COURSE SYLLABUS

COURSE TITLE: MATH-109: Finite Mathematics

CLASS SECTION: 002

TERM: 2024W

COURSE CREDITS: 3

DELIVERY METHOD(S):

For COVID-19 information please visit https://legacy.camosun.ca/covid19/index.html.

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.

INSTRUCTOR DETAILS

NAME: Bogdan Verjinschi

EMAIL: verjinschi@Camosun.ca

OFFICE: E224

HOURS: Mo, W, F:11:30-12 & Tu, Th :10:30-11:20

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.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30-9:20		M109-001 **Y227**		M109-001 Y219	
9:30-10:20		M109-001 **Y227**	M109-002 Y219	M109-001 Y219	M109-002 Y219
10:30-11:20		OFFICE HOUR	M109-002 Y219	OFFICE HOUR	M109-002 Y219
11:30-12:20	OFFICE		OFFICE		OFFICE
12:30-1:20	M100-002 Y219		M100-002 Y219		M100-002 Y219
1:30-2:20	M100-002 Y219				M100-002 Y219

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.

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

Not Applicable

Not Applicable

COURSE LEARNING OUTCOMES / OBJECTIVES

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.
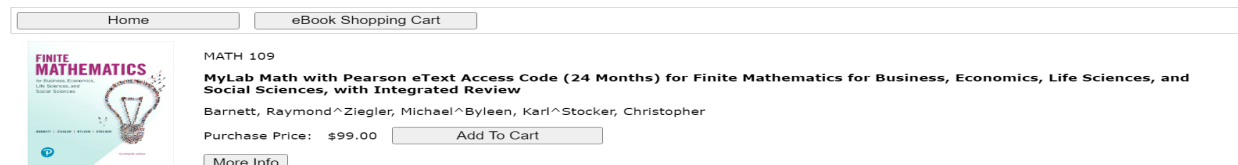
REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Textbook: Barnett • Ziegler • Byleen • Stocker MyLab Math with Integrated Review Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences, 14e ©2019

STEP 1
Go to https://www.camosuncollegebookstore.ca/buy_access_codes.asp?
Sign in, and select Math 109 to purchase the access code for **MyLab Math with Pearson eText -- for Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences, with Integrated Review, 14/e   Barnett**

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MATH 109

MyLab Math with Pearson eText Access Code (24 Months) for Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences, with Integrated Review

Barnett, Raymond^Ziegler, Michael^Byleen, Karl^Stocker, Christopher

Purchase Price: $99.00 | Add To Cart |

More Info

STEP 2
Follow the instructions from D2L:
STUDENT REGISTRATION HANDOUT verjinschi32624

Calculator: Sharp EL-531 (or EL-510R) scientific calculator

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

TABLE OF CONTENTS

Barnett • Ziegler • Byleen • Stocker MyLab Math with Integrated Review Finite Mathematics for Business, Economics, Life Sciences, and Social Sciences, 14e ©2019

CHAPTER/sections
Chapter 1 Linear Equations and Graphs
1.1 Linear Equations and Inequalities
1.2 Graphs and Lines
Chapter 3 Mathematics of Finance
3.1 Simple Interest
3.2 Compound and Continuous Compound Interest
3.3 Future Value of an Annuity; Sinking Funds
3.4 Present Value of an Annuity; Amortization
Chapter 4 Systems of Linear Equations; Matrices
4.1 Review: Systems of Linear Equations in Two Variables
4.2 Systems of Linear Equations and Augmented Matrices
4.3 Gauss-Jordan Elimination
4.4 Matrices: Basic Operations
4.5 Inverse of a Square Matrix
4.6 Matrix Equations and Systems of Linear Equations
Chapter 5 Linear Inequalities and Linear Programming
5.1 Inequalities in Two Variables
5.2 Systems of Linear Inequalities in Two Variables
5.3 Linear Programming in Two Dimensions: A Geometric Approach
Chapter 7 Logic, Sets, and Counting
7.1 Logic
7.2 Sets
7.3 Basic Counting Principles
7.4 Permutations and Combinations
Chapter 8 Probability
8.1 Sample Spaces, Events, and Probability
8.2 Union, Intersection, and Complement of Events; Odds
8.3 Conditional Probability, Intersection, and Independence
8.4 Bayes' Formula
8.5 Random Variable, Probability Distribution, and Expected Value
Chapter 9 Markov Chains
9.1 Properties of Markov Chains
9.2 Regular Markov Chains
Chapter 10 Data Description and Probability Distributions
10.4 Bernoulli Trials and Binomial Distributions

WEEK or DATE RANGE	ACTIVITY or TOPIC	OTHER NOTES
W4	TEST 1	W Jan 31
W9	TEST 2	W March 6
W13	TEST3	W Apr 3
April 15 - 23	FINAL EXAM	

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 scan be reviewed on the CAL exams page. http://camosun.ca/services/accessible-learning/exams.html

EVALUATION OF LEARNING

DESCRIPTION		WEIGHTING
Assignments (best 5 of 6)		5%
3 Tests (There are no make-up tests.)		55%
Final Exam		40%
	TOTAL	100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the Grade Review and Appeals policy for more information. http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf

Final Exam: There will be a comprehensive three-hour final exam scheduled during the Final Exam Period (April17-25). *All tests count. If you must miss one test* <u>due to illness or family affliction</u>, *contact me via e-mail , phone, or in person before the test to make alternate arrangements.*
If you don't provide a reason for a missed test, you may get a zero on that test. There will be no "make-up" tests.

COURSE GUIDELINES & EXPECTATIONS

Have a good review of the material every weekend. Some of the sections covered in this course could be very difficult so please be sure you spend enough time to understand the concepts presented in class and that you can work the assigned problems (HW).
If you need help, please see me, my Office is E244, or go to The Camosun Math Help Center E224

SCHOOL OR DEPARTMENTAL INFORMATION

The Camosun Math Help Center in located in E224
For details please see:

https://camosun.ca/services/academic-supports/help-centres/math-help

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 http://camosun.ca/students/.

Academic Advising	http://camosun.ca/advising
Accessible Learning	http://camosun.ca/accessible-learning
Counselling	http://camosun.ca/counselling
Career Services	http://camosun.ca/coop
Financial Aid and Awards	http://camosun.ca/financialaid
Help Centres (Math/English/Science)	http://camosun.ca/help-centres
Indigenous Student Support	http://camosun.ca/indigenous
International Student Support	http://camosun.ca/international/
Learning Skills	http://camosun.ca/learningskills
Library	http://camosun.ca/services/library/
Office of Student Support	http://camosun.ca/oss
Ombudsperson	http://camosun.ca/ombuds
Registration	http://camosun.ca/registration
Technology Support	http://camosun.ca/its
Writing Centre	http://camosun.ca/writing-centre

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.

Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](http://camosun.ca/services/accessible-learning/) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started: http://camosun.ca/services/accessible-learning/

Academic Integrity

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/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 http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit http://camosun.ca/learn/fees/#deadlines.

Grading Policy

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf for further details about grading.

Grade Review and Appeals

Please visit http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf for policy relating to requests for review and appeal of grades.

Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the "Attendance" section under "Registration Policies and Procedures" (http://camosun.ca/learn/calendar/current/procedures.html) and the Grading Policy at http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf.

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. Please visit http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence and Misconduct

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 or misconduct 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 and Misconduct Policy: http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf and camosun.ca/sexual-violence. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

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 http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf to understand the College's expectations of academic integrity and student behavioural conduct.

> **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 changes.