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

MATH-108-D02
Applied Calculus
Fall 2020

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**	Amanda Malloch
(b)	**Office hours**	During class time: Tuesday/Thursday 5:30 – 6:45pm and by appointment
(c)	**Location**	Online – D2L – Collaborate – Course Room
(d)	**Phone**	250-370-3135 (Lansdowne Office Phone) **Alternative:**
(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 recommended calculator for use on tests and the final exam is the Sharp EL-531 (or EL-510R) scientific calculator.

4. Basis of Student Assessment (Weighting)

(a) Pre-Class Assignment   6%
Small online assignments using WebWork prior to each meeting time.

(b) Bi-weekly Assignments   10%
We will have online homework assignments using WebWork each week due every second Mondays at midnight.

(c) Project   10%
There will be a small project consisting of two parts on an applied problem.

(d) Tests   44% (11% each)
Each test will be accessed and returned through the Assignments tab of D2L.

Tentatively scheduled for:
Thursday, Oct 1_{st}
Thursday, Oct 22_{nd}
Thursday, Nov 12_{th}
Thursday, Dec 3_{st}

(e) Exam   30%
The final exam is scheduled by Camosun College and will occur sometime between December 14_{th} and December 22_{nd}. You must write the final exam at the scheduled time as per Camosun College's policy on final examinations. See camosun.ca/learn/calendar/current/procedures.html#academic.

5. Grading System

X Standard Grading System (GPA)

☐ Competency Based Grading System

6. Recommended Materials to Assist Students to Succeed Throughout the Course

Math Lab: There is an instructional assistant available online who can answer questions about the content of the course. Instructions on how to 'drop in' and/or make an appointment for assistance are available on our D2L page.

7. 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	*Incomplete*: 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	*In progress*: 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	*Compulsory Withdrawal*: 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

Sept 8th: First day of class

Sept 17th: Add/Drop date and Fee deadline

Sept 21st: Tuition due

Oct 12th: Thanksgiving Day (no class)

Nov 11th: Remembrance Day (no class)

Nov 12th: Last day to drop without academic penalty

Dec 10th: Last day of class

Dec 14th – 22nd: Exam Period