



## COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/math.html>

Ω Please note: the College electronically stores this outline for five (5) years only.  
It is **strongly recommended** you keep a copy of this outline with your academic records.  
You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

### 1. Instructor Information

(a)	Instructor:	Laura Shepherd		
(b)	Office Hours:	Mon - Fri: 7:30 - 8:20; Mon: 11:30 - 2:20; Tues & Thurs: 9:30 - 2:20		
(c)	Location:	E258		
(d)	Phone:	3499	Alternative Phone:	
(e)	Email:	<a href="mailto:shepherd@camosun.bc.ca">shepherd@camosun.bc.ca</a>		
(f)	Website:	<a href="https://online.camosun.ca/">https://online.camosun.ca/</a>		

### 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) **Texts:** Ron Larson and Bruce H. Edwards, Calculus of a Single Variable, 10<sup>th</sup> Edition, Brooks/Cole, 2014.
- (b) **Other:** As per Math Department policy, the only calculator permitted for use on the tests and the final exam is the **Sharp EL-531X** 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) **Daily Questions(10%):** Each Monday, Tuesday and Thursday (first 5 minutes of class) there will be a question and assigned based on the previous days material. Please see the homework set for exact questions. There will be a total of 30 daily questions of which each student may miss three without penalty. These three dropped questions are in case a student misses a class or gets one wrong.

(b) **Maple Labs(5%):** Labs will take place in the Computer Lab E115 on the following Thursdays:

- Lab 0 & Lab 1 Thursday September 18<sup>th</sup>
- Lab 2 & Lab 4 Thursday October 16<sup>th</sup>\*
- Lab 5 Thursday November 6<sup>th</sup>
- Lab 6 Thursday November 20<sup>th</sup>

\*Note: There is no Lab 3.

(c) **Term Tests(35%):** There will be a total of three in class tests on the following days. **There are no make-up tests**, if you must miss a test please see me as soon as possible so that I can give you a copy of the missed test to help you study for the final exam.

(d) **Final Exam(50%):** Comprehensive Final Exam that is 3 hours long and will be written during the week(s) following the end of classes between the dates of December 8<sup>th</sup> to December 16<sup>th</sup>. Time, exact date and place will be scheduled by the college. Students must be available to write the exam at the scheduled date and time.

#### 5. Where to Get Help.

(a) **Office Hours:** Monday 7:00 - 8:20 & 11:30 - 2:20  
Tuesday 7:00 - 8:20 & 9:30 - 2:20  
Wednesday 7:00 - 8:20  
Thursday 7:00 - 8:20 & 9:30 - 2:20  
Friday 7:00 - 8:20

(b) **Math Lab:** This is a drop in centre where you can get help with your homework. The lab is located in E224 and the hours will be posted on the door.

(c) **Website:** This website has practice tests as well as othe useful information.  
<http://online.camosun.bc.ca/>

(d) **Calc Chat:** This website is linked to the text book and has solution to exercises.  
<http://www.calcchat.com/book/Calculus-10e/>

#### 6. 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	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

## 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 E-1.5 at [camosun.ca](http://camosun.ca) 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, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. <i>(For these courses a final grade will be assigned to either the 3<sup>rd</sup> course attempt or at the point of course completion.)</i>
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.

## 7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services, or the College web site at [camosun.ca](http://camosun.ca).

### STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and the College web site in the Policy Section.