COURSE SYLLABUS

COURSE TITLE: MATH-100-Calculus 1

CLASS SECTION: 001

TERM: 2024F

COURSE CREDITS: 3

DELIVERY METHOD(S): Lecture

INSTRUCTOR DETAILS

NAME: Chedo Barone

EMAIL: baronec@camosun.ca

OFFICE: Ewing 266

HOURS: Monday, Wednesday, and Friday 9:30 – 10:20; Tuesday and Thursday 12:30 – 1:30.

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

For mathematics and science students. Topics include: limits, derivatives of algebraic, trigonometric, logarithmic and exponential functions, applications of differentiation and the Fundamental Theorem of Calculus. Students will complete some assignments using Maple.

PREREQUISITE(S):

One of:

B in Pre-calculus 12

B in MATH 097

A in MATH 107

COURSE LEARNING OUTCOMES / OBJECTIVES

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

Find the limit of elementary functions as the independent variable approaches some finite value or approaches infinity.

Define continuity.

Find the derivative of simple functions using the definition.

Find the derivative of functions (polynomial, trigonometric, logarithmic and exponential functions) using the product, quotient and chain rule.

Find the derivative using implicit differentiation.

Solve problems involving rates of change.

Find relative and absolute extrema of functions.

Sketch graphs of functions identifying such features as relative extrema, intervals where the function is increasing and decreasing, points of inflection, intervals where the function is concave up and concave down, and asymptotes.

Solve problems that involve maximizing or minimizing some variable associated with the problem.

Solve equations using Newton's method.

Find the area under a curve using the limit of the area of a set of approximating rectangles.

Evaluate a definite and an indefinite integral of polynomial, trigonometric, logarithmic and exponential functions using the Fundamental theorem of Calculus.

Use the Mean Value Theorem of integrals to find the mean value of a continuous function.

Evaluate integrals using the method of substitution.

Evaluate definite integrals using the trapezoidal rule and Simpson's rule.

Solve elementary differential equations using the method of separation of variables.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Textbook: Ron Larson and Bruce Edwards, Calculus of a Single Variable, 12th Edition, Cengage Learning, 2023.

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

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.

WEEK or DATE RANGE	TOPICS/TEXTBOOK SECTIONS	TESTS/QUIZZES/ASSIGNMENTS
Week 1: Sep 2 – 6	Introduction, 1.1 – 1.2	Assignment 1 given out (1.2)
Week 2: Sep 9 – 13	1.3 – 1.4	Quiz 1 on Thursday Sep 12
Week 3: Sep 16 – 20	1.5, 2.1 – 2.3	Assignment 2 given out (2.1) Quiz 2 on Thursday Sept 19
Week 4: Sep 23 – 27	2.3 – 2.5	Quiz 3 on Thursday Sept 26
Week 5: Sep 30 – Oct 4	2.6	**Midterm 1: Thursday October 3** coverage: 1.1 - 1.5, 2.1 - 2.4
Week 6: Oct 7 – 11	3.1 – 3.3	Assignment 3 given out (3.1) Quiz 4 on Thursday Oct 10
Week 7: Oct 14 – 18	3.4 – 3.5	Quiz 5 on Thursday Oct 17
Week 8: Oct 21 – 25	3.6 – 3.8	Assignment 4 given out (3.6) Quiz 6 on Thursday Oct 24
Week 9: Oct 28 – Nov 1	3.9, 4.1 – 4.2	Assignment 5 given out (4.1) Quiz 7 on Thursday Oct 31
Week 10: Nov 4 – 8	4.2 – 4.4	**Midterm 2: Tuesday November 5** coverage: 2.5 - 2.6, 3.1 - 3.9
Week 11: Nov 11 – 15	4.5, 8.6, 5.1	Assignment 6 given out (4.5) Quiz 8 on Thursday Nov 14
Week 12: Nov 18 – 22	5.2 – 5.4	Quiz 9 on Thursday Nov 21
Week 13: Nov 25 – 29	5.4 – 5.5, 6.2, 6.3	Quiz 10 on Thursday Nov 28

WEEK or DATE RANGE	TOPICS/TEXTBOOK SECTIONS	TESTS/QUIZZES/ASSIGNMENTS
Week 14: Dec 2 – 6	6.3, Final Exam Review	**Midterm 3: Tuesday December 3** coverage: 4.1 - 4.5, 8.6, 5.1 - 5.5
Final Exam Period: Dec 9 -17		

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 CAL exams page.
https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams

EVALUATION OF LEARNING

DESCRIPTION		WEIGHTING
Assignments (6)		5%
Quizzes (10)		10%
Midterms (3)		45%
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.

https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf

COURSE GUIDELINES & EXPECTATIONS

Assignments: There will be six short assignments to be completed and handed in for marking. You will complete the assignment questions on blank sheets of paper, then submit them to me at or before the due date. The assignment questions and the due date for the assignment will be posted on D2L.

While collaboration with your classmates is permitted, you must submit your own work and ensure you don't let collaboration turn into plagiarism. You may not post assignment questions to, or copy solutions from, "cheat" websites such as Chegg and ChatGPT. The assignments are quite short, and the solutions will be posted soon after assignments are collected. As such, late assignments will not be accepted under any circumstances. To account for the event that a student might miss an assignment due to

illness (or other reasons) **I will excuse a student from a maximum of one assignment**. The weight for the missed assignment will be shifted to the remaining assignments.

Quizzes: There will be 10 short quizzes, each with a duration of 15 minutes. The content of each quiz will be from the previous five or six classes, and there will usually be two questions in each quiz. The quizzes will be held during the **last** fifteen minutes of class on the scheduled quiz days.

Midterms: There are 3 midterm exams, each with a duration of 50 minutes. The coverage of each midterm is given in the schedule given above in this syllabus. Before each midterm, a collection of sample midterm exams will be posted on D2L for your practice.

Quiz and Midterm Absences: If you miss a quiz/midterm for a legitimate reason such as illness, accident or family affliction, you should notify me (by email, or in person) as soon as possible and before the quiz/midterm (unless circumstances reasonably prevent you from doing so).

There will be no "make-up" quizzes or midterms. In the case of a missed quiz, the weight for this missed quiz will be spread among the remaining quizzes. **I will excuse a student from a maximum of two quizzes.**

In the case of a missed midterm exam, I will use the mark from the relevant portions of your final exam to calculate a mark for that missed exam. **I will excuse a student from a maximum of one midterm exam.**

SCHOOL OR DEPARTMENTAL INFORMATION

A&S Math Lab (Ewing 224): This drop-in centre is freely available for your use to work on math homework and to seek help from the instructional assistant. Hours are posted on the door or online at camosun.ca/services/academic-supports/help-centres/math-help.

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. It is your responsibility to become familiar with the contents of the document and the college policies it references.

Calculator Policy: As per department policy, the only calculator permitted for use on tests and the final exam is the Sharp EL-531 (or EL-510R) scientific calculator. No other calculator or any other electronic device including cell phones, smartwatches, etc. is allowed.

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
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.

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 changes