COURSE OUTLINE

1. Instructor Information

(a)	Instructor:	Gilles Cazelais	
(b)	Office Hours:	http://pages.pacificcoast.net/~cazelais/schedule.html	
(c)	Location:	CBA 158	
(d)	Phone:	370 - 4495	Alternative Phone:
(e)	Email:	cazelais@camosun.bc.ca	
(f)	Website:	http://pages.pacificcoast.net/~cazelais/	

2. Intended Learning Outcomes
(No changes are to be made to these Intended Learning Outcomes as approved by the Education Council of Camosun College.)

Upon completion of this course the student will be able to:

1. Solve problems involving trigonometric functions, sine and cosine graphs, trigonometric identities and trigonometric equations. Solve equations involving exponential and logarithmic functions.
2. Perform basic operations on complex numbers in rectangular form. Represent complex numbers graphically, and in polar and exponential form. Compute products, quotients and powers of complex numbers in polar or exponential form.
3. Evaluate limits of functions. Find derivatives of simple functions using the definition. Calculate the derivative of algebraic functions using the product rule, quotient rule and generalized power rule. Use implicit differentiation. Demonstrate an understanding of the derivative as both the slope of a tangent line and an instantaneous rate of change. Solve electronic problems involving rates of change.
4. Perform standard matrix operations. Find the inverse of a matrix. Solve linear systems using Gauss-Jordan elimination and inverse matrices. Solve linear systems involving electric circuits and Kirchhoff's laws.
5. Plot and analyze frequency distributions, relative frequency polygons and histograms. Calculate the mean, median, and standard deviation for a data set. Perform calculations involving normal distributions.

3. Required Materials

Allyn J. Washington, *Basic Technical Mathematics with Calculus*, 9th Edition

4. Course Content and Schedule

http://pages.pacificcoast.net/~cazelais/174a.html

5. Basis of Student Assessment (Weighting)

- Four term tests: 50%

- Comprehensive final exam: 50%

6. Grading System
(No changes are to be made to this section unless the Approved Course Description has been forwarded through the Education Council of Camosun College 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	*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.

1. Review
_ Review of Basic Trigonometric Functions (sections 8.1-8.3)
_ Review of Sine and Cosine Graphs (sections 10.1-10.3)
_ Review of Trigonometric Identities (sections 20.1-20.3)
_ Solving Trigonometric Equations (section 20.5)
_ Review of Exponentials and Logarithms (sections 13.1-13.5)

2. Complex Numbers
_ Basic De_nitions (section 12.1)
_ Basic Operations with Complex Numbers (section 12.2)
_ Graphical Representation of Complex Numbers (section 12.3)
_ Polar Form of a Complex Number (section 12.4)
_ Exponential Form of a Complex Number (section 12.5)
_ Products, Quotients, Powers, and Roots of Complex Numbers
(section 12.6)

3. The Derivative
_ Limits (section 23.1)
_ The Slope of a Tangent to a Curve (section 23.2)
_ The Derivative (section 23.3)
_ The Derivative as an Instantaneous Rate of Change (section
23.4)
_ Derivatives of Polynomials (section 23.5)
_ Derivatives of Products and Quotients of Functions (section 23.6)
_ The Derivative of a Power of a Function (section 23.7)
_ Di_erentiation of Implicit Functions (section 23.8)
_ Higher Derivatives (section 23.9)

4. Matrices; Systems of Linear Equations
_ De_nitions and Basic Operations (section 16.1)
_ Multiplication of Matrices (section 16.2)
_ Finding the Inverse of a Matrix (section 16.3)
_ Matrices and Linear Equations (section 16.4)
_ Gaussian Elimination (section 16.5)

5. Introduction to Statistics
_ Frequency Distributions (section 22.1)
_ Measures of Central Tendency (section 22.2)
_ Standard Deviation (section 22.3)
_ Normal Distributions (section 22.4)