



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

**MATH-108-002**  
**Applied Calculus**  
**Summer 2020**

**COURSE OUTLINE**

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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.

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**1. Instructor Information**

(a) Instructor	Amanda Malloch
(b) Office hours	During class time: Mon-Wed 10:30-11:20 and Thurs 10:30-12:20
(c) Location	Using Collaborate on D2L
(d) Phone	250-686-0072 <b>Alternative:</b> _____
(e) E-mail	MallochA@camosun.bc.ca
(f) Website	D2L available through www.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. Find the derivative of simple functions using the definition of the derivative.
3. Find the derivative of functions (polynomial, trigonometric, logarithmic and exponential functions) using the product, quotient and chain rule.
4. Find the derivative using implicit differentiation.
5. Solve problems involving rates of change.
6. Find relative and absolute extrema of functions.
7. 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.
8. Solve problems that involve maximizing or minimizing some variable associated with the problem.
9. Find the approximate area under a curve using the area of a set of approximating rectangles.
10. Evaluate a definite and an indefinite integral of polynomial, trigonometric, logarithmic and exponential functions using the Fundamental theorem of Calculus.
11. Evaluate integrals using the method of substitution.
12. Use integration to find the area between two curves.
13. Evaluate a definite and indefinite integral by the method of integration by parts.
14. Solve elementary differential equations using the method of separation of variables.
15. Solve problems using differential and integral calculus that involve applications from business and/or biological sciences.

### 3. Required Materials

- (a) Text: Open Access – available on D2L.
- (b) Calculator: 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 make/model of calculator is permitted, nor are other electronic devices such as cell phones, iPods, electronic translators, etc

### 4. Basis of Student Assessment (Weighting)

- (a) Quizzes 20%  
We will have regular online homework assignments (using WebWork) available for practice, but then bi-weekly quizzes using a selection of the homework questions.
- (b) Tests 40% (10% each)  
Each test will have a written component worth 7.5% as well as a brief oral component worth 2.5%.

Tentatively scheduled for:  
Thursday, May 28<sup>th</sup>  
Thursday, June 18<sup>th</sup>  
Thursday, July 9<sup>th</sup>  
Thursday, July 30<sup>th</sup>

- (c) Exam 40%  
The final exam will have a written component worth 30% as well as a brief oral component worth 10%.

The final exam is scheduled by Camosun College and will occur sometime between August 10<sup>th</sup> and August 18<sup>th</sup>.

In the event that we are able to return to the classroom (even just for tests), the oral component requirement may be removed and the entire test score could come from just the written component.

### 5. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

### 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.

## A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

### 1. 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

### 2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

## B. 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.

## 8. Important Dates

May 4 <sup>th</sup> /5 <sup>th</sup> :	First day of class
May 14 <sup>th</sup> :	Last day to add courses and Tuition drop date
May 18 <sup>th</sup> :	Victoria Day (no class)
May 28 <sup>th</sup> :	Fee deadline
July 1 <sup>st</sup> :	Canada Day (no class)
July 8 <sup>th</sup> :	Last day to drop without academic penalty
August 3 <sup>rd</sup> :	British Columbia Day (no class)
August 7 <sup>th</sup> :	Last day of class
August 10 <sup>th</sup> – 18 <sup>th</sup> :	Exam Period