

Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Dattaprasad D. Narulkar	Subject: Concepts in Organic and Analytical Chemistry (Major)	
Paper code: CHC-201	Program: S.Y.BSc.	Division:
Academic year: 2026 - 2027	Semester: III	Total Practical/Labs: 15 (30 hours)
Credits:1		
Course Objectives: 1. To apply theoretical concepts to experiments. 2. To acquire hands-on training in organic preparation experiments and organic qualitative analysis. 3. To evaluate data for central tendency and dispersion. 4. To apply extraction methods to separate given mixtures		
Expected Course Outcome: At the end of the course, students will be able: CO1. Synthesise simple organic compounds abd Perform extraction and separation of chemical mixtures. . CO2. Analyse and identify organic compounds using classical qualitative analysis. CO3. Solve numericals based on statistical data obtained from experimental results. CO4. Perform analysis using UV-Visible spectrophotometric		
Student Learning Outcome: At the end of the course, students will be able: LO1: Demonstrate hands-on proficiency in the laboratory by successfully synthesising and analysing organic compounds. LO2: Evaluate statistical parameters related to analysis. LO3: Handle UV-Vis spectrophotometer.		

Month	Practical/Labs Scheduled Date	No. of Practical/Labs planned	List of Experiments	Reference books
June	23/06/2026	1	2,4-dinitrophenylhydrazone of benzaldehyde/acetophenone.	Ref 1 and 2
	30/06/2026	1	Titration of the supplied calcium chloride solution with 0.01M EDTA solution.	Ref 1 and 2
July	07/07/2026	1	Organic qualitative analysis: Water-soluble compounds	Ref 1 and 2
	14/07/2026	1	Titration of the given 0.1N NaOH solution using primary standard 0.1 N succinic acid solution.	Ref 1 and 2
	21/07/2026	1	Organic qualitative analysis: Water insoluble Acids/ Phenols	Ref 1 and 2
	28/07/2026	1	Separation of mixture of benzoic acid and β -naphthol using ethyl acetate by solvent extraction method.	Ref 1 and 2
August	04/08/2026	1	Organic qualitative analysis: Water-insoluble Base	Ref 1 and 2
	11/08/2026	1	Determination of partition coefficient of acetic acid in water and n-butyl alcohol.	Ref 1 and 2
	18/08/2026	1	Organic qualitative analysis: Water insoluble Neutral	Ref 1 and 2
	25/08/2026	1	Extraction of Caffeine from tea leaves decoction using dichloromethane as organic solvent.	Ref 1 and 2
September	01/09/2026	1	Organic qualitative analysis: Liquids	Ref 1 and 2
	08/09/2026	1	Oxime of Cyclohexanone.	Ref 1 and 2
			Ganesh Chaturthi break (14/09/2026 - 19/09/2026)	Ref 1 and 2
	22/09/2026	1	Determine λ_{max} for 0.1 M $\text{K}_2\text{Cr}_2\text{O}_7$ by spectrophotometry.	Ref 1 and 2

Month	Practical/Labs Scheduled Date	No. of Practical/Labs planned	List of Experiments	Reference books
	29/09/2026	1	Verify Beer's law using KMnO_4 by the colourimetric method and determine the molar extinction coefficient.	Ref 1 and 2
October	06/10/2026	1	Estimation of Cu^{2+} as $[\text{Cu}(\text{NH}_3)_4]^{2+}$ complex in the given unknown solution using the calibration curve method.	Ref 1 and 2
	13/10/2026	1	Journal certification	

1. Vogel's Textbook of Inorganic Qualitative Analysis
2. Vogel's Textbook of Inorganic Quantitative Analysis

* Assessment Rubrics	
Component	Max Marks
ISA	15
Practical SEE	25
Semester End Exam	60
Total	100