

**CE30/ME85 – Introduction to Solid Mechanics**  
**Section II**

Date	Class #	Topic	Readings	Homework	Notes
1/17	1	Introduction and Review of vector algebra	Chapter 1		
1/19	2	Force and moments (1)	Chapter 2	HW1 (S)	
1/22	3	Force and moments (2)	Chapter 2 & 3	HW2 (S)	
1/24	4	Forces and moments (3)	Chapter 2 & 3	HW2 (S)	
1/26	5	Statics: Equilibrium (1)	Chapter 3 & 4		HW1 (In)
1/29	6	Equivalent force-moment systems	Chapter 3 & 4	HW3(S)	
1/31	7	Equilibrium of Rigid Bodies	Chapter 4		
2/2	8	Friction force	Chapter 4	HW4 (S)	HW2 (In)
2/5	9	2D Trusses (method of joints)	Chapter 6	HW4 (S)	
2/7	10	2D Trusses (method of sections)	Chapter 6		
2/9	11	Frames and machines	Chapter 6	HW5 (S)	HW3 (In)
2/12	12	Distributed force: Centroids	Chapter 5	HW5 (S)	
2/14	13	Distributed force: Moment of Inertia	Chapter 7		
2/16	14	Internal forces and stress	Chapter 8	HW6(S)	HW4 (In)
2/19	15	Academic Holiday	Chapter 8		
2/21	16	Stresses (1)	Chapter 8	HW6 (S)	
2/23	17	Stresses (2)	Chapter 9		HW5 (In)
2/26	18	Deformation and strain	Chapter 9	HW7 (S)	
2/28	19	Stress-strain relation	Chapter 9	HW7 (S)	
3/1	20	Deflection of bars	Chapter 9		HW6 (In)
3/4	21	Static indeterminacy	Chapter 9	TBA	
3/6	22	Torsion of circular shafts (1)	Chapter 10	TBA	
3/8	23	Torsion of circular shafts (2)	Chapter 10	HW8 (S)	HW7 (In)
3/11	24	Midterm exam (through lecture 21)			
3/13	25	Torsion of circular shafts	Chapter 10	HW8 (S)	
3/15	26	Beam statics	Chapter 11		HW8 (In)
3/18	27	Bending of beams (I)	Chapter 11	HW9 (S)	
3/20	28	Bending of beams (II)	Chapter 12	HW9 (S)	

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3/22	29	Beam bending (III)	Chapter 11		HW9 (In)
3/25	30	Spring Break	Chapter 11		
3/27	31	Spring Break	Chapter 11		
3/29	32	Spring Break	Chapter 11	HW9 (S)	
4/1	33	Shear stress in beam (1)	Chapter 13	HW10 (S)	
4/3	34	Shear stress in beam (2)	Chapter 13	HW10 (S)	HW10 (In)
4/5	35	Shear stress in beam (3)	Chapter 13		
4/8	36	Deflection of beam (1)	Chapter 15	HW11 (S)	
4/10	37	Deflection of beam (2)	Chapter 15	HW11 (S)	HW11(In)
4/12	38	Transformation of stress	Chapter 14		
4/15	39	Mohr's circle (1)	Chapter 14	HW12 (S)	
4/17	40	Mohr's circle (2)	Chapter 14	HW12 (S)	HW12(In)
4/19	41	Mohr's circle (3)	Chapter 14		
4/22	42	Stability and Column Buckling (1)	Chapter 16	HW13 (S)	
4/24	43	Column Buckling (2)	Chapter 16	HW13 (S)	HW13(In)
4/26	44	Column Buckling (3)	Chapter 16	HW13 (S)	
4/29	45	Final Review	End of Instruction	HW13 (S)	
5/1	46	RRR Week Office Hour		HW14	HW14(In)
5/7	47	Final Exam	Tuesday	8am-11am	

**Required Textbook:** Statics and Mechanics of Materials, by Beer et. al. Third Edition, McGraw-Hill, 2021.

**Time and location:** MWF 1-2pm, 50 Birge Hall.

**Home work:** The **homework** assignment during a regular week are assigned at each Friday through class email system, and they are due on the next Friday (a week after).

There is one midterm examination, as shown in the outline, and a final exam. All exams will be closed book written exam with an instructor provided equation sheet.

**Course grade** is from three aspects of your performance : Homework 40%, Midterms 30%, Final 30%.  
 Two final points for attendance record.

Limited **Collaboration** is permitted on homework assignments. You may discuss the homework with each other but may not show your written work to others. Similarly, the use of solution keys or solution sets of any type is expressly forbidden. Misconduct on examinations will likewise be reported to the Student Conduct Office and result in a failing grade for the course.

**Office Hours:** Prof. Li (Email: li@ce.berkeley.edu; Phone: 510-642-5362)  
 TuThu: 9:30am – 12:00 pm; 783 Davis Hall;

**Discussion Session and GSIs:**

TA 1: Mr. Qijun Chen Email: cdec76@berkeley.edu;

Office Hours (305 Davis Hall):

M: 11:00 am – 1:00 pm and 2:00pm – 4:00pm;

W: 11:00 am – 1:00 pm

Mr. Qijun Chen also serves as a reader.

TA 2: Mr. Caglar Tamur; Email: caglar.tamur@berkeley.edu;

Discussion Session: Monday: 5:00-6:00 pm, 534 Davis Hall;

Discussion Session: Tuesday: 5:00-6:00 pm, 534 Davis Hall;

Discussion Session: Wednesday: 5:00-6:00 pm, 534 Davis Hall;

Office Hours (504 Davis Hall):

Tu/Wed 3:00 pm - 4:30 pm.

Class web-page is in Bcourses