

Course Title: **Photonics Lab Techniques**

Course Number: **PSE 605**

Department: **Photonics Science and Engineering Program (PSEP)**

Pre-requisite: **PSE 601, PSE 602**

Lab Instructors: **Prof. Asima Pradhan(Lab-in-Charge) and Prof. P K Panigrahi**

Course Description:

This course will help develop experimental skill of the students in the areas of optics and photonics. Students will perform 12 experiments in optics and photonics and work in groups of two students. All experiments have to be performed by the students and attendance is compulsory. Lab reports should be submitted within a week after completing an experiment and each student should submit a report individually..

Grading:

12 experiments : 60% of the total marks

End semester exam (each student will perform the experiment individually): 40% of the total marks

S. No.	1	2	3	4	5	6
Exp. Title	He-Ne Laser	Diode laser	EO effect	F&F diffraction	Diffraction Grating	AO Modulator

S. No.	7	8	9	10	11	12
Exp. Title	Fiber Gyroscope	Optical Fiber	Mach-Zehnder Interferometer	Michelson Interferometer	Holography	Nd:YAG Laser

First Round	
Week 1	08 Jan & 09 Jan
Week 2	15 Jan & 16Jan
Week 3	22 Jan & 23 Jan
Week 4	29Jan & 30 Jan
Week 5	05 Feb & 06 Feb
Week 6	12 Feb & 13 Feb

Second Round	
Week 1	05 March & 06 March
Week 2	12 March & 13 March
Week 3	19 March & 20 March
Week 4	26 March & 27 March
Week 5	02 April & 03 April
Week 6	09 April & 10 April

Exp. Title Group No.	He-Ne Laser	Diode laser	EO effect	F&F diffraction	Diffraction Grating	AO Modulator
Group 1	Week1	Week2	Week3	Week4	Week5	Week6
Group 2	Week2	Week3	Week4	Week5	Week6	Week1
Group 3	Week3	Week4	Week5	Week6	Week1	Week2
Group 4	Week4	Week5	Week6	Week1	Week2	Week3
Group 5	Week5	Week6	Week1	Week2	Week3	Week4

Exp. Title Group No.	Fiber Gyroscope	Optical Fiber	Mach-Zehnder Interferometer	Michelson Interferometer	Holography	Nd:YAG Laser
Group 1	Week1	Week2	Week3	Week4	Week5	Week6
Group 2	Week2	Week3	Week4	Week5	Week6	Week1
Group 3	Week3	Week4	Week5	Week6	Week1	Week2
Group 4	Week4	Week5	Week6	Week1	Week2	Week3
Group 5	Week5	Week6	Week1	Week2	Week3	Week4