

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI – HYDERABAD CAMPUS**FIRST SEMESTER 2019-2020****Course Handout (Part II)****01/08/2019**

In addition to part-I (General Handout for all courses appended to the time table), this portion gives further specific details regarding the course.

Course No. : ME F215/ MF F215
Course Title : MECHANICAL ENGINEERING LABORATORY
Instructor-in-charge : AMIT KUMAR GUPTA
Team of Instructors : Amit Kumar Gupta, R Sujith, K Supradeepan, Chithajalu Kiran Sagar, Akhil Bhardwaj, Sunkara Prudhvi Raj, P Chennakesava Sai, Srinivasa Murali Kartheek S, K Monika, MD Abdul Wahed, Pavandatta Jadhav, B Sravya

1. Scope and Objective: The objective of this course is to expose the students to a broad knowledge of experimental methods and measurement techniques useful in Mechanical engineering. The course shall aim to train the student in the skill of operation of instruments and equipments. Testing of mechanical properties like tensile testing, hardness, impact, bending of beams, spring testing, basic fluid mechanics experiments like measurements of pressure, temperature, viscosity, flow measurement, basic electrical & electronics like experiments on diodes, rectifiers, OPAMPS, dc motors, transformers, induction and synchronous motors. (Reproduced from the bulletin)

2. Text Books / Manuals:

- I. Holman J.P., “Experimental Methods for Engineers,” Tata McGraw Hill, 7th ed., 2004.
- II. A Laboratory Manual pertaining to the experiment will be provided

3. Reference Books:

- III. Doebelin E.O. “Measurement Systems: Application and Design” TATA McGraw HILL, 5th ed. 2003
- IV. Modi P.N. and S.M Seth, “Hydraulics and Fluid Mechanics,” Standard Publishers, 12th ed. 1998.

4. List of Experiments:

This lab will have total 20 experiments in 4-cycles from the following four courses.

Cycle	Course	No. of Experiments	Lab Venue
A	Mechanics of Solids	5	Material Testing Lab (E-002)
B	Materials Science and Engineering	5	Material Testing Lab (E-002)
C	Fluid Mechanics	5	Hydraulic Machines Lab (E-122)
D	Electrical Sciences	5	Electrical Machines Lab (E-001)

Complete modalities of operation of the laboratory such as the exact titles of experiments, reports submission and evaluation methodology etc. shall be announced at the beginning of laboratory session.

5. Evaluation Scheme:

Component	Duration	Weightage (%)	Date & Time	Remarks
Regular lab experiments and viva		50	---	--
Cycle viva		20	---	---
Lab test and viva	2 hours	10	Before compre. exams.	CB
Final quiz	1 hour	20	Before compre. exams.	CB

6. Chamber consultation hours: To be announced in the class.

7. Notices: All notices concerning the course are displayed on **CMS** and **Material testing lab notice board**.

8. Make-up Policy: Make-up is strictly not entertained and may be considered only in the case of hospitalization with appropriate certification.

9. Academic Honesty and Integrity Policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

AMIT KUMAR GUPTA
Instructor-in-charge (ME F215)