

Year & Sem: E2S1	Course Code: ME2102	Course Name: Design of Machine Elements I	No. of Credits: 4	L 2	T&PS 2	P 0
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UNIT I: General considerations & procedure of Machine Design: General Principle of Machine Design;

UNIT II: Common engineering materials & their mechanical properties, factor of safety, strength, rigidity, fracture, wear, creep, fatigue, stress concentration.

UNIT III: Design principle of machine elements: Rivets, welded joint.

UNIT IV: Design of Cotter joint, knuckle joint etc.

UNIT V: Design of power screw, Design of Shaft, keys

UNIT VI: Design of shaft Couplings, spring design.

Reference Books:

1. J. E. Shigley, *Mechanical Engineering Design*.
2. M. F. Spotts, *Design of Machine Elements*

Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.

Video Lectures (Web Links):

- 1.
- 2.

Study Materials (Web Links):

- 1.
- 2.

Problems & Solutions (Web Links):

- 1.
- 2.

Assignments (Web Links):

- 1.
- 2.