

**Course Name:**

Strength of Materials and Structures Laboratory

**Course Number:**

20101

**Credit:**

1

**Prerequisite:**

Solid Mechanics I

**Course Description (Objectives):**

In this course, various tests are conducted to study strength and behavior of materials and structures. Loading and data acquisition using measurement tools are introduced. Test set-up and boundary conditions in form of simple and rigid supports will be demonstrated. The experiments show various types of stress in materials and structures. In general, this course connects theory with experiments and presents application aspects of materials and structures.

**List of experiments:**

- Hook's Law
- Cantilever Beam
- Maxwell's Law
- Torsion
- Buckling of Column
- Shear Center
- Rectangular Frame Displacement
- Suspension Bridge
- Tensile Test

**References:**

- Guidelines for Experiments
- Mechanics of Materials and structural Analysis Books