Machine Design – ME316 Fall 2018

Required Text: Machine Design, 5th edition, Robert L. Norton, Pearson Prentice Hall 2014

Week	Topics	Sections	Assignments
1	Kinematics and Load Determination	3-9 through 3-17	2-1,2-4,2-5,2-13,2-15 3-1, 3-4, 3-5, 3-10, 3-17, 3-7,3-8, 3-11, 3-15, 3-21,3-22
2	Stress, Strain, and Deflection	4-1 through 4-17	4-3, 4-4, 4-7, 4-8,4-17,4-18, 4-19, 4-21, 4-22, 4-30a, 4-53, 4-67
3	Static Failure Theories	5-1 and 5-2	5-1a,c,e, and j
4	Static Failure Theories Cont.	5-1 and 5-2	5-3, 5-4, 5-7, 5-8, 5-10, 5-11, 5-17, 5-22, 5-49, 5-54
5	Fatigue Failure Theories	6-4 through 6-12	6-1b, c, and h, 6-2b, 6-3, 6-4a, 6-5a, 6-7, 6-20, 6-33a, 6-37,6-54, 6-55, 6-56, 6-57
6	**Exam 1** Fatigue Cont.	6-4 through 6-12	6-19, 6-30, 6-34a, 6-38, 6-42
7	Shafts Keys and Couplings	10-2 through 10-8, 10-11, 10-12	10-1a, 10-9a, 10-11a, 10-31a.
8	Bearings and Lubrication	11-1 through 11-5, 11-18 through 11-11	11-3, 17a, 44, and 45
9	Surface Failure	7.2 to 7.5; 7.7 to 7-9, and 7-11, 7-13	7-2, 7-7, 7-13, 7-14, 7-16, 7-19, 7-24, 7-30
10	**Exam 2** Screws and Fasteners	15-1 through 15-7	15-1, 2, 5, 9
11	Spur, Helical, Bevel, and Worm Gears	12-1 through 12-9 13-1 through 13-3	12-1, 14, 16, 75
12	Spring Design	14-1 through 14-7, 14-9	14-1, 11, 14, 17, 47
13	Weldments	16-1 through 16-6	16-1,3, 5, 7
14	Clutches and Brakes	17-1 thru 17-6	17-1,7, 12, 35
15	**Final Exam**		