

## **0402226 Strength of Materials**

(3 Credit hours, Prerequisite 0403200 Statics)

The course deals with the behavior of solid bodies subjected to various types of loading include axially loaded members, shafts in torsion, thin cylinders, beams, and columns, as well as structures that are assemblies of these components. Topics of the course include: Fundamental concepts, Simple stresses and strain, Bending moment and shearing force, Design of beams, Torsion of shafts, Compound stresses (Principal stress and Mohr's Circle for plane stresses and Spherical and cylindrical pressure vessels), Buckling and stability, Mechanical Engineering / General Mechanics Page ( 17 ) Principle of virtual work and energy methods, Statically indeterminate simple structure and thermal stresses