



JIS COLLEGE OF ENGINEERING
DEPARTMENT OF MECHANICAL ENGINEERING

Strength of Material Laboratory

Details of Laboratory:

Lab in-charge: Mr. Anirban Sarkar

Strength of Material Laboratory is a well equipped laboratory which provides ideas on evaluating mechanical properties of a given specimen or structure. This laboratory is scheduled for 3rd semester Mechanical engineering students & 5th semester Civil engineering students. Apart from curriculum, some additional experimental setups are there which helps the students to enhance their knowledge. Students also get opportunity to implement their ideas through various application oriented micro projects.

Major Equipments:

- 1 Hardness Testing Machine
- 2 Universal Testing Machine
- 3 Impact Testing Machine
- 4 Torsion Testing Machine

List of Experiments:

Sl.	Description
1.	To determine the hardness of the given Specimen using Rockwell hardness test.
2.	To determine the hardness of the given specimen using Brinell hardness test.
3.	To determine the Impact toughness (strain energy) through Izod test
4.	To determine the Impact toughness (strain energy) through Charpy test
5.	To determine the tensile strength of a given specimen.
6.	To find the modulus of rigidity of a given specimen.

Lab Occupancy

JIS College of Engineering
Lecture and Lab schedule for odd semester 2017-2018 STREAM/BATCH: ME-2A
B.Tech - 2nd Year classes -Traditional Classes: 317(Main)

DAYS	10 am to 11 am	11 am to 12 am	12 pm to 1pm	1 to 2pm	2 to 3pm	3 to 4 pm	4 to 5 pm	5 to 6 pm
MON				Recess				
	ME391Gr.2A(2)[BJ+TS]							
TUE								
WED								
THU								
FRI								
					ME391Gr.2A(1)[BJ+TP]			

Subjects: ME 301- Applied Thermodynamics , ME 302- Strength of Materials, ME 303- Fluid Mechanics, EE(ME)301- Electrical Machines, M(ME) 301- Mathematics- III, PH(ME) 301- Physics- II, ME 391- Strength of Materials Lab, ME 392- Machine Drawing- I, EE(ME)391- Electrical Machines Lab, PH(ME)391- Physics-II Lab, MC 381- Technical Skill Development

SG- Dr. Sandip Ghosh, ARS-Dr. Anal Ranjan Sengupta, SP-Dr. Suresh Prasad,DS- Mr. Dipak Shaw TP-Ms.Thia Pal, BJ-Mr. Bikash Joadder, TS-Mr. Tanmoy Sarkar DM- Mr .Dhiraj Mondal, D Majumder, RB - Mr. Rupak Bhattacharjee, MD- Mr. Mrinmoy Dum,SSR-Dr.Subhamoy Singha Roy,PR-Mr.Partha Roy

Routine Coordinator
(Prof. P. Biswas)

HOD
(Prof. (Dr.) S. Ghosh)

Principal
(Prof. (Dr.) M. R. Dave)

JIS College of Engineering
Lecture and Lab schedule for odd semester 2017-2018 STREAM/BATCH: ME-2B
B.Tech - 2nd Year classes –Room No: 419 (Main)

DAYS	10 am to 11 am	11 am to 12 am	12 pm to 1pm	1 to 2pm	2 to 3pm	3 to 4 pm	4 to 5 pm	5 to 6 pm	
MON				Recess		ME391Gr.2B(2)[TP+TS]			
TUE									
WED									
THU									
	ME 391,Gr.ME2B(1)[TP+TS]								
FRI									

Subjects: ME 301- Applied Thermodynamics , ME 302- Strength of Materials, ME 303- Fluid Mechanics, EE(ME)301- Electrical Machines, M(ME) 301- Mathematics- III, PH(ME) 301- Physics- II, ME 391- Strength Of Materials Lab, ME 392- Machine Drawing- I, EE(ME)391- Electrical Machines Lab, PH(ME)391- Physics-II Lab, MC 381- Technical Skill Development.

Faculty name: SG- Dr. Sandip Ghosh, ARS-Dr. Anal Ranjan Sengupta, SP-Dr. Suresh Prasad,DS- Mr. Dipak Shaw TP-Ms.Thia Pal, BJ-Mr. Bikash Joadder, TS-Mr. Tanmoy Sarkar DM- Mr .Dhiraj Mondal, D Majumder, RB - Mr. Rupak Bhattacharjee, MD- Mr. Mrinmoy Dum,SD-Mr.Sudip Das,SB-Mrs.Sagata Bhattacharjee

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Name of the Course: Strength of Material Lab

Course Code: ME 391

Pre requisites: Engineering Mechanics

Course Objective: To make students learn evaluating mechanical properties of a given specimen or structure.

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

ME391.1 Analyze the tensile and compressive strength of a specimen for applying in a practical design based project work.

ME391.2 Determine the hardness, impact strength, fatigue strength to analyze the application of a specific material for a given design requirements for different loading conditions of structures or machines.

ME391.3 Understanding the bending in beams and to analyze the bending stresses which further build the foundation of using modern analysis software.

ME391.4 Evaluate the capacity of a material to withstand torsional stresses for a safe and sustainable design of machine elements.

Course Articulation Matrix.

CO Codes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2	PSO 3
ME391													2	1	2
.1	1	-	3	-	-	-	-	-	3	-	2	-			
ME391													2	1	2
.2	1	-	2	-	-	-	-	-	2	-	2	-			
ME391													3	2	2
.3	1	-	2	-	3	1	-	1	2	-	2	-			
ME391													1	2	1
.4	1	2	3	-	-	-	-	-	2	-	2	-			
Avg.	1	2	2.5	-	3	1		1	2.2 5	-	2	-	2	1.5	1.7 5

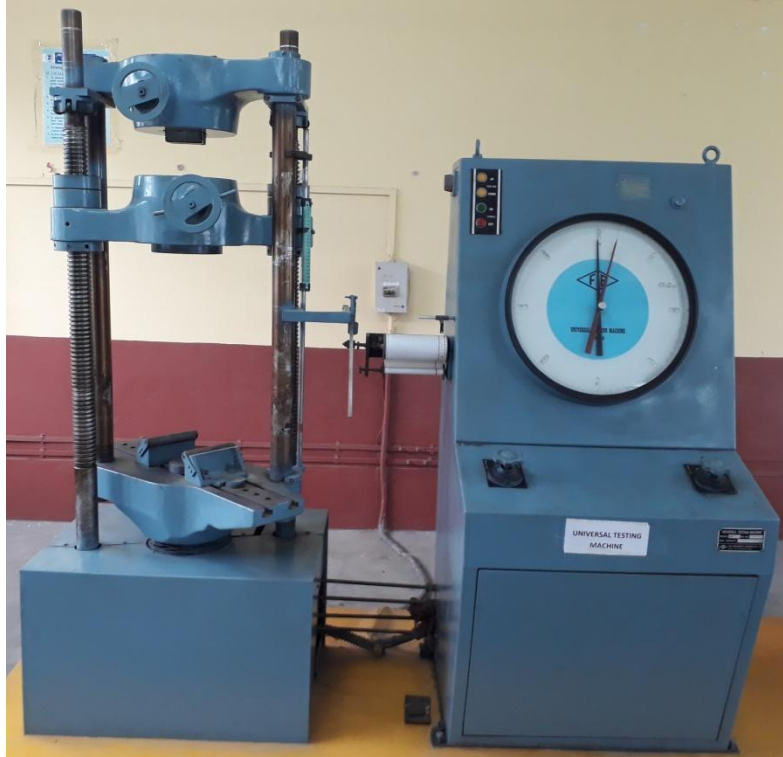
Apparatus Details:



Hardness Tester

MANUFACTURED BY: SAROG ENGINEERING UDYOG PVT. LTD. (MAHARASTHRA, INDIA)

MODEL: RAB 250, SL .NO. 1111084



Universal Testing Machine

**MANUFACTURED BY: FUEL INSTRUMENTS AND ENGINEERS PVT. LTD.
(MAHARASTRA,INDIA)**

MODEL: UTN 40, SR .NO. 8/2011-4741



Torsion Testing Machine

**MANUFACTURED BY: FUEL INSTRUMENTS AND ENGINEERS PVT. LTD.
(MAHARASTRA,INDIA)**

MODEL: TT-6, SR .NO. 10/2011-4807



Impact Testing Machine

**MANUFACTURED BY: FUEL INSTRUMENTS AND ENGINEERS PVT. LTD.
(MAHARASTRA,INDIA)**

MODEL: IT-30, SR .NO. 10/2011-41040