

Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Sudesh M. Morajkar	Subject: Fundamentals of Chemistry (Major)	
Paper code: CHC 100	Program: F.Y.BSc.	Division:
Academic year: 2026 - 2027	Semester: I	Total Practical/Labs: 8 (16 hours)
Credits: 3+1		
Course Objectives: - To translate certain theoretical concepts learnt earlier into experimental knowledge by providing hands on experience of basic laboratory techniques required for chemistry. - To introduce the fundamentals and basic techniques of volumetric and gravimetric estimations.		
Expected Course Outcome: At the end of the course students will be able: CO1: To acquire knowledge about the fundamental concepts of organic, inorganic and physical chemistry CO2: Explain properties and applications of liquid and gases. CO3: Elucidate the atomic structure based on Quantum theory. CO4: Understand basic concept of organic chemistry, preparation and reactions of alkanes, alkenes and alkynes		
Student Learning Outcome: At the end of the course students will be able: LO1: Understand the basic laboratory techniques required for chemistry. LO2: Understand methods to quantitatively estimate with precision the desired amount of the precipitate. LO3: Understand the various conditions to be undertaken to acquire the desired yield. LO4: Understand various methods to identify chemical nature of organic compounds.		

Month	Practical/Labs Scheduled Date	No. of Practical /Labs planned	List of Experiments	Reference books
July-Aug	27-06-2026	1 (Batch I)	Pre-Lab session (Laboratory safety, concept of normality and molarity and stoichiometric calculations)	[1-2]
	04-07-2026	1 (Batch I)	Calibration of Burette and Pipettes.	[1-2]
	11-07-2026	1 (Batch I)	Determination of viscosity of two unknown liquids or dilute solutions by using Ostwald's viscometer	[1-2]
	01-08-2026	1 (Batch I)	Determination of viscosity of two unknown liquids or dilute solutions by using Ostwald's viscometer	[1-2]
	22-08-2026	1 (Batch I)	Study of the variation of viscosity of an aqueous solution with concentration of solute.	[1-2]
Sep-Oct	05-09-2026	1 (Batch I)	Determination of solubility and chemical nature of both solids and liquids	[1-2]
	19-09-2026	1 (Batch I)	Determination of solubility and chemical nature of both solids and liquids.	[1-2]
	03-10-2026	1 (Batch I)	To prepare 100 ml of 0.1 N KHP solution and standardize the given approximate 0.1 N NaOH solution.	[1-2]

References:

[1] A.I. Vogel, A., R. Tatchell, B. S. Furniss, A.J. Hannaford, Vogel's Textbook of Practical Organic Chemistry, 5thEd., Prentice Hall; 2011.

[2] J. Basset, Vogels textbook of quantitative inorganic analysis.

* Assessment Rubrics	
Component	Max Marks
ISA	05
Practical	50
Semester End Exam	20