COURSE SYLLABUS



COURSE TITLE: MATH-109-Finite Mathematics

CLASS SECTION: 004

TERM: 2024F

COURSE CREDITS: 3

Camosun College respectfully acknowledges that our campuses are situated on the territories of the Ləkwəŋən (Songhees and Kosapsum) and WSÁNEĆ peoples. We honour their knowledge and welcome to all students who seek education here.

DELIVERY METHOD(S): Face-to-Face – Lansdowne – Fisher 206 (Wednesdays) and Fisher 200 (Fridays)

INSTRUCTOR DETAILS

NAME: Amanda Malloch

EMAIL: MallochA@camosun.ca

OFFICE: Ewing 262

HOURS: Tues/Thurs 1:30-2:30pm, Wed 9:30-10:30am, or by appointment

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

CALENDAR DESCRIPTION

This course provides an introductory survey to material that is of particular interest to business, biology and social science students. Topics include a review of linear equations; sets and counting, including permutations and combinations; probability, including Bayes' Theorem, random variables, expected value and the binomial distribution; matrix operations; solving systems of linear equations using a variety of methods, including Gauss-Jordan elimination and inverse matrices; linear programming using a geometric approach; Markov chains; annuities and amortization of loans; and basic logic, including implication and equivalence.

PREREQUISITE(S):

One of: C in Math 11 C- in Pre-calculus 12

C+ in MATH 072 C in MATH 073

C+ in MATH 075 C in MATH 077

C+ in MATH 135 C in MATH 137

CO-REQUISITE(S):

EQUIVALENCIES:

COURSE LEARNING OUTCOMES / OBJECTIVES

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

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.

Solve linear programming problems using a graphical approach.

Derive simple annuity formulas and use them to solve amortization problems.

Translate statements into symbolic form and vice versa. Construct truth tables for propositions, including implications. Use truth tables to verify equivalencies.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

- Calculator As per department policy, the only allowable calculators for use on quizzes and the final exam are the Sharp EL-531 or 510 models.
- MyOpenMath Assignments will be completed using www.myopenmath.com. You will need to create a (free) account and register in our course. Instructions are posted on our D2L page.

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

| DATE | Course Component | Expected Coverage | |
|------------------------------------|------------------------|----------------------------------|--|
| Friday, September 13 th | MyOpenMath Assign1 Due | | |
| Friday, September 20 th | Quiz 1 | Sections 1.1-1.5 and some of 1.6 | |
| Friday, September 20 th | MyOpenMath Assign2 Due | | |
| Friday, September 27 th | MyOpenMath Assign3 Due | | |
| Friday, October 4 th | Quiz 2 | Sections 1.6 and 2.1-2.3 | |
| Friday, October 4 th | MyOpenMath Assign4 Due | | |
| Friday, October 11 th | MyOpenMath Assign5 Due | | |
| Friday, October 18 th | Quiz 3 | Sections 2.4-2.5 and Ch 3 | |

| DATE | Course Component | Expected Coverage |
|-----------------------------------|-------------------------|---------------------------|
| Friday, October 18 th | MyOpenMath Assign6 Due | |
| Friday, October 25 th | MyOpenMath Assign7 Due | |
| Friday, November 8 th | Quiz 4 | Chapter 4 and Section 5.1 |
| Friday, November 8 th | MyOpenMath Assign8 Due | |
| Friday, November 15 th | MyOpenMath Assign9 Due | |
| Friday, November 22 nd | Quiz 5 | Sections 5.2-5.4 and Ch 6 |
| Friday, November 22 nd | MyOpenMath Assign10 Due | |
| Friday, November 29 th | MyOpenMath Assign11 Due | |
| Friday, December 6 th | MyOpenMath Assign12 Due | |

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced noticed is required. Deadlines can be reviewed on the <u>CAL exams page</u>. https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams

EVALUATION OF LEARNING

| DESCRIPTION | | WEIGHTING |
|--|-------|-----------|
| Assignments (using MyOpenMath) | | 10% |
| Quizzes – 5 quizzes at 10% each | | 50% |
| Final Exam | | 40% |
| If you have a concern about a grade you have received for an evaluation, please come and see | TOTAL | 100% |

me as soon as possible. Refer to the <u>Grade Review and Appeals</u> policy for more information.

 $\underline{\text{https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf}}$

While I do have videos available on YouTube, I feel attendance and participation during class as well as keeping up with the suggested exercises is *extremely important* in order for success in this course.

There will be no make-up quizzes. If you must miss a quiz due to illness, you need to inform me of your absence before the quiz with a valid reason provided (doctor's note may be required) and your grade will be determined using the relevant portion of the final exam.

SCHOOL OR DEPARTMENTAL INFORMATION

You are welcome and encouraged to make use of Camosun's Math Lab where there is an instructional assistant who can answer questions about the content of the course. Instructions on how to 'drop in' and/or make an appointment for assistance will be posted on our D2L course page. You may also use the link in the list below to find more information about the Math Lab.

STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit camosun.ca/services.

| Support Service | Website |
|-------------------------------------|--|
| Academic Advising | camosun.ca/services/academic-supports/academic-advising |
| Accessible Learning | camosun.ca/services/academic-supports/accessible-learning |
| Counselling | camosun.ca/services/health-and-wellness/counselling-centre |
| Career Services | camosun.ca/services/co-operative-education-and-career- services |
| Financial Aid and Awards | camosun.ca/registration-records/financial-aid-awards |
| Help Centres (Math/English/Science) | camosun.ca/services/academic-supports/help-centres |

| Support Service | Website |
|-------------------------------|---|
| Indigenous Student Support | camosun.ca/programs-courses/iecc/indigenous-student- services |
| International Student Support | camosun.ca/international |
| Learning Skills | camosun.ca/services/academic-supports/help- centres/writing-centre-learning-skills |
| Library | camosun.ca/services/library |
| Office of Student Support | camosun.ca/services/office-student-support |
| Ombudsperson | camosun.ca/services/ombudsperson |
| Registration | camosun.ca/registration-records/registration |
| Technology Support | camosun.ca/services/its |
| Writing Centre | camosun.ca/services/academic-supports/help- centres/writing-centre-learning-skills |

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

Academic Integrity

Students are expected to comply with all College policy regarding academic integrity; which is about honest and ethical behaviour in your education journey. The following guide is designed to help you understand your responsibilities: https://camosun.libguides.com/academicintegrity/welcome
Please visit https://camosun.ca/sites/default/files/2021-05/e-1.13.pdf for Camosun's Academic Integrity policy and details for addressing and resolving matters of academic misconduct.

Academic Accommodations for Students with Disabilities

Camosun College is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging appropriate academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a documented disability and think you may need accommodations, you are strongly encouraged to contact the Centre for Accessible Learning (CAL) and register as early as possible. Please visit the CAL website for more information about the process of registering with CAL, including important deadlines: https://camosun.ca/cal

Academic Progress

Please visit https://camosun.ca/sites/default/files/2023-02/e-1.1.pdf for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

Course Withdrawals Policy

Please visit https://camosun.ca/sites/default/files/2021-05/e-2.2.pdf for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit https://camosun.ca/registration-records/tuition-fees#deadlines.

Grading Policy

Please visit https://camosun.ca/sites/default/files/2021-05/e-1.5.pdf for further details about grading.

Grade Review and Appeals

Please visit https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf for policy relating to requests for review and appeal of grades.

Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal (see Medical/Compassionate Withdrawals policy). Please visit https://camosun.ca/services/forms#medical to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence Policy: https://camosun.ca/sites/default/files/2021-05/e-2.9.pdf and camosun.ca/services/sexual-violence-support-and-education.

To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-370-3841

Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at https://camosun.ca/sites/default/files/2021-05/e-2.5.pdf to understand the College's expectations of academic integrity and student behavioural conduct.

Looking for other policies?

The full suite of College policies and directives can be found here: https://camosun.ca/about/camosun-college-policies-and-directives

Changes to this Syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the change

OTHER IMPORTANT DATES

- Tuesday, September 3rd First day of classes.
- Monday, September 9th Last day to add courses/Last day to drop with 80% refund.
- Monday, September 30th National Day of Truth and Reconciliation (no classes).
- Monday, October 14th Thanksgiving Day (no classes).
- Monday, November 11th Remembrance Day (no classes).
- Saturday, December 7th Last day of classes.
- Saturday, December 7th Last day to drop without academic penalty.
- December 9th December 17th Final Exam Period