

Machine Drawing I

Details of Laboratory:

Lab in-charge: Mr. Munshi R. Islam

Machine Drawing I Laboratory is a well equipped laboratory. The objective of this lab is to practically demonstrate the failure criteria of different mechanical elements or bodies. This laboratory is scheduled for 3rd semester Mechanical 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 Drawing sheet.
- 2 Drawing board.
- 3 Mini drafter.
- 4 Eraser.
- 5 Pencils.
- 6 Protractor.
7. French curves.
8. T Scale

List of Experiments.

S1	Description
1.	Schematic product symbols for standard components in mechanical welding symbols and pipe joints.
2.	Orthographic projections of machine elements different sectional views- full, auxiliary sections Isometric projection of components
3.	Assembly and detailed drawings of a mechanical assembly i) Plummer block
4.	Assembly and detailed drawings of a mechanical assembly ii) Tool head of a shaping machine
5.	Assembly and detailed drawings of a mechanical assembly iii) Tailstock of a lathe
6.	Assembly and detailed drawings of a mechanical assembly iv) Welded pipe joints indicating work parts before welding

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					
TUE									
WED									
THU	ME 392Gr.ME2A(1)[SG+DS]								
FRI					ME 392Gr.ME2A(2) [ARS+DM]				

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				
	ME 392Gr.ME2B(2)[SP]					ME 392Gr.ME2B(1)[DM+DS]		
TUE								
WED								
THU								
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: Machine Drawing I

Course Code: ME 392

Pre requisites: Basic knowledge of Machine elements, engineering drawing/drafting

Course Objectives: The objective of this lab is to practically demonstrate the failure criteria of different mechanical elements or bodies.

Course Outcomes:

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

ME392.1 Demonstrate the isometric view of a given three dimensional object/part.

ME392.2 Apply the concept of orthogonal projection of a solid body and assemble drawing using part drawings.

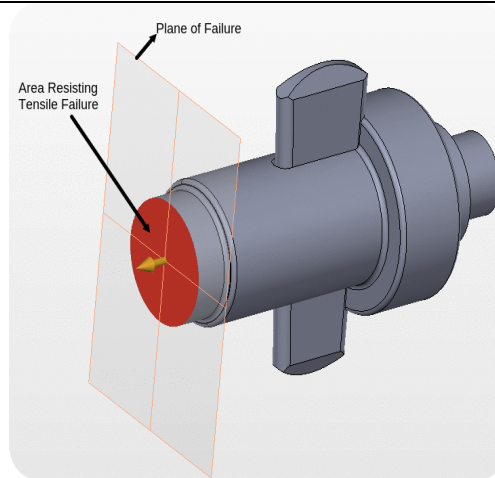
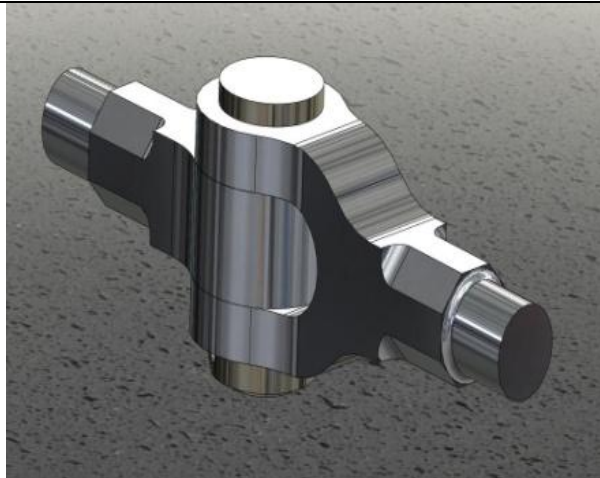
ME392.3 Evaluate various materials and Mechanical components conventionally.

ME392.4 Classify the shape and structure of different types of screws, keys and Couplings.

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
ME39 2.1	1	-	3	-	-	-	-	-	3	-	2	-	2		
ME39 2.2	1	-	2	-	-	-	-	-	2	-	2	-		1	
ME39 2.3	1	-	2	-	3	1	-	1	2	-	2	-	2		2
ME39 2.4	1	2	3	-	-		-	-	2	-	2	-		2	
Avrg.	1	2	2.5		3	1		1	2.25		2		2	1.5	2

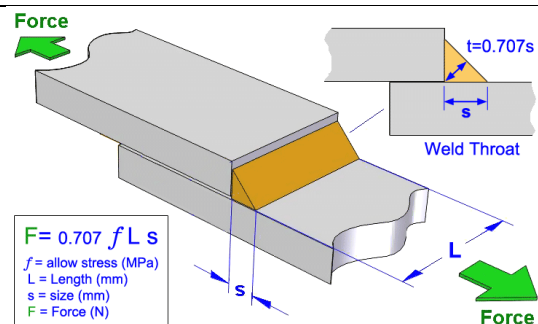
Apparatus Used.



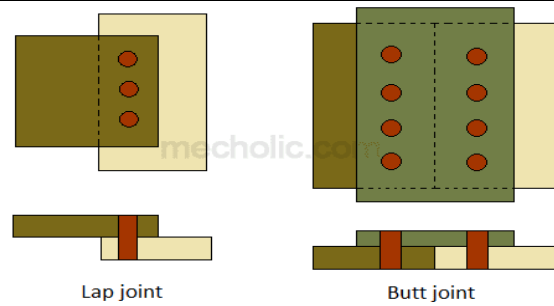
KNUCKLEJOINT/COTTER JOINT



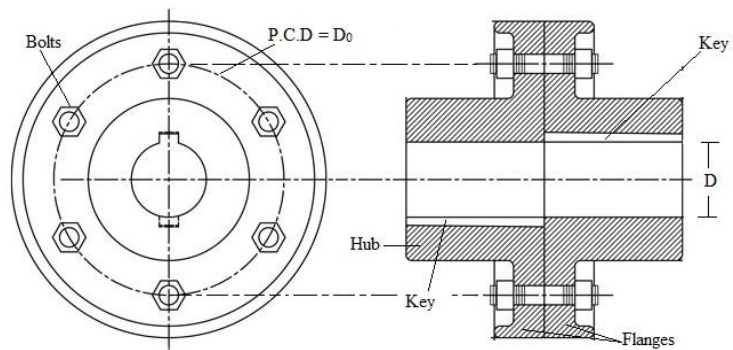
BOLTED BRACKET/TURN BUCKLE



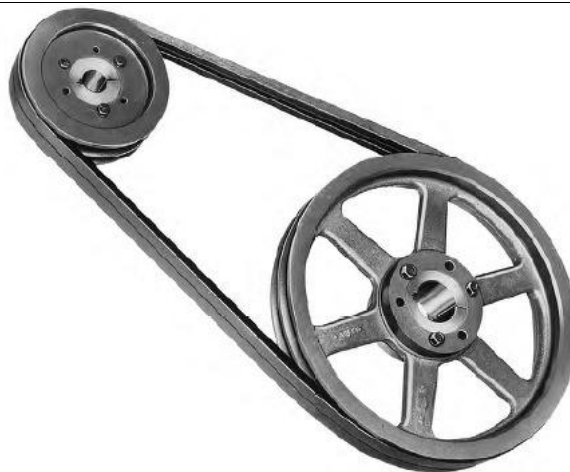
WELDED JOINT



RIVETED JOINT



SHAFT COUPLING



BELT PULLEY DRIVE



HELICAL COMPRESSION SPRING/LEAF SPRING