

#### School of Arts & Science Department of Mathematics & Statistics MATH 109 Finite Mathematics Winter 2016

# **COURSE OUTLINE**

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

Ω Please note: the College electronically stores this outline for five (5) years only. It is strongly recommended you keep a copy of this outline with your academic records. You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

#### 1. Instructor Information

(a)	Instructor:	Crystal Lomas
(b)	Office Hours:	M/W 2:30-3:20 pm, Tu/Th 11:00-12:20 pm
(c)	Location:	E270
(d)	Phone:	250-370-3428
(e)	Email:	LomasC@camosun.bc.ca
(f)	Website (D2L):	http://online.camosun.ca

# 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: Custom Edition for Camosun College, Pearson. \* The textbook will be on 2 hour reserve loan status in the library.
- (b) Calculator: Sharp EL-531

\* No electronic device of any sort (e.g. cell phones, ipods, tablets, laptops, translators) other than the Sharp EL-531 is allowed on tests and quizzes.

# 4. Course Content and Schedule

We will cover Chapters 1-9 in the textbook. The *approximate, tentative* schedule of topics can be found (and printed, if you like) on the D2L site in the Content section.

#### 5. Basis of Student Assessment (Weighting)

- (a) WeBWorK Assignments (~8): 10%
- (b) In-class Assignments (~weekly): 5%
- (c) Term Tests (in-class): Test 1 -10%, Test 2 15%, Test 3 10%
- (d) Final Exam (cumulative, 3 hrs): 50%

#### 6. Grading System

#### 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	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

#### **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 E-1.5 at **camosun.ca** 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	IP In progress: A temporary grade assigned for courses that, due to design may red a further enrollment in the same course. No more than two IP grades will be assig for the same course. (For these courses a final grade will be assigned to either the 3 <sup>rd</sup> course attempt or at the point of course completion.)	
CW	<b>CW</b> 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.	

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

#### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services, or the College web site at <u>camosun.ca</u>.

# STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and the College web site in the Policy Section.

#### 8. Other Information

#### Attendance

Attendance is expected. In-class assignments will make up a portion of your course grade. If you feel yourself falling behind at any point during the term, then please do not hesitate to speak to me.

### Extra Help

You can get **free face-to-face tutoring** from our instructional assistant in the Math Lab **E224.** Hours are posted on the lab doors and on the web <u>http://camosun.ca/services/help-</u>centres/math.html.

# D2L

This class has the assistance of **Desire2Learn (D2L)**, an online course management system. All course related materials, grades, and announcements (including any changes to test dates or due dates) will be available on D2L. It is your responsibility to ensure you have access to D2L and to check it regularly.

#### WeBWorK

We will be using **WeBWorK** for assignments. At the start of the course, you will receive an invitation to join the WeBWorK course. **Make sure I have your correct and current email address; otherwise, you will not be able to complete the course assignments!** 

#### Academic Integrity

The Department of Mathematics and Statistics has prepared a "red handout" called *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.

#### **Missing Coursework**

- Your single lowest **WeBWorK assignment** grade will not be counted in the final grade calculations.
- Your single lowest **in-class assignment** grade will not be counted in the final grade calculations.

- No late assignments will be accepted.
- There will be no re-writes or make-ups for **term tests**. If you have an emergency (i.e. illness or family emergency) that causes you to miss a term test, please speak to me as soon as possible and I will move the weight of the missed test onto the final exam. Be prepared to show documentation (i.e. a doctor's note) if you miss a test.
- You are required to write the **final exam** at the scheduled date and time, which will fall within the exam period. If you have an emergency (i.e. illness or family emergency vacations and travel plans are NOT emergencies) and are unable to write the exam at the scheduled time, please speak to me as soon as possible.

#### **Recommended Exercises**

Although they are not a direct part of your grade, the recommended exercises are a very important part of your coursework. This is where a substantial portion of your learning will occur! *Read and follow along* with the textbook examples then complete as many of the listed problems as you can and think through them carefully. The list of recommended exercises is posted on D2L.