



**School of Arts & Science
MATHEMATICS DEPARTMENT**

**MATH 100-001
Calculus 1
Spring/2008**

COURSE OUTLINE

The Approved Course Description is available on the web @ _____

Ω Please note: this outline will be electronically stored for five (5) years only.
It is strongly recommended students keep this outline for your records.

1. Instructor Information

(a)	Instructor:	Laura Shepherd		
(b)	Office Hours:	Tuesday and Thursday 12:00-4:30		
(c)	Location:	E266		
(d)	Phone:	3504	Alternative Phone:	360-1397
(e)	Email:	shepherd@camosun.bc.ca		
(f)	Website:	Lmds5637@gmail.com		

2. Intended Learning Outcomes

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

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 Calculus of a Single Variable, 8th edition by Larson, Hostetler and Edwards
- (b) Other

4. Course Content and Schedule

CONTENT: MATH 100 is the first course in a two course (MATH 100 and MATH 101) introduction to single variable calculus. This course is a comprehensive introduction to the methods and theory of differential and integral calculus for students in mathematics and the sciences. The course covers most of the material in the first six chapters of the textbook and includes the following topics: limits; derivatives; techniques and applications of differentiation; antiderivatives; the definite integral and area; logarithmic and exponential functions; trigonometric functions; Newton's, Simpson's and trapezoidal methods.

5. Basis of Student Assessment (Weighting)

EVALUATION: Daily Questions (5%) Tests (45%) Final Exam (50% or 100%)

Percentage:	0-49	50-59	60-64	65-69	70-72	73-76	77-79	80-84	85-89	90-100
Grade:	F	D	C	C+	B-	B	B+	A-	A	A+

Your final grade will be determined on the basis of Term Work worth 50% and a comprehensive Final Exam worth 50%. The term work consists of 4 in-class tests (45%), and a set of daily questions (5%). The final exam is 3 hours long and will be written during the week following the end of classes, the time and place will be scheduled by the College. Your final exam mark may count for 100% replacing your in-class tests **provided that you have written all of your in-class tests and attained at least a 50% average (collectively) on these tests.**

6. Grading System

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

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
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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	<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^d 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.

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 on the College web site in the Policy Section.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED