South Plains College
Mathematics, Engineering, & Computer Science Department
Mechanics of Materials (Solids) – ENGR 2332.601
Tuesday & Thursday: 4:00pm – 5:45pm
Course Syllabus - Spring 2026

Instructor: Jake Wyatt, PE, SE
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Office Hours (Levelland Campus): M & W: 3-5pm, T & R: 1:30-3pm, and by appointment.
Office Hours (Lubbock Campus): F: 12-1pm, and by appointment.

Course Description: Solids is the theory of stress and strain in elastic and inelastic bodies subject to various conditions of loading.

Credit: 3 Semester Credit Hours

Prerequisites: ENGR 2301 ("C" or better in Statics)

Textbook: Mechanics of Materials (11th ed.) by R.C. Hibbeler

Attendance: Attendance and effort are important for success in this course. Class attendance may be taken at any time during the class period, so please do not arrive late or leave early.

Class Format:

4:00 – 4:30pm	HW Questions from Students
4:30 – 5:15pm	Lecture
5:15 – 5:20pm	Break
5:20 – 5:45pm	Lab Assignment

Lab Assignments: Lab assignments (labs) are short worksheets to be completed in class. The lab consists of problems related to the lecture. If the lab cannot be completed by 5:45pm, then an extension without penalty will be granted. However, if a student leaves early before completing the lab, no extension will be granted and he or she must turn in the incomplete lab before leaving. Make-up labs are only permitted in the case of an excused absence. Group work is encouraged during labs.

Homework: Homework will be assigned at each class meeting but will not be graded until exam day.
Format for all homework assignments:
1. Provide a "Given" and "Find" problem statement on your own paper.
2. Provide a solution showing all the necessary work.
3. Clearly mark your final answer.
4. Check your answer with the answer key to make certain you are practicing correctly.

Notebook: You are required to maintain a 3-ring binder with four dividers, labeled: Notes, Homework, Lab Assignments, & Exams. Your notebook will be collected on exam days and will be graded for completeness and neatness.

Grading:

Notebook:	10%
Lab Assignments:	10%
3 Exams:	20% each
Final Exam:	20%

Note: Your lowest exam score will be replaced with your final exam score, provided the latter is higher.
Your final average in the course will determine the letter grade posted on your transcript. This grade is determined by the following scale. A(90-100%), B(80-89%), C(70-79%), D(60-69%), F(0-59%).

Technology: A non-graphing calculator may be used in this course as needed. The TI-30XIIS is a good option. Computers and cell phones are prohibited.

Supplementary Information: The course syllabus, schedule, and grades can be accessed through Blackboard, the online course management system for this course. Please email questions regarding Blackboard support to blackboard@southplainscollege.edu. For information regarding official South Plains College statements about diversity, disabilities, non-discrimination, Title V Pregnancy & Parenting Accommodations, and Campus Concealed Carry, please visit: https://www.southplainscollege.edu/syllabusstatements/.

Mechanics of Materials (Solids) Course Outline
ENGR 2332.601 (TR 4:00 – 5:45pm)
Spring 2026

Topics & Assignments from:
Mechanics of Materials (11th ed.) by R. C. Hibbeler

Week	Date	Required Reading & Lecture Topic	Homework Assignment	#
1	Jan 13 – T	1.1 - 1.2 Equilibrium of a Deformable Body	1-1, 1-5, 1-10	1
	Jan 15 – R	1.3 – 1.5 Stress, Average Normal Stress, Average Shear Stress	1-31, 1-38, 1-42	2
2	Jan 19 - M	*Martin Luther King Jr. Holiday – no office hours*		
	Jan 20 – T	1.6 – 1.7 Allowable Stress Design, Limit State Design	1-70, 1-77, 1-79	3
	Jan 22 – R	2.1 – 2.2 Deformation & Strain	2-2, 2-5, 2-15	4
3	Jan 27 – T	3.1 – 3.4 Stress-Strain Relationships	3-1, 3-14, 3-21	5
	Jan 29 – R	3.5 – 3.6 Poisson's Ratio	3-25, 3-29, 3-33	6
4	Feb 3 – T	**Exam 1 (20%)**		
	Feb 5 – R	4.1 – 4.2 Saint-Venant's Principle & Axially Loaded Members	4-1, 4-7, 4-13	7
5	Feb 10 – T	4.6 – 4.7 Thermal Stress & Stress Concentrations	4-69, 4-70, 4-93, 4-94	8
	Feb 12 – R	5.1 – 5.2 Torsion Part 1	5-5, 5-11, 5-15	9
6	Feb 17 – T	5.3 – 5.4 Torsion Part 2	5-30, 5-33, 5-58	10
	Feb 19 – R	6.1 – 6.2 Load as Function of Position, Shear & Moment Diagrams	6-2, 6-5, 6-13	11
7	Feb 24 – T	6.3 – 6.4 Bending Deformation, Flexure Formula	6-47, 6-53, 6-73	12
	Feb 26 – R	6.6 Composite Beams	6-121, 6-122, 6-124	13
8	Mar 3 – T	**Exam 2 (20%)**		
	Mar 5 – R	7.1 – 7.2 The Shear Formula	7-1, 7-2, 7-3	14
9	Mar 10 – T	7.3 Shear Flow in Built-Up Members	7-33, 7-34, 7-35, 7-46	15
	Mar 12 – R	8.1 – 8.2 Combined Loadings	8-18, 8-26, 8-27	16
SB	Mar 16-20	*Spring Break – No Classes*		
10	Mar 24 – T	4.4 – 4.5 Indeterminate Axially Loaded Members & The Force Method	4-31, 4-39	17
	Mar 26 – R	5.5 Indeterminate Torque-Loaded Members	5-77, 5-78, 5-79	18
11	Mar 31 – T	9.1 – 9.3 Stress Transformation	9-1, 9-2	19
	Apr 2 – R	9.4 Mohr's Circle – Plane Stress	9-51, 9-53	20
	Apr 3 - F	*Easter Break – no office hours*		
12	Apr 7 – T	**Exam 3 (20%)**		
	Apr 9 – R	11.1 – 11.3 Beam Design	11-1, 11-5, 11-10	21
	Apr 10 – F	*Registration Opens for Spring & Summer Classes*		
13	Apr 14 – T	13.1 – 13.3 Column Design	13-2, 13-3, 13-10	22
	Apr 16 – R	12.1 – 12.2 Elastic Curve, Slope & Displacement by Integration	12-5, 12-9	23
14	Apr 21 – T	12.5 Method of Superposition	12-83, 12-85, 12-86	24
	Apr 23 – R	*No Class – Instructor at NASCC: The Steel Conference*		
15	Apr 28 – T	12.6 – 12.7 Statically Indeterminate Beams & Shafts - Integration	12-99, 12-102	25
	Apr 30 – R	12.9 Statically Indeterminate Beams & Shafts - Superposition *– Last Day to Drop a Class*	12-117, 12-119	26
16	May 5 – T 5:00–7:00 pm	**Final Exam (20%)**		

Note: The instructor reserves the right to modify the course syllabus and schedule, as well as notify students of any changes, at any point during the semester.