



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

MATH-109-002
Finite Mathematics
Winter 2019

COURSE OUTLINE

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

* 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 | Leah Howard |
| (b) Office hours | Tuesday and Thursday 1:30-2:20 |
| (c) Location | Ewing 224 |
| (d) Phone | 250-370-4490 Alternative: _____ |
| (e) E-mail | HowardL@camosun.ca |
| (f) Website | www.leahhoward.com |

Free Math Help is also available in the Math Lab in Ewing 224.

2. Intended Learning Outcomes

Upon completion of this course a 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

1) **TEXTBOOK:** Finite Mathematics (Custom Edition). Available in the bookstore.

2) **CALCULATOR:** Sharp EL-531 or TI-BA II Plus. These are the only calculators permitted on tests and exams. The Sharp EL-531 is recommended.

4. Basis of Student Assessment (Weighting)

5% Quizzes
45% Tests (3 tests at 15% each)
50% Final Exam

Quizzes: There will be short quizzes at the start of class on Tuesdays, starting in Week 2. There are no make-up quizzes. The two lowest quiz grades will be dropped.

Tests: If a student misses a test for any reason then the weighting of that test will shift to the final exam. There are no make-up tests.

Final Exam: A comprehensive, 3-hour final exam will take place during the final exam period. You must write the final exam at the scheduled time and place as per Camosun College's policy on final examinations.

TENTATIVE DATES

Test One **Thurs Jan 31**
Test Two **Thurs Mar 7**
Test Three **Thurs Apr 4**

5. Grading System

Standard Grading System (GPA)

Competency Based Grading System

| 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 |

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://camosun.ca/about/policies/index.html> 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 a student is unsafe to self or others and must be removed from the course. |

6. 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.

| Dates | Tuesday | Thursday |
|---------------|----------------------|----------------------|
| Jan 8 and 10 | 1.1 1.2 | 1.3 1.4 |
| Jan 15 and 17 | 1.4 2.1 | 2.2 |
| Jan 22 and 24 | 3.1 3.2 | 3.3 3.4 |
| Jan 29 and 31 | 3.5 | Test 3.6 |
| Feb 5 and 7 | 3.6 4.1 | 4.2 |
| Feb 12 and 14 | 4.3 4.4 | 4.4 4.5 |
| Feb 19 and 21 | Reading Break | Reading Break |
| Feb 26 and 28 | 4.6 5.1 | 5.2 |
| Mar 5 and 7 | 6.1 6.2 | Test 6.2 |
| Mar 12 and 14 | 6.3 | 6.4 6.5 |
| Mar 19 and 21 | 7.1 7.2 | 7.2 8.2 |
| Mar 26 and 28 | 8.2 8.3 | 8.4 |
| Apr 2 and 4 | 9.1 9.2 | Test 9.3 |
| Apr 9 and 11 | 9.4 | Review |

Math 109 Suggested Homework

These questions are for your own practice.
You don't have to hand them in.

| Section | Odd-Numbered Questions |
|---------|--------------------------------|
| 1.1 | 1-47 |
| 1.2 | 1-43 |
| 1.3 | 1-31 |
| 1.4 | 1-51, 63, 65, 73 |
| 2.1 | 1-13 |
| 2.2 | 1-21, 25-47 |
| 3.1 | 1-9, 13-31, 33, 39, 47-61 |
| 3.2 | 1-49 |
| 3.3 | 1-11, 17, 21, 23-43, 47-61, 71 |
| 3.4 | 1-47, 55, 59, 63 |
| 3.5 | 1-19, 27-51, 55-59 |
| 3.6 | 1-31, 35 |
| 4.1 | 1-23 |
| 4.2 | 7-45 |
| 4.3 | 1-21, 25-31, 39-45, 51 |
| 4.4 | 1-55 |
| 4.5 | 19, 13, 15, 19, 29-33 |
| 4.6 | 3-7, 11-17, 21 |

| Section | Odd-Numbered Questions |
|---------|---|
| 5.1 | 7-23, 29, 35, 41 |
| 5.2 | 1-5, 27, 43, 45, 47d mean only, 49, 51, 53d mean only, 55, 59 |
| 6.1 | 5, 7, 15, 17-27, 31, 33, 37, 39, 45, 49 |
| 6.2 | 3, 7, 17, 21-31, 37, 41, 47, 49 |
| 6.3 | 11-67 |
| 6.4 | 1-13, 17-23 |
| 6.5 | 1-19 |
| 7.1 | 13-51, 79-85 |
| 7.2 | 9-29, 51-57 |
| 8.2 | 9-15, 21-35, 43-47, 61-65, 75 |
| 8.3 | 7-17, 27-33 |
| 8.4 | 7-17, 29, 31, 41 |
| 9.1 | 1, 5, 7, 11-25 |
| 9.2 | 5-29, 35 |
| 9.3 | 1-45 |
| 9.4 | 1-29 |