Course Title	Course Code	Credits Hour
Mechanics of material-II	ME-237	2+1

Textbooks:

- E J Hearn, Mechanics of Materials Volume 1 & 2

Reference Books:

- Ferdinand P. Beer & Russel Johnston Jr., Mechanics of Materials, McGraw-Hill 3. Popov, Mechanics of Materials
- P. P. Benham & R. J. Crawford, Mechanics of Engineering Materials, Longman Sci& Tech 5. Boresi, Arthur P., Schmidt, Richard J. Sidebottom, Omar M.,Advanced Mechanics of
- Materials
- R. C. Hibbeler, Mechanics of Materials
- Andrew Pytel and F. L. Singer, Strength of Materials
- W. F. Riley, L. D. Sturges and D. H. Morris, Mechanics of Materials.
- W. A. Nashi, Statics and Mechanics of Materials, Schaum's outline series New York.

Course Objective:

Mechanics of Materials II aims to deepen students' skills in analyzing complex stress and strain, applying failure theories, and using computational tools for advanced structural design and optimization.

Course Outline:

- Analysis of stress and strain in two and three dimensions • Principal stresses and strains
- Mohr's circle for stress and strain • Thick-walled pressure vessels
- Symmetrical and asymmetrical loading • Introduction to fracture mechanics
- Impact loading
- Fatigue and creep • Virtual work
- Theories of elastic failure • Theory of columns

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