



COURSE OUTLINE

Course Name: Mathematics for the Arts

Course Number: MATH 1210

Number of Credits: 3.0

Effective Date: September 2017

Course Description:

This course is intended for students in life sciences, social sciences, business, or economics degree programs. It explores the applications of mathematics through everyday, real-life examples. Students are introduced to the concepts of linear equations and functions, inequalities, systems, linear programming, set and graph theory, elementary probability, Markov processes and descriptive statistics.

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):

Precalculus 11 or Foundations of Mathematics 11 or MATH 0861 and MATH 0871 both with a C- or Basic Algebra Assessment test with a 55% or equivalent

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No Yes (details below):

Instructional Strategies:

The course uses a combination of lectures, project work, guest speakers and software demonstrations.

Course Learning Outcomes:

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

1. Set up and solve linear systems and linear inequalities by the methods of graphing, algebraically and by using matrices.
2. Formulate and solve maximum and minimum linear optimization problems by writing a system of linear equations or inequalities from a written description.
3. Perform operations on sets, including unions, intersections, differences, and complements.
4. Model and solve real-world problems using graphs and trees.
5. Calculate simple present and future value of annuities using math formulas.
6. Compute basic probabilities including conditional probabilities using Baye's Theorem.
7. Solve application problems using combinatorial analysis.
8. Model real-world problems using Markov processes.
9. Use statistical procedures to analyze data, including measures of center and variation, and the normal distribution.

Program Learning Outcomes:

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	20	
Participation	10	
Midterm Exam	20	
Project	25	
Final Exam	25	
Total		100

Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
L - Classroom	60	
Total		60

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:

Algebra and Equations
Graphs, Lines, and Inequalities
Functions and Graphs
Mathematics of Finance
Systems of Linear Equations and Matrices
Linear Programming
Sets and Probability
Counting, Probability Distributions, and Further Topics in Probability
Markov Processes
Introduction to Statistics

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:	December 20, 2016	Approved by Education Council:	January 10, 2017
-----------------------------------	-------------------	--------------------------------	------------------