Material Testing Laboratory			
Hours/Week L-T-P :	0-0-3	Credits:	1.5
Course Type :	Laboratory Course	Course Code:	MS2501

Course Objectives:

1. Determine the tensile strength/ compressive strength/ bending strength of materials by Universal Testing Machine
2. Identify the Strain measurement using Strain Gauge
3. Apply the concept of estimation of Spring Constant under Tension and Compression
4. Analyze the Brinnel, Rockwell and Vickers Hardness strength of materials

Course Outcomes:
Upon completion of this course, the students will be able to:

CO 1 Determine the tensile strength/ compressive strength/ bending strength of materials by Universal Testing Machine.
CO2 Identify the Strain measurement using Strain Gauge.
CO3 Apply the concept of estimation of Spring Constant under Tension and Compression.
CO4 Analyze the Brinnel, Rockwell and Vickers Hardness strength of materials.

Prerequisites: Mechanics of Material

List of Experiments:(Any Eight)

1. Study of microstructure of steel specimen.
2. Determination of tensile strength/ compressive strength/ bending strength of materials by Universal Testing Machine
3. Double shear test in Universal Testing Machine
4. Determination of Impact strength of material (Charpy and Izod)
5. Determination of Hardness strength of materials (Brinnel, Rockwell andVickers)
6. Determination of Rigidity modulus of material
7. Determination of Fatigue strength of material
8. Estimation of Spring Constant under Tension and Compression.
9. Strain measurement using Strain Gauge.
10. Stress measurement using strain rosette

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	2	2	2	-	1	1	2	1	1	1	2	3	2	2
CO2	3	2	1	2	-	1	1	2	3	2	1	2	2	2	2
CO3	3	2	2	2	-	2	1	2	2	1	1	2	2	2	1
CO4	2	2	1	2	-	2	1	1	2	2	1	2	2	2	1