4. Algebra Review
- 5. Products and Factors
- 6. Ratio, Proportion and Variation
- 7. Percent

IV. REQUIRED RESOURCES / TEXTS / MATERIALS :

- 1. Essentials of College Mathematics, second edition, by Cleaves and Hobbs, Pearson Education. ISBN 0-13-171480-5
- 2. Calculator: (Recommended) SHARP Calculator EL-531. The use of some kinds of calculators and other electronic devices may be restricted during tests.

Recommended Resource (Not Required):

 Student Solutions Manual to Accompany: Essentials of College Mathematics, 2nd ed Cheryl Cleaves and Margie Hobbs Pearson ED ISBN 0-13-171483-X

V. EVALUATION PROCESS/GRADING SYSTEM:

6 Quizzes (6 x 10%) 60% of final mark

1 Final Test (paper-based and proctored) 40% of final mark

Minimum passing grade at Sault College is 50%. Your final grade will be assigned as a percentage. Your home college will determine the letter grade.

VI. SPECIAL NOTES:

- 1. If you are a student with a disability please identify your needs to the tutor and/or the Centre for Students with Disabilities at your registering college.
- 2. Students, it is your responsibility to retain course outlines for possible future use to support applications for transfer of credit to other educational institutions.
- 3. 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.