

# Machine Drawing-II(CAD Lab)

# Details of Laboratory.

# Lab in-charge. Mr. Munshi R. Islam

Manufacturing Technology Laboratory is a well equipped laboratory which provides ideas on the practical knowledge to develop the capability of modeling important machine components using CAD. This laboratory is scheduled for 4<sup>th</sup> 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.

| Sl. No. | Description   |
|---------|---|
| 1       | Assembly and detailed drawings of a mechanical assembly:              |
|         | A simple gear box   |
| 2       | Assembly and detailed drawings of a Flange Coupling                   |
| 3       | Welded bracket joined by stud bolt on to a structure                  |
| 4       | Practicing AutoCAD or similar graphics software                       |
| 5       | Making orthographic projections of different components using AutoCAD |
| 6       | Making isometric projections of different components using AutoCAD    |
| 7       | Assembly and detailed drawings of a mechanical assembly:              |
|         | A simple gear box   |
| 8       | Assembly and detailed drawings of a Flange Coupling                   |

## Lab Occupancy

#### JIS College of Engineering

#### Lecture and Lab schedule for even semester 2017-2018 STREAM/BATCH: ME- 2A

B.Tech 2<sup>nd</sup> Year classes Room No. 317

| DAYS  | 10 am to 11    | 11 am to 12 | 12 pm to | 1 to | 2 to                  | 3 to 4 | 4 to 5 | 5 to 6 |  |  |
|-------|----------------|-------------|----------|------|-----------------------|--------|--------|--------|--|--|
| Ditto | am             | am          | 1pm      | 2pm  | 3pm                   | pm     | pm     | pm     |  |  |
| MON   |                |             |          |      |                       |        |        |        |  |  |
|       |                |             |          | В    |                       |        |        |        |  |  |
| TUE   |                |             |          | R    |                       |        |        |        |  |  |
|       |                |             |          | E    |                       |        |        |        |  |  |
| WED   | ME 494,Gr.ME2A | A(2)[AM]    |          | A    |                       |        |        |        |  |  |
|       |                |             |          | 1    |                       |        |        |        |  |  |
| THU   |                |             |          | K    |                       |        |        |        |  |  |
| FRI   |                |             |          |      | ME 494,Gr.ME2A(1)[AM] |        |        |        |  |  |

Subjects. ME 401- Fluid Machinery, ME 402- Primary Manufacturing Process, ME 403- Engineering Materials, ME 404- Mechanisms ,M(ME)401- Numerical Methods, HU 401- Environmental Science, ME 491- Fluid Mechanics & Hydraulic Machines Lab, ME 492- Manufacturing Technology Lab, ME 493- Material Testing Lab, ME 494- Machine Drawing-II, M(ME) 491- Numerical Methods Lab HU481- Technical Report Writing & Language Practice

Faculty name. SG-Dr. Sandip Ghosh,AM-Mr.Abhishek Mondal, MRI- Mr. Munshi Rasidul Islam,SM-Mr. Subrata Majumder DS-Mr.Dipak Shaw, DM-Debashis Majumder,PR-Partha Roy,SSR-Subhomay Singha Roy, TP- Mrs.Thia Paul, DM1-Mr.Dhiraj Mondal, AG-Mrs.Adrija Guha

Routine Coordinator HOD Principal (Prof. P. Biswas) (Prof. (Dr.) S. Ghosh) (Prof. (Dr.) M. R. Dave)

#### JIS College of Engineering

#### Lecture and Lab schedule for even semester 2017-2018 STREAM/BATCH. ME-2B

#### B.Tech- 2<sup>nd Year</sup> classes - Room No. 419

| DAYS     | 10 am to 11  | 11 am to 12 | 12 pm to | 1 to | 2 to | 3 to 4   | 4 to 5     | 5 to 6 |
|----------|--------------|-------------|----------|------|------|----------|------------|--------|
| DATE     | am           | am          | 1pm      | 2pm  | 3pm  | pm       | pm         | pm     |
| MON      |              |             |          |      |      |          |            |        |
| WICH     |              |             |          |      |      |          |            |        |
|          |              |             |          | В    |      |          |            |        |
| TUE      |              |             |          | R    |      |          |            |        |
|          |              |             |          |      |      |          |            |        |
| WED      |              |             |          | Е    |      |          |            |        |
|          |              |             |          | A    |      |          |            |        |
| 777 77 7 |              |             |          |      |      |          |            |        |
| THU      |              |             |          | K    |      | ME 494,G | r.ME2B(1)[ | PB]    |
|          | ME 494,Gr.ME | 2B(2)[PB]   |          |      |      | I        |            |        |
| FRI      |              |             |          |      |      |          |            |        |

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Faculty name: SG-Dr. Sandip Ghosh,PB-Mr.Palash Biswas,AP-Mr.Arijit Patra, TP-Mrs.Thia Paul, MRI- Mr. Munshi Rasidul Islam, DS- Mr. Dipak Shaw DM-Debashis Majumder, PR-Partha Roy,SSR-Subhomay Singha Roy,TS-Mr.Tanmoy Sarkar, TP- Mrs.Thia Paul, DM1-Mr.Dhiraj Mondal, Mrs.Adrija Guha

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### Name of the Course: Machine Drawing-II

Course Code: ME 494

Pre requisite: Engineering Drawing.

**Course Objective**: To develop the capability of modeling important machine components using CAD.

#### Course Outcomes:

After successful completion of the course, the student would be able to

ME494.1 Run Computer Aided Drafting software like AutoCAD independently.

ME494.2 Model basic two dimensional objects, modify and dimension them to form more complex machine parts of engineering importance.

ME494.3 Understand geometric construction, Solid Modeling concepts and techniques.

ME494.4 Design three dimensional views of important machine parts and explore the plotting techniques for standard presentation.

#### Course Articulation Matrix.

| CO<br>Code<br>s | P<br>O1 | P<br>O2 | P<br>O3 | P<br>O4 | P<br>O5 | P<br>O6 | P<br>O7 | P<br>O8 | P<br>O9 | PO<br>10 | PO<br>11 | PO<br>12 | PS<br>O1 | PS<br>O2 | PS<br>O3 |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|
| ME49<br>4.1     | -       | 1       | 1       | -       | 3       | -       | -       | 1       | -       | 1        | -        | ı        | 2        | 1        | ı        |
| ME49<br>4.2     | -       | -       | 2       | -       | 3       | -       | -       | -       | -       | 1        | 1        | -        | 2        | -        | 1        |
| ME49<br>4.3     | -       | -       | 2       | -       | 3       | -       | -       | -       | -       | 1        | 2        | -        | 3        | -        | 2        |
| ME49<br>4.4     | -       | 1       | 2       | -       | 2       | -       | -       | 1       | -       | 1        | 2        | •        | 3        | 1        | 2        |
| Avg.            | -       | -       | 1.7     | -       | 2.7     | -       | -       | -       | -       | 1        | 1.6      | -        | 2.5      | -        | 1.6      |





CAD Lab