

**EGM 3520 MECHANICS OF MATERIALS FALL 2022**

<u>Date</u>	<u>Topics</u>	<u>Sections Covered</u>	<u>Homework Collected</u>
1/9	Statics review	Statics Review, 1.1	-----
1/11	Stress	1.1, 1.2	
1/13	Stress components	1.3, 1.4	HW1: 1.7, 1.10, +1*
1/16	-----	Dr. <i>MLK Day Holiday</i> -----	
1/18	Design considerations	1.5 <b><u>Quiz 1</u></b>	HW 2: 1.32, 1.35 +1
1/20	Strain	2.1	HW 3: 1.43, 1.45, 1.55, +1
1/23	Axial deformation	2.1	HW 4: 2.3, 2.14, 2.19, +1
1/25	Statically indeterminate	2.2	HW 5: 2.25, 2.27, +1
1/27	Temperature effects	2.3	HW 6: 2.33, 2.39, +1
1/30	3D Hooke's Law	2.4-2.8	HW 7: 2.47, 2.51, +1
2/1	3D Hooke's Law	2.4-2.8 <b><u>Quiz 2</u></b>	HW 8: 2.65, 2.68, +1
2/3	Stress concentrations	2.10, 2.11	HW 9: 2.70, 2.77, +1
2/6	Torsional stresses	3.1	HW 10: 2.95, 2.97, +1
2/8	Review, Chapters 1-3	<b><u>Exam 1</u></b>	-----
2/10	Gears & statically ind.	3.2, 3.3	HW 11: 3.10, 3.17, +1
2/13	Design of shafts	3.4-3.6	HW 12: 3.36, 3.41, +1
2/15	Pure bending	4.1, 4.2	HW 13: 3.70, 3.74, +1
2/17	Bending deformation	4.2, 4.3	HW 14: 4.10, 4.11, +1
2/20	Eccentric Loading	4.7	HW 15: 4.9, 4.16, +1
2/22	Beam Bending	5.1 <b><u>Quiz 3</u></b>	HW 16: 4.106, 4.115, +1
2/24	V and M diagrams	5.2	HW 17: 5.4, 5.9, +1
2/27	Design of beams	5.3	HW 18: 5.52, 5.59, +1
3/1	Shear stresses in beams	6.1	HW 19: 5.69, 5.76, +1
3/3	Shear flow in beams	6.2	HW 20: 6.4, 6.7, +1
3/6	Thin-walled members	6.3, 6.4	HW 21: 6.15, 6.23, +1
3/8	Stress transformations	7.1 <b><u>Quiz 4</u></b>	HW 22: 6.30, 6.40, +1
3/10	Mohr's circle	7.2 - 7.4	HW 23: 7.7, 7.14, +1
3/11 -3/19		SPRING BREAK	
3/20	Mohr's circle	7.2 - 7.4	HW 24: 7.31, 7.41, +1
3/22	Review Chapters 4-6	<b><u>Exam 2</u></b>	
3/24	Failure criteria	7.5	-----
3/27	Failure criteria	7.5	-----
3/29	Pressure vessels, plane strain	7.6, 7.7	HW 25: 7.83, 7.88, 7.96
3/31	Strain transformation	7.8	HW 26: 7.100, 7.109, 7.115
4/3	Strain Rosettes	7.9	HW 27: 7.137, 7.145, +1
4/5	Combined loading	8.1 <b><u>Quiz 5</u></b>	HW 28: 7.144, 7.145, +1
4/7	Combined loading	8.3	HW 29: 8.16, 8.19, +1
4/10	Combined loading	8.3	HW 30: 8.37, 8.38, +1
4/12	Beam deflections	9.1	HW 31: 8.43, 8.47, +1
4/14	Statically indeter. beams	9.2	HW 32: 9.2, 9.10, +1
4/17	Singularity functions	9.3	HW 33: 9.20, 9.21, +1
4/19	Superposition	9.4 <b><u>Quiz 6</u></b>	HW 34: 9.46, 9.53, +1
4/21	Column buckling	10.1	HW 35: 9.66, 9.89, +1
4/24	Review		
4/26	Review		

**Exams 1 and 2**: 8:20 – 10:10 pm (location to be announced).

**Final Exam**: Per Registrar's office (<https://registrar.ufl.edu/courses/final-exam>) on **05/04/2023 Thursday 12:30 – 2:30 pm** in the classroom

\*all +1 problems will be posted on Canvas