

Spring 2024

ME 316-004, 102: Machine Design

Harry Kountouras

Follow this and additional works at: <https://digitalcommons.njit.edu/mie-syllabi>

Recommended Citation

Kountouras, Harry, "ME 316-004, 102: Machine Design" (2024). *Mechanical and Industrial Engineering Syllabi*. 520.

<https://digitalcommons.njit.edu/mie-syllabi/520>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Mechanical and Industrial Engineering Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact digitalcommons@njit.edu.

ME 316 MACHINE DESIGN

Required Text: Design of Machine Elements, 8th Edition M.F. Spots etal, Pearson 2004

Week	Topics	Sections	Assignments
1	Fundamental Principles	1-1 through 1-10	1.1, 1.10, 1.21, 1.91, 1.93
2	Working Stresses and Failure Theories	2-1 through 2-6	2.5, 2.12, 2.25, 2.71 ↓ 2.28
3	Design of Shafts	3-1 through 3-9	3.1, 3.10, 3.22, 3.42
4	Springs	4-1 through 4-12, 4-17	4.1, 4.4, 4.9, 4.10, 4.12
5	Screws	5-1 through 5-8	5.2, 5.3, 5.4, 5.16
6	Exam 1 Belts, Clutches, Brakes and Chains	6-1 through 6-8	6.1, 6.3, 6.8, 6.10, 6.13
7	Belts, Clutches, Brakes and Chains (cont.)	6-9 through 6.18	6.19, 6.21, 6.30
8	Welded and Riveted Connections	7-1 through 7-9	7.1, 7.2, 7.8
9	Welded and Riveted Connections (cont.)	7-10 through 7-13	7.15, 7.17, 7.19, 7.27 8.5 ↑
10	Lubrication	8-1 through 8-11	8.1, 8.3, 8.9
11	Exam 2 Ball and Roller Bearings	9-1 through 9-9	9.1, 9.6, 9.9, 9.12, 9.19
12	Spur Gears	10-1 through 10-7	10.1, 10.3, 10.4, 10.7
13	Helical, Bevel and Worm Gears	11-1 through 11-15	11.12, 11.16, 11.21
14	Miscellaneous Machine Elements	12-1 through 12-8	12.5, 12.19, 12.21, 12.26
15	Review/Final Exam		