YukonCollege

COURSE OUTLINE

MATH 053

Self- Study

For Drop-in Centre Students

2010-2011

PREPARED BY: Drop-In Centre   DATE: 14 September 2011

APPROVED BY: Shelagh Rowles, Dean   DATE: 14 September 2011
Applied Science and Management, Dean

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Yukon College
P.O. Box 2799
Whitehorse, Yukon Y1A 5K4

Applied Math 053

Location:	**Drop-In Centre, Room A2311**
Instructors:	**Larry Gray/ Cindy Fleischman**
Contact:	**Tel. (867) 668-8744**
	Fax. (867) 668-8828
	dropincentre@yukoncollege.yk.ca

COURSE DESCRIPTION

APP Math provides a foundation in concepts of mathematics including fractions, decimals, percent, graphing, introductory algebra and polynomials, geometry, trigonometry and systems of measurement. The applied approach to the delivery of this course material will provide an integration of mathematical and scientific concepts with the trades.

LEARNING OUTCOMES:

Upon the completion of APP Math, the student shall:

- demonstrate the mathematics skills necessary to successfully complete the Trade Entrance Exam.
- demonstrate the mathematics skills necessary to successfully complete the pre-apprenticeship and apprenticeship training.
- demonstrate the numeracy required by a journeyman in their chosen trade.
- communicate effectively, particularly to the trades using the language of science.
- Work effectively as a member of a team.
- handle equipment in a safe and effective manner with regard to their own safety and the safety of others.

DELIVERY METHODS/FORMAT:
Students will be guided through the mathematics concepts and skills required to accomplish several projects. Practical applications of mathematics and science will be emphasized. Students will be given ample practice in writing multiple choice mathematics questions in order to prepare for the Trade Entrance Examination.

Course content will be covered with the aid of a self-study textbook/workbook. The instructor will supply and organize the materials and help set up a pacing schedule for the student.

The Drop-in Centre is open regularly and students are encouraged to use as many of the tutorial hours as fit into their schedules. Please see the instructor for a list of the hours when an instructor is available for Math 053 support.

PREREQUISITES:
- Mature Student Status with acceptable scores on the College Placement Test and English Placement Test, **or**
- Completion of Yukon College Math 030 and Critical Issues 040, **or**
- Permission of the Dean of Developmental Studies

COURSE REQUIREMENTS/EVALUATION:
Quizzes
Students will write regular short quizzes. These quizzes will contribute 40% towards student's final mark in the course.

Tests
Four midterm examination will be given. The average of these four tests will contribute 60% towards a student's final mark in the course.

Evaluation

Daily Quizzes	40%
Midterm Examinations (4)	60%
Total	100%

Yukon College uses a letter grade system and calculates weighted grade point averages (GPA) on a 4.0 scale. Following are equivalents of the letter grades:

A+	95 – 100	4.0
A	86 – 94	4.0
A-	80 – 85	3.7
B+	75 – 79	3.5
B	70 – 74	3.0
B-	65 – 69	2.7
C+	62 – 64	2.5
C	58 – 61	2.0
C-	55 – 57	1.7
D	50 – 54	1.0
F	Under 50	0.0

OTHER:

Students with Disabilities or Chronic Conditions

Reasonable accommodations are available for students with a documented disability or chronic condition. It is the student's responsibility to seek these accommodations. If a student has a disability or chronic condition and may need accommodation to fully participate in this class, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

Electronic Devices

In order to be successful in classes and minimize distractions for others, cell phones, iPods and other electronic devices must be turned to vibrate or used with headphones while students are in the Drop-in Centre.

Appropriate Language

In all areas of the college environment, students are responsible to show respect for others, swearing, or language that is discriminatory or derogatory in relation to race, sex, ethnic background, religious beliefs, age and physical condition is not appropriate.

TOPIC OUTLINE/SYLLABUS

Arithmetic of Whole Numbers
- Working with Whole Numbers
- Subtraction of Whole Numbers
- Multiplication of Whole Numbers
- Division of Whole Numbers
- Order of Operations

Fractions
- Working with Fractions
- Multiplication of Fractions
- Division of Fractions
- Addition and Subtraction of Fractions

Decimal Numbers
- Addition and Subtraction of Decimal Numbers
- Multiplication and Division of Decimal Numbers
- Decimal Fractions

Ratio, Proportion, and Percent
- Ratio and Proportion
- Introduction to Percent
- Percent Problems
- Applications of Percent Calculations
- Applications of Ratio and Proportion

Measurement
- Working with Measurement Numbers
- Significant Figures
- Accuracy and Precision
- English Units and Unit Conversion
- Metric Units
- Metric-English Conversions
- Vernier Scale: Micrometers, Calipers, protractors

Pre-Algebra
- Addition of Signed Numbers
- Subtraction of Signed Numbers
- Multiplication and Division of Signed Numbers
- Exponents and Square Roots

Basic Algebra
- Algebraic Language and Formulas
- Adding and Subtracting Algebraic Expressions
- Solving Simple Equations
- Solving Equations Involving Two Operations
- Solving More Equations and Formulas
- Solving Word Problems
- Multiplying and Dividing Algebraic Expressions
- Scientific Notation

Practical Plane Geometry
- Angle Measurement'
- Area and Perimeter of Polygons
- Triangles, Hexagons, and Irregular Polygons
- Circles

Solid Figures
- Prisms
- Pyramids and Frustums of Pyramids
- Cylinder and Spheres
- Cones and Frustums of Cones

Triangle Trigonometry
- Angles and Triangles
- Trigonometric Ratios
- Solving Right Triangles