CAMOSUN COLLEGE	**School of Arts & Science** **MATHEMATICS DEPARTMENT** **MATH 100** **Calculus 1** **Fall 2017**

COURSE OUTLINE

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

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1. Instructor Information

(a)	Instructor:	Laura Shepherd		
(b)	Office Hours:	M, Tu, Th, F 9:30 11:20 & 12:30 – 1:20; W 10:30 -11:20 & 12:30 – 1:20		
(c)	Location:	E258		
(d)	Phone:	3499	Alternative Phone:	
(e)	Email:	shepherd@camosun.bc.ca		
(f)	Website:	https://sites.google.comsite/lmds5637/100		

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

Textbooks: Calculus of a Single Variable, 11th edition by Larson, Hostetler and Edwards, available in the College Bookstore

Calculator: As per department policy, the only calculator permitted for use on tests and the final exam is the Sharp **EL-531X (or EL-531XG)** scientific calculator. No other calculator, nor any other electronic device including cell phones, smart watches, electronic translators iPods, etc, is allowed.

4. Course Content and Schedule

Calendar Description:

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.

A&S Math Lab:

E224: This drop-in center is freely available for your use to work on math homework and to seek help from the tutor on staff (see hours posted on door).

Academic Integrity:

The Department of Mathematics and Statistics has prepared a red 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.

Minimum consequences for academic dishonesty in this course are as follows:

Weekly Questions: *The student will receive a zero for all of the weekly questions.*

Term Test: *The student will receive a zero for the term test.*

Final Exam: *The student will receive a failing grade for the course and a letter to the dean detailing your actions..*

5. Basis of Student Assessment (Weighting)

(a) **Weekly Questions:** Once a week during the first 5 minutes of class, there will be a question and/or formula assigned based on the previous lectures. These in-class questions will count for 5% of your grade.

(b) **Maple Labs**: The Maple Labs will take place in the Ewing computer lab. See webpage for labs. These Labs will count for 5% of your grade

(c) **Quizzes:** There will be a total of three term tests which will count for 40% of your grade. *There are no make up tests, if you miss a test for any reason please see me as soon as possible.*

(d) **Exam:** There is a comprehensive final exam worth 50% of your grade. The final exam is three hours long and will be written during the week following the end of classes, Dec 11th – 19th. **Students MUST be available to write the exam at the scheduled date, time, and place.**

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** 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, 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. *(For these courses a final grade will be assigned to either the 3rd course attempt or at the point of course completion.)*
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.

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.

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.