BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
HYDERABAD CAMPUS
SECOND SEMESTER 2023-2024
COURSE HANDOUT (PART-II)

Date: 09-01-2024

In addition to part I (General handout for all courses appended to the timetable) this portion gives further details regarding the course.

Course No. : **PHY F110**

Course Title : **Physics Laboratory**

Instructor In charge : **Rahul Nigam**

Instructors Name :PrasantSamantray, Aiswarya N M, AsrarulHaque, Suvadip Das, Aprajitasrivastav, Swastik Bhattacharya, AnamikaAvinash Pathak, Suvadip Das, Kulkarni akshayavinash, ViswaKannan R K, AranyaBhutiBhattacherjee, Akhil U Nair, Rakesh kumarJha, Tanay Nag, Urjjarani Patel, Tanay Nag A, Gourab das, Subhash N. Karbelkar

1. **Aims and Learning Outcomes**:

Familiarize the students to the experimental methods in physics and also to integrate theoretical knowledge with practical experience. Students will learn operation of scientific equipment for collecting data from the online videos and do the analysis of collected data.

Learning outcomes:

- Identifying and quantifying sources of error in an experiment.
- Fitting experimental data to an expected theoretical expression.
- Error analysis.
- Use of logarithmic graph sheets.
- Usage of optical instruments such as microscopes and spectrometers, through online videos.

List of experiments

1. Coupled Pendulums
2. Katers pendulum
3. Combination of springs
4. Vibrating string
5. Moment of inertia of flywheel
6. Resonance of LCR circuit
7. Newton's Rings
8. Diffraction Grating 1
9. Diffraction Grating 2
10. Error Assignment

2. TEXT BOOK:

Lab manual (Soft copy), slides and videos
Reference: Relevant reference materials are specified in the lab manuals.

3. EVALUATION SCHEME:

EVALUATION COMPONENT	DURATION	WEIGHTAGE	
DAY TO DAY Performance	1 hour 50 min per class	30 %	
Lab test	1 hour	40%	
Compre	1.5 hours	30%	15/05 AN

4. DAY-TO-DAY PERFORMANCE FOR EACH LAB class:

ACTIVITY	**MARKS**
Active Participation in Lab (Discussion/quiz)	10
CALCULATION AND GRAPH (submission within 72 hours)	25
TOTAL	35

The total marks for day-to-day performance of the labs will be scaled down to the corresponding total marks mentioned in the first row of the previous table.

Students MUST submit the lab report in the specified format for each experiment within 72 hours of the class. Late submission will not be counted as SUBMISSION and therefore no marks would be awarded. Students are expected to read the allotted experiments from the manuals before attending the lab, so that they can actively take part in the discussion and answer the quiz.

5. MAKE-UP:
The schedule of the experiment is very strict: the students are expected to attend all the labs regularly. Make-up will be given only in case of hospitalization/other unavoidable technical issues. More than 2 make-up experiments will not be entertained.

6. NOTICE: Notices concerning this course will be displayed on CMS and the google classroom.
7.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.

Instructor-In-Charge
PHY F110