



COURSE OUTLINE

Course Name: Applied Mathematics for Health Sciences 1

Course Number: MATH 1105

Number of Credits: 2.5

Effective Date: Sep 6, 2016

Course Description:

The course provides the student with the basic math skills necessary to succeed in their post-secondary health care-related education. Students will renew fundamental math skills such as calculations with fractions, decimals, percent, ratio and proportion; order of operations; conversions between units and systems; manipulating algebraic equations; creating and interpreting graphs and basic statistics. Emphasis will be placed on developing critical-thinking and problem-solving skills through application problems related to health sciences.

School or Centre:

Arts and Sciences

Year of Study:

1st Year Post-secondary

Course History:

New Course

Name of Replacing Course (if applicable):

Course Pre-requisites (if applicable):

Admission to the Pre-Health Sciences Program

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No Yes (details below):

Challenge exam or other method of assessment may be possible.

Instructional Strategies:

The course uses a combination of lectures, demonstrations, group work, class discussion and software demonstrations.

Course Learning Outcomes:

Upon successful completion of this course, students will be able to:

1. Perform arithmetic operations including addition, subtraction, multiplication and division on integer and rational numbers, and convert numbers between fractions and decimals without a calculator.
2. Use order of operations to simplify expressions, perform rounding and express numbers in scientific notation.
3. Compare ratios, identify proportions, calculate percentages and use ratios, proportions and percentages to solve problems.
4. Graphically present and interpret data in the form of frequency tables, line graphs and bar graphs.
5. Calculate and demonstrate an understanding of the measures of Central Tendency, percentiles, standard deviation, the normal curve, and z-scores.
6. Convert between and within metric and Imperial measurement systems.
7. Solve measurement problems involving both metric and Imperial units of length, temperature, time, area, volume and mass.

Program Learning Outcomes:

Upon successful completion of this program, students will be able to:

1. Confidently choose a Health Sciences career path appropriate to their interests;
2. Use computers and other technological tools to perform related tasks;
3. Discuss and apply a variety of Math, Biology, and Chemistry concepts as they relate to health care;
4. Interact with others in groups and teams in ways that contribute to effective working relationships and support Interprofessional Collaboration;
5. Communicate clearly and concisely in the written and spoken form in relation to health studies;
6. Utilize problem solving and critical thinking skills that are essential for success in health sciences programs;
7. Acquire depth and breadth of knowledge through the exploration of multiple health sciences courses and an elective course.

Evaluation/Grading System

Grading System	Specify if 'Other':	Specify Passing Grade:
Letter Grades		D

Components and Weighting of the Assessment/Evaluation Plan:

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Assignments	30	
Quizzes/Tests	40	Four tests worth 10% each
Final Exam	30	
Total		100

Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
L - Classroom	48	
Total		48

Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

Course Topics:

Mathematical Essentials: Operations with Integers, Fractions, Order of Operations, Decimals, Percents, Roman Numerals.

Algebra: Solving Linear Equations, Mixture Problems, Solving Rational Equations, Formulae Manipulation, Ratios and Proportions, Solving Percent Problems, Properties of Exponents, Scientific Notation, Significant Digits, Using the Scientific Calculator.

Measurement Systems and Conversion Procedures: Basic Dimensional Analysis, Conversions within the Metric System, Conversions between Systems.

Charts, Tables and Graphs: Collecting Data, Organizing Data Using Frequency Distribution Tables, Reading and Interpreting Tables and Charts, Constructing Charts and Graphs from Tables.

Introductory Statistics

Measures of Central Tendency, The Standard Deviation, The Normal Distribution, The Z Score, Percentiles

VCC Education and Education Support Policies

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

<http://www.vcc.ca/about/governance--policies/policies/>

To find out how this course transfers, visit the BC Transfer Guide at www.bctransferguide.ca.

FOR COMMITTEE USE ONLY

Approved by Curriculum Committee:	February 21, 2017	Approved by Education Council:	March 14, 2014
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