

**CALIFORNIA STATE POLYTECHNIC UNIVERSITY  
MECHANICAL ENGINEERING DEPARTMENT  
SPRING 2018**

CLASS ME218 Section 01 (CRN 31134)  
STRENGTH OF MATERIALS I

TEXT MECHANICS OF MATERIALS, 7th Edition  
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McGraw Hill

INSTRUCTOR M. IZADI  
Room 222, Bldg. 9  
Phone: 909-869-2548

CLASS HOURS Tu & Th : 7:45 AM - 9:00 AM

OFFICE HOURS Tu & Th : 10:30 AM - 12:30 PM

PRE-REQUISITES C- or better in ME214

GRADE DISTRIBUTION	Home Work Assignments	5%
	Quizzes	55%
	Final	40%

15 min. Quiz will be given every Thursday. Minimum of 6 Quizzes and the lowest score will be dropped.  
**ABSOLUTLY NO MAKE-UPS.**

Homework will be assigned on a weekly basis, and will be collected a week following the day of the assignment. The assignments should be submitted at the start of the class on the due date. All homework problems should contain *Chapter Number, Problem Number, Equations, Sketches and Free-Body-Diagrams*, if applicable.

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**The answers should be placed in a box with appropriate units.**  
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This class is fairly difficult and challenging. To be successful student need to allocate 6 to 8 hours per week to do the homework assignment. Student should focus on the understanding of the concepts and logics of the materials presented in class. Each and every assigned problem should be approached systematically through the logical application of those basic concepts. **Memorizing a formulas or a recipe to do the homework is worthless.** Discussion and collaboration on homework is highly recommended, **copying is not!**

FINAL EXAM Thursday June 7, 7:00 AM – 9:00 AM  
(Normal Schedule Date)

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Proposed Course Outline: ME 218 - Strength of Materials

DATE	TOPICS	TEXT	HOMEWORKS (Not all assigned)
March	27	Review Principals of Statics Introduction to Stress	To be assigned CH 1: 1,2,7,8,9,10,12,13,14,17,18,20,23,24,27,28
	29	Stress Components, Safety Factor	29,30,31,32,35,36,38,40,41,42,43,47,48,51, 53,55,60,61,65,66,67,69
April	03	Stress-Strain Diagram, Hook's Law	CH 2: 1,2,3,4,6,7,8,9,11,13,14,16
	05	Axially Loaded Members	18,19,20,23,24,25,26,27,28
	10	Statically Indeterminate Problems	33,35,36,37,38,39,40,41,43,44,46
	12	Thermal Effect	47,49,50,52,58,59
	17	Poisson's Ratio & Multi-Axial Stresses	61,62,63,64,66,67,68,69,70
	19	Shearing Strain Stress Concentration	75,76,77,79,80,81 93,95,96,97,98,100
	24	Torsion in Circular Shafts Angle of Twist	CH 3: 3,5,6,7,10,12,13,17,21,22,24 32,34,36,37,38,39,40,41,48
26	Indeterminate Shafts, Power Shafts	51,53,55,59,66,67,70,71,77	
May	01	Pure Bending	CH4: 1,3,4,6,7,8,9,10,11,12,13,15,16,20,24
	03	Composite Members	33,34,35,37,40,41,42
	08	Eccentric Axial Loading General Case of Eccentric Loading	99,102,103,104,106,112,117,121,123,124 144,145,146,147
	10	Shear & Bending Moment Diagrams	CH 5: 2,4,5,6,8,9,10,11,12,16,17,18,19,21,22,23, 24,28,31
	15	Load, Shear & Bending Relationships Beam Design	34,36,41,42,43,44,45,53,54,56,59 66,68,70,71,72,74,75,85
	16	Shearing Stresses in Beams	CH 6: 1,3,4,5,6,7,8,10,12,16,18,19,21,22,24
	22	Longitudinal Shear in Common Beams	29,30,31,33,34,36,37,38,40
	24	Stress Transformation	CH 7: 1,2,3,4
	29	Principal and Maximum Shear Stresses	5,7,9,11,13,16,17,18,20,23,24,25,26
	31	Mohr's Circle, Graphical Method	31,33,34,36,37,39,40,42,45,46,47,48,49

Course Review: Monday June 4, 1:00 PM to 3:00 PM (Attendance Optional)