

School of Arts & Science MATHEMATICS DEPARTMENT MATH 174A

Mathematics for Electronics 3 Quarter 1/Fall 2009 (Sep-Dec)

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 Shepher	rd		
(b)	Office Hours:	Tuesday-Friday	Tuesday-Friday 10:30 – 12:30		
(c)	Location:	CBA 147			
(d)	Phone:	4448	Alternative Phone:		
(e)	Email:	shepherd@car	shepherd@camosun.bc.ca		
(f)	Website:	LmdS5637@googlepages.com			

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 basic exponential and logarithmic equations. Plot graphs of exponential and logarithmic functions. Use the number "e" as a base in exponential and logarithmic expressions.
- 2. Perform basic operations on complex numbers. Represent complex numbers graphically, and in polar and exponential form. Compute products, quotients, and powers of complex numbers.
- 3. Solve trigonometric equations. Plot sine and cosine graphs. Simplify expressions using fundamental trigonometric identities (including Pythagorean identities, the sum and difference formula, and the double angle formula).
- 4. Plot and analyze frequency distributions, relative frequency polygons and histograms. Calculate measures of central tendency (mean, median, and mode) for a data set. Calculate the standard deviation of a data set. Perform calculations involving the mean and standard deviation for normal distributions. Calculate confidence intervals.
- 5. Evaluate limits of functions. Find the derivative of a function using the definition. Differentiate polynomials. Calculate the derivative of a function using the product rule, quotient rule, and power rule. Use implicit differentiation to calculate the derivative. Solve problems involving applications of derivatives.
- 6. Perform basic operations on matrices, including multiplication. Find the inverse of a matrix. Solve linear systems using Gauss-Jordan elimination and inverse matrices.

3. Required Materials

Texts: Allyn J. Washington, Basic Technical Mathematics With Calculus, 9th edition, Pearson Education Canada.

4. Course Content and Schedule

In class work load 4 hours per week

5. Basis of Student Assessment (Weighting)

(This section should be directly linked to the Intended Learning Outcomes.)

There will be 5 tests of which the lowest scored test will be dropped. Students may use a scientific calculator on the tests and final exam. The final exam will cover the entire course and will be 3 hours long. As stated in the current college calendar students are expected to write tests and final examinations at the scheduled time and place. There is no provision for 'making up' a missed test. If your final exam grade is higher than your term work grade and your term work is 50% or higher, then your final exam grade will count as 100% of your final grade.

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	Α		8
80-84	A-		7
77-79	B+		6
73-76	В		5
70-72	B-		4
65-69	C+		3
60-64	С		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
1	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 3 rd course attempt or at the point of course completion.)
Compulsory Withdrawal: A temporary grade assigned by a Dean when an after documenting the prescriptive strategies applied and consulting with pedeems that a student is unsafe to self or others and must be removed from 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.

ADDITIONAL COMMENTS AS APPROPRIATE OR AS REQUIRED