



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:	Susie Wieler		
(b)	Office Hours:	Monday, Tuesday, Thursday, Friday 12:00 – 1:00		
(c)	Location:	CBA 147		
(d)	Phone:	250-370-4448	Alternative Phone:	
(e)	Email:	wieliers@camosun.bc.ca		
(f)	Website:	https://sites.google.com/site/susiewieler		

Math help is also available in the Math Lab in TEC 142. Hours are posted on the door.

2. Intended Learning Outcomes

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

1. Find the equation of a line tangent and normal to a curve at a point. Use Newton's Method to find an approximate solution to an equation. Solve curvilinear motion problems using equations in parametric form. Solve related rate problems including applications to electronic circuits and devices.
2. Sketch curves using the first and second derivatives, symmetry and asymptotes as appropriate. Solve optimization problems including applications to electronic circuits and devices. Find differentials, estimate errors and linearize functions.
3. Find antiderivatives of functions and use antiderivatives to solve applied problems including applications to electronics.
4. Use the Fundamental Theorem of Calculus to evaluate definite integrals. Using the trapezoidal rule and Simpson's rule, evaluate integrals for functions that cannot be integrated directly. Calculate areas between curves and find volumes of solids of revolution.
5. Differentiate trigonometric, inverse trigonometric, exponential and logarithmic functions.

3. Required Materials

- (a) Textbook: Allyn J. Washington, Basic Technical Mathematics with Calculus, SI Version, 10th Ed.
- (b) Calculator: scientific calculator (no graphing calculators allowed)

4. Course Content and Schedule

Chapter 24: APPLICATIONS OF THE DERIVATIVE

- 24.1 Tangents and Normals
- 24.2 Newton's Method
- 24.3 Curvilinear Motion
- 24.4 Related Rates
- 24.5 Using Derivatives in Curve Sketching
- 24.6 More on Curve Sketching
- 24.7 Applied Maximum and Minimum Problems
- 24.8 Differentials and Linear Approximations

Chapter 27: DIFFERENTIATION OF TRANSCENDENTAL FUNCTIONS

- 27.1 Derivatives of the Sine and Cosine Functions
- 27.2 Derivatives of the Other Trigonometric Functions
- 27.3 Derivatives of the Inverse Trigonometric Functions
- 27.5 Derivatives of the Logarithmic Function
- 27.6 Derivatives of the Exponential Function

Chapter 25: INTEGRATION

- 25.1 Antiderivatives
- 25.2 The Indefinite Integral
- 25.3 The Area Under a Curve
- 25.4 The Definite Integral
- 25.5 Numerical Integration: The Trapezoidal Rule
- 25.6 Simpson's Rule

Chapter 26: APPLICATIONS OF INTEGRATION

- 26.1 Applications of the Indefinite Integral
- 26.2 Areas by Integration
- 26.3 Volumes by Integration

5. Basis of Student Assessment (Weighting)

Weekly 5-minute quizzes, total weight 5%

Quizzes will be at the beginning of class on Mondays, starting in Week 2. The two lowest quiz grades will be dropped. There are no make-up quizzes, even if a student is absent.

Three tests, total weight 45% (15% for each test)

Test Dates:

Thursday, January 29

Thursday, February 19

Thursday, March 12

If a student misses a test for any reason, the exam will be worth 65%.

There is no provision for making up a missed test.

Final Exam, weight 50%

If the final exam grade is higher than the term grade AND the term grade is 50% or higher, then the final exam grade will count as 100% of the final grade.

The final exam will cover the entire course and will be 3 hours long. As stated in the current college calendar on page 34, "students are expected to write tests and final examinations at the scheduled time and place." Exceptions will only be considered due to **emergency** circumstances as outlined in the calendar. Holidays or scheduled flights are not considered to be emergencies.

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	<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 the College web site in the Policy Section.