



**CAMOSUN COLLEGE**  
**School of Arts & Science**  
**Department of Mathematics & Statistics**

**MATH-193-DX01**  
**Applied Math for Civil/Mech 2**  
**Summer 2021**

**COURSE OUTLINE**

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The course description is online @ <http://camosun.ca/learn/calendar/current/web/math.html>

$\Omega$  Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

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**1. Instructor Information**

(a) Instructor	Torsten Schoeneberg
(b) Office hours	Online by appointment Mondays through Thursdays
(c) Location	Off-campus (online)
(d) Phone	N/A
(e) E-mail	schoenebergt@camosun.bc.ca
(f) Website	https://online.camosun.ca/d2l/home/199585

**2. Intended Learning Outcomes**

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

1. Integrate algebraic, exponential, logarithmic and trigonometric functions.
2. Use methods of integration, including integration by parts and non-repeated linear partial fractions
3. Find partial derivatives of functions.
4. Evaluate double integrals using both Cartesian and polar coordinates and use double integration to calculate volumes under three-dimensional surfaces.
5. Solve separable and linear first-order differential equations.
6. Solve second-order linear homogeneous and non-homogeneous differential equations with constant coefficients.
7. Solve application problems involving first and second-order differential equations, including mass-spring systems.
8. Calculate probabilities using counting techniques and basic probability.
9. Graph a data set using a variety of presentations. Calculate the mean, median, and standard deviation of a data set and interpret the results.
10. Solve problems involving discrete probability distributions such as binomial and Poisson, and continuous probability distributions such as the normal distribution.
11. Calculate point estimates and confidence intervals for means of both large and small samples.
12. For a bivariate data set, calculate the linear regression line using the method of least squares, either using a scientific calculator or using appropriate software. Calculate and interpret the coefficients of correlation and determination.

### **3. Required Materials**

(a) Optional Textbook:

Washington: Basic Technical Mathematics with Calculus

(b) Other:

Coursepack and files with suggested exercises on the D2L site.

### **4. Course Content and Schedule**

Combination of asynchronous and synchronous online lectures. Videos with accompanying lecture notes will be uploaded regularly to the D2L site. There are also usually two live lectures per week with time for questions and extra practice. Participation in these is encouraged. These will also be recorded and made available on D2L after.

### **5. Basis of Student Assessment (Weighting)**

(a) Weekly Homework Assignments

Weekly assignments, to be submitted at myopenmath.com. Our course ID on this website is 108519, the password is camosun.

(b) 3 Midterm Tests

Tentatively scheduled for Wednesdays: May 26, June 23, August 4. Each midterm test will be sent out electronically at 2.30pm, and scans/photos of solutions are to be sent back by 3.45pm. (Suggested time for test: 60 minutes, for printing/scanning/taking photos: 15 minutes).

(c) Optional final exam

Held in the examination week August 9-17.

The final grade will be the better of:

(I) 10% homework assignments, 90% midterm tests (30% each);

or (II) 6.5% homework assignments, 58.5% midterm tests (19.5% each), 35% final exam.

## 6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

## 7. Recommended Materials to Assist Students to Succeed Throughout the Course

## 8. College Supports, Services and Policies



### Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

### College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

### College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

## A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

### 1. 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		1
0-49	F	Minimum level has not been achieved.	0

## 2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

## B. 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 at <http://camosun.ca/about/policies/index.html> 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 are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
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.