



CAMOSUN COLLEGE
School of Trades and Technology
Department of Civil Engineering Technology

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	Ross Gibbs
Office hours	Please see schedule posted outside office.
Location	TEC 265
Phone	Please use email Alternative: _____
E-mail	Gibbs@camosun.bc.ca
Website	See MME.

2 Prerequisites and Co-requisites

One of

- MATH 101
- MATH 191

3 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.

4 Intended Learning Outcomes

Upon successful completion of this course a student 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.

5 Required Materials

- a) Texts – Statics and Mechanics of Materials, 5E; RC Hibbeler; Pearson; ISBN 978-0-13-438259-3.
- b) Other – Modified MasteringEngineering access code for above text.

6 Course Content and Schedule

See last page.

7 Student Assessment

Grading System




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

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

8 Class Policies

(Edit as you wish)

- Assignments are submitted via Modified Mastering Engineering (MME). See MME website for grading policies for assignments and quizzes.
- You must complete all assignments prior to the final exam to be permitted to write the final exam.
- You must pass the final exam to pass the course

Week	X01A	X01B	Time			Assessment		Chapter*	Sections	Examples			
	Date	Date	Lecture	Seminar 2	Seminar 1	Assign.†	Quiz‡						
1	2-Sep	2-Sep						1 General Principles	1-5	1-3			
	4-Sep	3-Sep		1.5									
	6-Sep	6-Sep		1.5									
2	9-Sep	9-Sep	2					2 Force Vectors	1-3	1-3			
	11-Sep	10-Sep		1.5					4	4-6			
	13-Sep	13-Sep			1.5								
3	16-Sep	16-Sep	2					2 Force Vectors	5-6	7-9			
	18-Sep	17-Sep		1.5		1							
	20-Sep	20-Sep			1.5		1						
4	23-Sep	23-Sep	2					2 Force Vectors	7-8	10-12			
	25-Sep	24-Sep		1.5		2			9	13-15			
	27-Sep	27-Sep			1.5		2						
5	30-Sep	30-Sep	2					3 Force System Resultants	1	1-2			
	2-Oct	1-Oct		1.5		3			2-3	3-4			
	4-Oct	4-Oct			1.5				4	5-6			
6	7-Oct	7-Oct	2					3 Force System Resultants	5	7-9			
	9-Oct	8-Oct		1.5		4			6	11-13			
	11-Oct	11-Oct			1.5		3						
7	14-Oct	14-Oct						3 Force System Resultants	7	14-16			
	16-Oct	15-Oct		1.5		5			8	17-20			
	18-Oct	18-Oct	1.5				4		9	22-23			
8	21-Oct	21-Oct	2					4 Equilibrium of a Rigid Body	1-2	1-3			
	23-Oct	22-Oct		1.5		6			3	4-7			
	25-Oct	25-Oct			1.5		5		4	8			
9	28-Oct	28-Oct	2					4 Equilibrium of a Rigid Body	5	9			
	30-Oct	29-Oct		1.5		7			6	10-11			
	1-Nov	1-Nov			1.5								
10	4-Nov	4-Nov	2					4 Equilibrium of a Rigid Body					
	6-Nov	5-Nov		1.5		8							
	8-Nov	8-Nov			1.5		6						
11	11-Nov	11-Nov						5 Structural Analysis	1-2	1-3			
	13-Nov	12-Nov		1.5		9			3	4			
	15-Nov	15-Nov	1.5										
12	18-Nov	18-Nov	2					5 Structural Analysis	4	5-7			
	20-Nov	19-Nov		1.5		10			5	8, 10-11			
	22-Nov	22-Nov			1.5		6						
13	25-Nov	25-Nov	2					6 Center of Gravity, Centroid, and Moment of Inertia	TBA				
	27-Nov	26-Nov		1.5		11							
	29-Nov	29-Nov			1.5								
14	2-Dec	2-Dec	2					6 Center of Gravity, Centroid, and Moment of Inertia			TBA		
	4-Dec	3-Dec		1.5		12							
	6-Dec	6-Dec			1.5		6						
			26.5	21	16.5	12	6						
			47.5										

* Statics and Mechanics of Materials, 5E; RC Hibbeler; Pearson; ISBN 978-0-13-438259-3

MME: gibbs44842

Evaluation	Mark
† MME Assignments	36
‡ MME Quizzes	24
Final	40
	100

3 marks each for 12 assignments

4 marks each for 6 quizzes