STRENGTH OF MATERIALS LAB

Course Code:	L	T	P	C
	0	0	3	1.5

Course Outcomes:

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

CO1: Demonstrate the basic knowledge of the mechanical properties of materials (L2)

CO2: Calculate the hardness of the given steel specimen (L3)

CO3: Determine the stiffness and deflection of the given spring material (L3)

CO4: Compute the toughness of the given steel specimen (L3)

CO5: Determine the shear strength of the steel specimen by conducting the shear test (L3)

(Any 12 out of 14 experiments)

LIST OF EXPERIMENTS:

1. Tension test on mild steel and HYSD bars.
2. Bending test on (Steel / Wood) Cantilever beam.
3. Bending test on simply supported beam.
4. Torsion test.
5. Hardness test.
6. Spring stiffness test.
7. Compression test on wood.
8. Impact test.
9. Shear test.
10. Verification of Maxwell's Reciprocal theorem on beams.
11. Measurement of strain using Electrical Resistance Strain gauges.
12. Perform Compression test on Bricks.
13. Understanding of failure planes.
14. Demonstration of buckling of struts.

Reference:

1. Hibbler R. C., "Mechanics of Materials", 10th Edition, Pearson, 2017.