Course Title	Course Code	Credit Hours
Mechanics of Materials-I	ME-210	3 – 0

Text Book:

- James M. Gere, Barry J. Goodno,Mechanics of Materials

Reference Books:

- Ferdinand P. Beer &Russel Johnston Jr.,Mechanics of Materials ,McGraw-Hill
- R. C. Hibbeler,Mechanics of Materials
- P. P. Benham& R. J. Crawford,Mechanics of Engineering Materials, Longman
- Popov,Mechanics of Materials.
- W. A. Nashi, Static andMechanics of Materials, Schaum's outline series New York.

Course Objective:

Develop a fundamental understanding of stress, strain, and deformation behaviors in materials crucial for engineering design and analysis.

Course Outline:

- Mechanical properties of materials; tensile, compressive and shear stress & strain • Moment of inertia
- Axial loading, Hooke's law, stress strain relationship • Thermal stresses
- Torsion of circular bars,
- Pure bending of beams, shear stresses in beams • Shearing force and bending moment
- Beam deflection using various methods
- Residual stresses and stress concentration in various engineering applications • Analysis of statically indeterminate problems,
- Thin and thick curved bars,
- Thin walled pressure vessels.

Description	Percentage Weightage (%)
Assignments	05-10%
Quizzes	10-15%
Mid Semester Exams	30-40%
End Semester **ASSESSMENTS** Exam	40-50%