



CDL State Institute of Engineering and Technology
Panniwala Mota (Sirsa)
Mechanical Engineering Department
MECHANICS OF SOLIDS-I (LAB)

General Course Information

Course Code: PCC-ME201-P Course Category: Professional Core Course Course Credits: 1.0 Mode: Practical Contact Hours: 02 hours per week	Course Assessment Methods (internal: 30; external: 70): Internal practical evaluation is to be done by the course coordinator. The end semester practical examination will be conducted jointly by external and internal examiners.
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Course Outcomes

Sr. No.	Course Outcome	RBT Level
CO1	Students will be able to perform tensile test, compression test, bending test, shear test, hardness test, impact test and torsion test to determine mechanical properties such as strength, hardness, impact strength and toughness of ductile and brittle materials.	L1
CO2	Students will be able to predict the behavior of ductile and brittle materials under different types of loading.	L2
CO3	Students will be able to Interpret the experimental results for material selection in engineering applications.	L3
CO4	Students will be able to compare the materials and utilize the appropriate materials in design considering engineering properties, sustainability, cost and weight.	L4

Experiments in MOS Lab

1. To study the Universal Testing Machine (UTM) and perform the tensile test on the given specimen (Mild steel and Cast Iron).
2. To perform compression test on UTM on the given specimen (Mild steel and Cast Iron).
3. To perform bending tests on UTM on the given specimen.
4. To perform the shear test on UTM on the given specimen.
5. To perform the torsion test on the given specimen (Mild steel and Cast Iron).
6. To perform the Rockwell hardness test.
7. To perform the Brinell hardness test.
8. To perform the Vickers hardness test.



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9. To perform the Impact tests (Izod & Charpy).

10. To perform the Erichsen cupping sheet metal test.

Course Articulation Matrix (CO to PO/PSO Mapping)

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

1 :(Slight /Low), 2:(Moderate/Medium), 3 :(Substantial/High)