

CAMOSUN COLLEGE
School of Trades and Technology
Civil Engineering Department

CIVE 191 – Statics
Fall, 2019

COURSE OUTLINE

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.

1 Instructor Information

Instructor	Perry Peterson	
Office hours	Please see schedule posted outside office.	
Location	TEC 105	
Phone	Mobile (250) 812 2214	Alternative: Note I can be available to help 24/7 by email or SMS
E-mail	petersonP@camosun.bc.ca	
Website	http://civil.camosun.bc.ca/student/	

2 Prerequisites and Corequisites

One of

- “C” in MATH 101 or
- “C” in MATH 191

3 Hours and Credits

Course Activity

- Lecture (Direct Instruction)
- Seminar (Direct Instruction)
- Lab /Collaborative Learning
- Supervised Field Practice
- Workplace Integrated Learning (Coop, Internship, etc.)
- Other*(please note):

Hours / Week	Instruction – No of Weeks <small>(Q=11; S=14; “P or S” = 7)</small>
2	14
3	14

Credits = 4

4 Short Description

Students are introduced to force systems, statics of rigid bodies, equivalent forces, and couple systems. Students perform analyses of free body diagrams, frames, and trusses and determine properties of sections and components of two and three dimensional vectors. Shear and bending moment diagrams of beams are drawn.

5 Intended Learning Outcomes

Upon successful completion of this course, students will be able to:

- Apply relevant safety regulations and best practices in the lab and in the field.
- Perform unit conversions using SI and US Customary units and perform analysis in both systems.
- Use the concepts of "the principles of statics", "free body diagrams" and "component methods" to determine forces acting on a body.
- Determine the resultant forces of systems of plane concurrent and nonconcurrent, plane parallel and non-parallel forces acting upon a body.
- Determine the resultant force on a body by replacing a force with a force and a couple.
- Determine conditions for equilibrium of bodies acted on by coplanar force systems, moments and couples and combinations of forces and couples in order to solve for reaction forces.
- Analyze various structural forms, including frames, trusses, and beams to find reaction forces and internal forces.
- Determine the properties of structural forms including centre of gravity, centroids of areas and moment of inertia. These properties will be used in later courses to calculate stresses.
- Draw the shear and bending moment diagrams for beams in order to identify internal forces.

6 Course Content and Schedule

<i>Week</i>	<i>Date of Monday</i>	<i>Topic</i>
1	Sept 2	General Principals / Review Vectors
2	Sept 9	Force Vectors
3	Sept 16	Force Vectors
4	Sept 23	Force System Results
5	Sept 30	Force System Results
6	Oct 7	Midterm Exam 1 Equilibrium of a Rigid Body
7	Oct 14	Equilibrium of a Rigid Body
8	Oct 21	Structural Analysis
9	Oct 28	Structural Analysis
10	Nov 4	Structural Analysis
11	Nov 11	Midterm Exam 2 (Nov 12) Intro to Bending (Shear and Bending Moment Diagrams)
12	Nov 19	Intro to Bending (Shear and Bending Moment Diagrams)
13	Nov 26	Centre of Gravity & Moment of Inertia
14	Dec 3	Centre of Gravity & Moment of Inertia / Review

7 Basis of Student Assessment

<i>Component</i>	<i>Weighting</i>	<i>Comments</i>
Mid-term Exams	30%	
Quizzes	20%	Short Quizzes every Monday at 12:30 Sharp
Final Exam	50%	
TOTAL	100%	

8 Recommended Materials to Assist Students to Succeed Throughout the Course

- a) Texts *Statics and Mechanics of Materials*, 5E; RC Hibbeler; Pearson; ISBN 978-0-13-438259-3. (assignments and reading will be aligned with the text. It is also used for the Mechanics of Materials course in second semester) –
- b) Other –

9 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.

10 Grading System

- Standard Grading System (GPA)*
 Competency Based Grading System

See [Camosun Grading Policy E-1.5](#)

11 A Safe Place for EVERYONE

Equity, diversity, and inclusion (EDI) are central to Camosun's culture and values. The Camosun community and the engineering community at large commit to pursuing equity in education regardless of race, heritage, religion, gender or gender identity, and ability. We learn best when we feel safe. Inappropriate, hateful or demeaning comments or actions will not be tolerated. Your suggestions on how to make your experience here better are encouraged and appreciated. Please let me or the department chair know ways to improve your experience at Camosun. If you wish to know more about Camosun's EDI policy, please see the EDI page on the college's website: <http://camosun.ca/about/policies/equity-diversity-inclusion.html>

12 Class Policies

- You must pass the final exam (minimum of 50%) to pass the course.
- Communicate with Instructor if you are to miss or have missed a class.