

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

MATH-109-001 Finite Mathematics Winter 2020

### COURSE OUTLINE

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

 $\Omega$  Please note: This outline will <u>not</u> 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		r	Dr. Fan Wu			
(b)	b) Office hours		Mondays and Thursdays, 14:30-16:00			
(c)	c) Location		E250			
(d)	Phone	By er	nail	Alternative:	N/A	
(e)	E-mail		WuF@camosun.bc.ca	<del>.</del>		
(f)	Website	•	Online.camosun.ca (D2L)			

# 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.
- 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.
- 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) At least one of the following:
  - Finite Mathematics (custom Camosun Edition) by Goldstein
  - Math 109 Lecture Notes (a series of handouts posted on D2L)
- (b) Calculator: EL-531X or EL-531XG are the standard calculators required for all Camosun math courses. Other variations *may* be accepted, but only after gaining the approval of the instructor.

### 4. Course Content and Schedule

#### **Assignments:**

There will be a total of nine assignments to be submitted for marking. The due dates for the assignments are listed on the pacing schedule. Each assignment will be due to be submitted no later than the end of class on the due date. Because I will be posting the solutions immediately after class, I will not be able to accept late assignments.

Of the nine assignments, the lowest two assignment marks will be dropped when calculating your grade in the course.

**Tests:** There will be three tests for this course (January 30, March 5, March 26). Each of these tests will be written in class, and will have a duration of 90 minutes. You will not be permitted the use of a formula sheet on these tests. The coverage for these test will be announced in class, and posted on D2L the week before the test.

**Final Exam:** A comprehensive, 3-hour final exam will take place during the final exam period of April 14-22. The specific date, time, and location will be announced on or about March 9. You must write the final exam at the scheduled time as per Camosun College's policy on final examinations. See camosun.ca/learn/calendar/current/procedures.html#academic.

**Test Absences:** If you miss a test for a legitimate reason such as illness, accident or family affliction, you should notify me as soon as possible and provide supporting documentation. There will be no "make-up" tests. In the event of an excused absence for a test, the mark from the relevant portions of the final exam, will replace your test mark. If you miss a test and are not excused, then a mark of zero will be given for that test or quiz.

# 5. Basis of Student Assessment (Weighting)

Term Tests: 36% (12% for each of the 3 term test)

Assignments: 14% (2% for each of the 7 assignments after the lowest 2 are dropped)

Final Exam: 50%

## 6. Grading System

X	Standard Grading System (GPA)
	Competency Based Grading System

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

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

# 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 @ <a href="http://camosun.ca/about/mental-health/emergency.html">http://camosun.ca/about/mental-health/emergency.html</a> or <a href="http://camosun.ca/services/sexual-violence/get-support.html#urgent">http://camosun.ca/services/sexual-violence/get-support.html#urgent</a>

### 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 <a href="http://camosun.ca/">http://camosun.ca/</a>

### **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 <a href="http://camosun.ca/about/policies/">http://camosun.ca/about/policies/</a>. 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://camosun.ca/about/policies/index.html

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	Α		8
80-84	A-		7
77-79	B+		6
73-76	В		5
70-72	B-		4
65-69	C+		3
60-64	С		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
СОМ	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 <a href="http://camosun.ca/about/policies/index.html">http://camosun.ca/about/policies/index.html</a> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary	Description
Grade	

I	Incomplete: 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	In progress: 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	Compulsory Withdrawal: 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.