

## **PHY-391 Laboratory I**

**Credit Hours:** 0-2

**Pre-requisite:** None

**Course Objectives:** this course is designed to give hands on experience of the physical concepts which the students learn during various courses. The course also includes one third of the time at the Manufacturing Resource Centre (MRC) where the students get the experience of manufacturing and processing different kinds of materials.

**Core Contents:** Advanced Level Physics experiments

**Detailed Course Contents:** Sand Craters and concept of gravity, Photoelectric Effect, Michaelson Interferometer, moulding, lathe machine handling, milling at MRC Workshop

**Course Outcomes:** At the end of the course, students will be able to understand the:

- different procedures at MRC Workshop
- Particle Nature of Electron
- Transmission lines – electrical signal
- The concept of meteoroids striking the moon surface through sand

**Textbook:** Lab Manuals

**Reference Books:**

- N/A

Weekly Breakdown		
Week	Section	Topics
1	Instruction Manual	Introduction to the lab
2	Instruction Manual	Workshop 1: Lathe machine
3	Instruction Manual	Workshop 1: Lathe machine
4	Instruction Manual	Workshop 2: Milling
5	Instruction Manual	Workshop 2: Milling
6	Instruction Manual	Workshop 3: Moulding

7	Instruction Manual	Workshop 3: Moulding
8	Instruction Manual	Workshop 4: Soldering
	Instruction Manual	<b>Midterm Exam</b>
9	Instruction Manual	Sand Crater
10	Instruction Manual	Michelson Interferometer 1
11	Instruction Manual	Michelson Interferometer 2
12	Instruction Manual	Transmission lines
13	Instruction Manual	Photoelectric effect 1
14	Instruction Manual	Photoelectric effect 1
15	Instruction Manual	Revision