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Mechanics of Materials	
/ / 48/3/3	
9-11	**312**
2018 三	
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15:00-18:00, By appointment/office 307 /	
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Mechanics of Materials: R. C. Hibbeler, Pearson Prentice Hall, 8th edition in SI units, 2013.

Mechanics of Materials, by James and Barry.
Mechanics of Materials, by Beer and Johnston.
Mechanics of Materials, by Riley Sturges and Morris
Mechanics of Materials, by Craig, Jr.
Mechanics of Materials, by Ugural.
Engineering Mechanics of Solids, by Popov.

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R.C. Hibbeler **Mechanics of Materials** **James and Barry.** **Mechanics of Materials**
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1	Introduction to Mechanics of materials	3	Syllabus Materials vs. mechanics	In class and Examples Demo	HW1
2	Chap 1 Stress Tension, Compression, and shear	3	Introduction, Equilibrium of a Deformable Body, Stress	In class and Examples Demo	Quizs1
3	Chap1 Stress Tension, Compression, and shear	3	Average Normal Stress in an Axially Loaded Bar, Average Shear Stress, Allowable Stress	In class and Examples Demo	HW2 Quizs2
4	Chap 1 Stress Tension, Compression, and shear Chap 2 Strain	3	Design of Simple Connections, Deformation , Strain	In class and Examples Demo	
5	Chap 3 Mechanical Properties of Materials	3	The Tension and Compression Test, The Stress-Strain Diagram, Stress–Strain Behavior of Ductile and Brittle Materials, Hooke's Law	In class and Examples Demo	
6	Chap 3 Mechanical Properties of Materials	3	Strain Energy, Poisson's Ratio, The Shear Stress– Strain Diagram	In class and Examples Demo	
7	Chap 4 Axial Load	3	Saint-Venant's Principle, Elastic Deformation of an Axially Loaded Member, Principle of Superposition, Statically Indeterminate Axially	In class and Examples Demo	
8	Chap 4 Axial Load	3	The Force Method of Analysis for Axially Loaded Members, Thermal Stress, Stress Concentrations	In class and Examples Demo	
9	Chap 5 Torsion	3	Torsional Deformation of a Circular Shaft, The Torsion Formula	In class and Examples Demo	
10	4/5 Midterm exam	3	Chapter1-5		
11	Chap 5 Torsion	3	Power Transmission, Angle of	In class and	

			Twist , Statically Indeterminate Torque-Loaded Members	Examples Demo	
12	Chap 6 Bending	3	Shear and Moment Diagrams, Graphical Method for Constructing Shear and Moment Diagrams	In class and Examples Demo	
13	Chap 6 Bending	3	Bending Deformation of a Straight Member, The Flexure Formula, Unsymmetric Bending	In class and Examples Demo	
14	Chap 7 Transverse shear	3	Shear in Straight Members, The Shear Formula, Shear Flow in Built-Up Members	In class and Examples Demo	
15	Chap 9 Stress transformation	3	Plane-Stress Transformation, General Equations of Plane-Stress Transformation	In class and Examples Demo	
16	Chap 9 Stress transformation Chap 10 Strain Transformation	3	Principal Stresses and Maximum In-Plane Shear Stress, Mohr's Circle—Plane Stress	In class and Examples Demo	
17	Chap 10 Strain Transformation	3	Plane Strain, General Equations of Plane-Strain	In class and Examples Demo	
18	6/24 Final exam	3	Chapter1-10		
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Midterm Exam	(Chap. 1 - 5)/	30%
Final Exam.	(Chap. 1 -10)/	30%
Homeworks+ Quizs	100 (+) / 100 100 (不 不)	40%

2019.03.15