EFFECTIVE: SEPTEMBER 2002

Douglas College

CURRICULUM GUIDELINES

A. Division: Educational Services
B. Department / Program Area: Student Development, Developmental Studies

Date: May 22, 2002
New Course [ ] Revision [X]
If Revision, Section(s) Revised F,N,P
Date Last Revised: 1998-05-08

C: DVST 210 **D:** Mathematics – Fundamental Level **E:** 3

Subject & Course No.	Descriptive Title	Semester Credits

F: Calendar Description:

This course is designed to help students develop and consolidate skills in the arithmetic of whole numbers, common fractions, decimals and percents, focusing on the operations of addition, subtraction, multiplication and division. As well, students will develop the ability to use appropriate strategies in applying arithmetic to the solution of practical problems, including specific use of proportion as a technique. Other topics include metric measurement, and perimeter, area and volume of simple, common geometric figures and forms.

G: Allocation of Contact Hours to Type of Instruction / Learning Settings

Primary Methods of Instructional Delivery and/or Learning Settings: Instructor directed

Number of Contact Hours: (per week / semester for each descriptor) 4

Number of Weeks per Semester: 13.5

H: Course Prerequisites:

DVST 110 or permission of the instructor

I: Course Corequisites:

none

J: Course for which this Course is a Prerequisite

DVST 310

K: Maximum Class Size:

18

L: PLEASE INDICATE:

[ ] Non-Credit
[X] College Credit Non-Transfer
[ ] College Credit Transfer: Requested [ ] Granted [ ]

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)

M: Course Objectives / Learning Outcomes

The aims of this course are for students to:

1. develop confidence in using arithmetic;
2. improve speed and accuracy in the recall and appropriate use of number facts;
3. improve speed and accuracy in calculations, by hand, involving whole numbers, fractions, decimals and percents;
4. be able to describe the basic concepts underlying addition, subtraction, multiplication and division;
5. select appropriate operations and strategies for solving applied problems;
6. incorporate the use of mathematics, where appropriate, as a strategy in dealing with quantifiable problems arising from practical situations;
7. be able to provide reasonable estimates of answers.

Course Content:

This course consists of the following units:

1. Whole Numbers

    a) review of basic arithmetic
    b) place value and rounding
    c) exponents (to represent multiple factors)
    d) averages (mean)
    e) order of operations
    f) divisibility, factors, primes, multiples
    g) estimation and application

2. Common Fractions

    a) naming, changing, comparing
    b) multiplying and dividing
    c) adding and subtracting
    d) combined operations, average
    e) estimation and application

3. Decimals

    a) reading and writing, comparing, rounding
    b) adding, subtracting, multiplying, dividing
    c) bar notation (repeating decimals)
    d) equivalence with common fractions
    e) estimation and application

4. Ratio and Proportion

    a) ratios, rates, unit rates
    b) equal ratios, cross/products, proportions
    c) solving proportions for missing term
    d) applications in problem solving

5. Percents

    a) definitions, meaning of percent
    b) conversions to and from other fractions
    c) calculations, use of proportion
    d) increase/decrease, simple interest, and other applications

6. Measurement and the Metric System

a) metric (S.I.) units; abbreviations and prefixes
b) metric estimation
c) conversion within metric
d) calculations involving metric units
e) applications
f) concepts of perimeter, area and volume
g) calculations of perimeter, ara and volume of selected common geometric figures and forms
h) applications

O: Methods of Instruction

A combination of different instructional methods will be used in order to balance instructional efficiency with individual student needs. Small group instruction, individual assistance (in lab tutorial or scheduled appointments) and student directed learning will be selected where appropriate and possible.

The student will be expected to maintain regular attendance and progress and to undertake independent learning as directed. Regular feedback and informal progress reports will be available from the instructor.

P: Textbooks and Materials to be Purchased by Students

Students are required to supply a three-ring binder, paper, pen, and pencil.

Main textbooks will be available on loan from the library to registered students. Other materials and textbooks may be borrowed from the instructor when needed.

Q: Means of Assessment

A mastery model of on-going evaluation will be used. A student will have completed the course when he/she has demonstrated through satisfactory completion of exercises and assignments that the course objectives have been achieved.

Where formal tests of specific skills are used, mastery will be defined as a score of 70% or more.

Progress will be monitored on a regular basis by the instructor in consultation with each student.

R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

No

Course Designer(s)

Education Council / Curriculum Committee Representative

Dean / Director

Registrar