

Lecture Plan		
Name of the college: Government College of Arts, Science and Commerce, Sanquelim – Goa.		
Name of Faculty: Ms. Anushka Panjekar and Vidhita Parab	Subject: Physics	
Paper code: PHY-141 : Basic experimental techniques	Program: FY BSc	Division: -
Academic year: 2026- 2027	Semester: I	Total Lectures: 15L + 60 P
Course Objectives: The course will enable students to acquire required skills to understand basic experimental techniques and use them in a physics laboratory.		
Expected Course Outcome: Student will be able to		
1. Identify different components and Experimental instruments		
2. Gain Basic understanding of Experimental instruments.		
3. Develop Skills in performing Physics experiments.		
4. Calculate errors in an experiment and other parameters related to the experiment.		

Student Learning Outcome: The course will enable students to Identify different components and Experimental instruments, Gain Basic understanding of Experimental instruments, Develop Skills in performing Physics experiments, Calculate errors in an experiment and other parameters related to the experiment.							
Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
JUNE	19-06-26	20-06-26	0				
JUNE	22/06/26	27/06/26	1L + 4P	1. Introduction Practical 1	Group discussion	Powerpoint presentation	Practical Physics

JUNE, JULY	29/06/26	04/07/26	1L + 4P	1. Units, vernier, micrometer, travelling microscope, spherometer Practical 2	Group discussion	Powerpoint presentation	Practical Physics
JULY	06/07/26	11/07/26	1L + 4P	1. Precision and accuracy, digital balance, temperature scales Practical 3	MCQ Quiz	Powerpoint presentation	Practical Physics
JULY	13/07/26	18/07/26	1L + 4P	1. Measurement of temperature Practical 4	MCQ Quiz	Powerpoint presentation	Practical Physics
JULY	20/07/26	25/07/26	1L + 4P	1. Arithmetic mean, absolute error,	Group discussion	Powerpoint presentation	Practical Physics

				relative error, percentage error. Practical 5			
JULY, AUGUST	27/07/26	01/08/26	1L + 4P	1. Expressing results of an experiment including errors, 2. Plotting of graphs. Practical 6	Group discussion	Powerpoint presentation	Practical Physics
AUGUST	03/08/26	08/08/26	1L + 4P	1. Propagation of errors. ISA 1 SUBMISSION Practical 7 ISA 1 SUBMISSION	MCQ Quiz	Powerpoint presentation	Practical Physics
AUGUST	10/08/26	15/08/26	1L	1. Convex & concave mirror and their focal length. Practical - HOLIDAY	MCQ Quiz	Powerpoint presentation	Practical Physics

SEPTEMBER	7/09/26	12/09/26	1L + 4P	1. Basic understanding and use of components: Transformers, switches, fixed resistors, potentiometers, rheostats, capacitors, inductors, Practical Revision	MCQ Quiz	Powerpoint presentation	Practical Physics
SEPTEMBER	21/09/26	26/09/26	1L + 4P	1. diodes, Zener diodes, LED's, transistors and relay. Practicals Revision	MCQ Quiz	Powerpoint presentation	Practical Physics

SEPTEMBER, OCTOBER	28/09/26	03/10/26	1L + 4P	1. Basic understanding and use of instruments /devices: Electrical tester, Digital Multimeter, Digital LCR meter. ISA III Practicals : ISA III	MCQ Quiz	Powerpoint presentation	Practical Physics
OCTOBER	05/10/26	10/10/26	1L + 4P	1. breadboards, Variac, DC Power supplies (fixed voltage, dual voltage & variable voltage), Function generator.	MCQ Quiz	Powerpoint presentation	Practical Physics

				Practical exam			
OCTOBER	12/10/26	14/10/26	1L + 4P	1. CRO (Cathode Ray Oscilloscope) and DSO (Digital Storage Oscilloscope) PRACTICAL EXAM			Practical Physics

Assessment Rubrics

Component	Max Marks
ISA 1 Assignment	5
ISA 2 Written Test	5
ISA 3 Presentation	5
Practical	40
Semester End Exam	20