

# ME305

# Design of Machine Elements

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Credit: 4

**Approval: Approved in 3rd Senate**

Prerequisite: Mechanics of Solids

Students intended for:

Elective or Core: Core

Semester: Odd/Even

**Course objective:** To introduce the basic principles of mechanical design and their applications.

**Course content:**

- Variable Loading (12 Lectures)
- Shafts, keys, couplings (7 Lectures)
- Threaded fasteners and Power Screws (6 Lectures)
- Permanent fasteners (5 Lectures)
- Gears (7 Lectures)
- Clutches & Brakes (6 Lectures)
- Belt & Chain Drives (6 Lectures)
- Bearings (6 Lectures)

**Suggested Books:**

1. Shigley, J.E., and Mischke, C.R., Mechanical Engineering Design, Tata McGraw-Hill.
2. Robert L. Norton, Machine Design: An Integrated Approach, Pearson.
3. Juvinall, R. C., and Marshek, K. M., Fundamentals of Machine Component Design, 4th Ed., John Wiley & Sons.