II Year - I Semester **L T P C**

20CE3101 **0 0 3 1.5**

STRENGTH OF MATERIALS LAB

Course Outcomes:

At the end of the course the student will be able to:

- Demonstrate the basic knowledge of the mechanical properties of materials
- Calculate the hardness of the given steel specimen and compressive strength of building materials
- Determine the stiffness and deflection of the given spring material
- Compute the toughness of the given steel specimen
- Determine the shear strength of the steel specimen by conducting the shear test

List of Experiments

1. Tension test on Steel bar
2. Bending test on (Steel / Wood) Cantilever beam.
3. Bending test on simple support beam.
4. Torsion test
5. Hardness test
6. Spring test
7. Compression test on wood or concrete
8. Impact test
9. Shear test
10. Continuous beam – deflection test.
11. Compression test on Bricks

List of Major Equipment:

1. UTM for conducting tension test on rods
2. Steel beam for flexure test
3. Wooden beam for flexure test
4. Torsion testing machine
5. Brinell's / Rock well's hardness testing machine
6. Setup for spring tests
7. Compression testing machine
8. Izod Impact machine
9. Shear testing machine
10. Continuous beam setup