



**School of Arts & Science
MATHEMATICS DEPARTMENT**

**MATH 115-01
Pre-Calculus
2008S**

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:	Monday-Thursday 11:20-12:20		
(c)	Location:	E266		
(d)	Phone:	3504	Alternative Phone:	
(e)	Email:	shepherd@camosun.bc.ca		
(f)	Website:	Via math dept web page.		

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. Evaluate functions, find the domain of functions, compose and decompose functions and find inverse functions.
2. Graph polynomial and rational functions using symmetry, intercepts, long run behaviour, asymptotes and a table of signs.
3. Prove the Remainder and Factor Theorems and use the theorems to factor polynomials and find their real and complex zeros.
4. Graph exponential and logarithmic functions and their transformations.
5. Prove the properties of logarithms and use these properties to simplify expressions, and solve equations and applied problems.
6. Graph the six trigonometric functions and their transformations and the three basic inverse trigonometric functions.
7. Use the unit circle definitions to derive the Pythagorean identities, the sum and difference formulas, and the double angle and half angle formulas. Use these identities to simplify expressions, solve equations and verify other identities.
8. Use trigonometric functions to model real-life problems involving cyclical patterns.
9. Evaluate limits, find derivatives using the definition, find equations of tangent lines and solve optimization problems using polynomial calculus.
10. Read and write mathematics at a level sufficient for entry into first year calculus.

3. Required Materials

(a) Fundamental concepts of algebra.

(b) Introduction to Calculus.

4. Course Content and Schedule

This course provides a solid foundation for calculus. Students who have been away from mathematics for more than a year should first refresh with MATH 073 or MATH 092. Topics include: transformations, polynomial, rational, exponential and logarithmic functions, polynomial equations, circular trigonometric functions and their inverses, identities and an introduction to calculus.

5. Basis of Student Assessment (Weighting)

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; dates for tests will be given in class at least one week in advance. There are no makeup tests. The final exam is 3 hours long and will be written during the exam week following the end of classes, the time and place will be scheduled by the College. If you do better on your final exam than on your in class tests your final exam mark may count for 100% replacing your midterms **provided that you have written all of your midterms and attained at least %50 on your midterms.**

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

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