



CAMOSUN COLLEGE
School of Arts & Science
Department of Mathematics & Statistics

MATH-109-002
Finite Mathematics
Winter 2018

COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/math.html>

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

(a) Instructor	Bree Wilton
(b) Office hours	Mon – Fri 9:30-10:20 or by appointment
(c) Location	E246
(d) Phone	250-370-3471
(e) E-mail	wiltonb@camosun.bc.ca
(f) Website	https://sites.google.com/site/breewilton/

2. Intended Learning Outcomes

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

1. Solve counting problems using sets and/or the multiplication principle, and recognize and solve problems involving permutations and combinations.
2. Apply the basic properties and concepts of probability to solve problems from fields such as medicine and quality control. Determine the probability distributions for random variables and calculate expected values. Where appropriate, evaluate probabilities using the binomial distribution. Explore systems evolving from one state to another using Markov chains.
3. Solve linear systems of equations using techniques, including Gauss-Jordan elimination and inverse matrices.
4. Solve linear programming problems using a graphical approach.
5. Derive simple annuity formulas and use them to solve amortization problems.
6. Translate statements into symbolic form and vice versa. Construct truth tables for propositions, including implications. Use truth tables to verify equivalencies.

3. Required Materials

- a) **Textbook:** *Finite Mathematics and its Applications*, custom edition for Camosun College
- b) **Calculator:** As per Math Department policy, the only calculator permitted for use on the tests and the final exam is the **Sharp EL-531X** (or the discontinued EL-531W) scientific calculator. No other make/model of calculator is permitted, nor are other electronic devices such as phones, iPods, electronic translators, etc.

4. Course Content and Schedule

Linear Equations and Straight Lines	1.1 – 1.4
Linear Programming	2.1 – 2.3
Sets and Counting	3.1 – 3.6
Probability	4.1 – 4.6
Random Variables	5.1 – 5.2
Matrices	6.1 – 6.5
Markov Chains	7.1 – 7.2
Mathematics of Finance	8.1 – 8.4
Logic	9.1 – 9.4

5. Basis of Student Assessment (Weighting)

The final grade will be calculated based upon the following breakdown:

In-Class Questions:	5%
Assignments:	6%
3 Term Tests:	39% (13% each)
Comprehensive Final:	50%

In-Class Questions: On specified Tuesdays, during the first 5 minutes of class, there will be a question based on the previous lectures. These in-class questions will count for 5% of your grade. There will be a total of 7 weekly questions and you may drop your lowest score. Students arriving late will not receive extra time. In-class questions will occur on: Jan 16, 23, 30, Feb 27, Mar 6, 20, 27.

Assignments: We will be using the online homework system WeBWork to complete homework assignments. No late assignments will be accepted.

3 Term Tests: The tentative test dates are **Feb 6th, Mar 15th and Apr 5th**

Comprehensive Final: Final examinations will be scheduled by the college and they will take place during April 16-24th. You must be available to write the final examination at the scheduled time. Holidays or scheduled flights are not considered to be emergencies.

Missed Test Policy: Students are expected to make every reasonable effort to write the test at the scheduled time. **A missed test usually counts as a 0**, so if for any reason it appears that you may miss a test,

- **before the test**, talk with the instructor about missing the test, unless an unforeseen emergency makes this impossible, in which case leave a comprehensive message.
- assuming that you qualify for a missed test (for instance, medical or compassionate leave), the weight of the test will be moved to the final exam. There will not be any rewrites of tests.

Please inquire if you have any questions or concerns about your particular situation.

Academic Integrity: The Department of Mathematics and Statistics has prepared a “red handout” called the *Student Guidelines for Academic Integrity* to help you interpret college policies involving student conduct, academic dishonesty, plagiarism, etc. It is your responsibility to become familiar with the contents of the document and the college policies it references.

Cell Phones: There is ample evidence that suggests that use of a cell phone in class has a negative impact on the grades of the students both using the phone and surrounding the user. Therefore, I will be prohibiting cell phone use and similar devices in class. Please note that this also means no photographing the board.

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

7. Recommended Materials to Assist Students to Succeed Throughout the Course

Attendance: Showing up to class is the easiest and most important thing you can do to help succeed the course. Keeping up is an essential part of any mathematics course as much of the material builds on itself. If you feel yourself falling behind at any point during the term, then please do not hesitate to come speak to me.

Math Lab: Math lab **E224** is staffed with math tutors available for **free** help. It is a great idea to do your homework there and get help whenever needed.

8. College Supports, Services and Policies



Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS <http://www.camosun.bc.ca/policies/policies.php>

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://www.camosun.bc.ca/policies/E-1.5.pdf> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.