



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

MATH-100-003
Calculus I
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	Dr. Garret Flowers
(b) Office hours	Monday – Thursday (2:30 – 3:20)
(c) Location	Ewing 250
(d) Phone	250-370-3321 Alternative:
(e) E-mail	flowersg@camosun.ca
(f) Website	D2L (online.camosun.ca)

2. Intended Learning Outcomes

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

1. Find the limit of elementary functions as the independent variable approaches some finite value or approaches infinity.
2. Define continuity.
3. Find the derivative of simple functions using the definition.
4. Find the derivative of functions (polynomial, trigonometric, logarithmic and exponential functions) using the product, quotient and chain rule.
5. Find the derivative using implicit differentiation.
6. Solve problems involving rates of change.
7. Find relative and absolute extrema of functions.
8. 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.
9. Solve problems that involve maximizing or minimizing some variable associated with the problem.
10. Solve equations using Newton's method.
11. Find the area under a curve using the limit of the area of a set of approximating rectangles.
12. Evaluate a definite and an indefinite integral of polynomial, trigonometric, logarithmic and exponential functions using the Fundamental theorem of Calculus.
13. Use the Mean Value Theorem of integrals to find the mean value of a continuous function.
14. Evaluate integrals using the method of substitution.
15. Evaluate definite integrals using the trapezoidal rule and Simpson's rule.
16. Solve elementary differential equations using the method of separation of variables.

3. Required Materials

- (a) The following resources are strongly recommended:
- *Calculus of a Single Variable*, 11th edition by Larson and Edwards (prior editions are generally OK too)
 - *Math 100 Lecture Notes* by Garret Flowers (a coursepack available in the Camosun bookstore, or for free on D2L)
- (b) Calculator: EL-531X or EL-531XG are the standard calculators required for all Camosun math courses. Other variations *may* be accepted, but only after gaining the approval of the instructor.

4. Basis of Student Assessment (Weighting)

5% - Maple Labs
7% - Quizzes
8% - Assignments
30% - Midterms (3 midterms at 10% each)
50% - Final Exam

Maple Labs: Every second week on Fridays we will be meeting in the computer lab to complete an assignment.

Assignments: There will generally be an assignment due each week.

Quizzes: There will be nearly weekly quizzes at the start of class for approximately 15 minutes. The quizzes are open-notes and may be completed in small groups.

Midterms: There are three midterms. The dates are tentatively:
Thursday, February 7
Thursday, March 14
Thursday, April 4

Final Exam: The final exam is 3 hours in length and occurs after courses have ended.

5. Grading System

Standard Grading System (GPA)

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

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.

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 that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.