

Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Sagar Narayan patil	Subject Organic Chemistry II	
Paper code: CHC 300	Program: T.Y.BSc.	Division:
Academic year: 2026 - 2027	Semester: V	Total Practical/Labs: 15 (30 h)
Credits: 1		
Course Objectives: - To apply theoretical concepts to experiments. - To acquire hands on training in organic preparation experiments. - To acquire hands on training in organic qualitative analysis.		
Expected Course Outcome: At the end of the course students will be able to: CO1: Synthesize Organic compounds. CO2: Identify the functional groups present in organic compounds using Infrared spectroscopy. CO3: Estimate organic compounds quantitatively. CO4: Apply theoretical knowledge in understanding laboratory skills.		
Student Learning Outcome: At the end of the course students will be able to: LO1: Synthesize organic compounds using standard laboratory procedures. LO2: Identify functional groups in organic compounds through IR spectroscopy. LO3: Quantitatively estimate organic compounds using appropriate techniques. LO4: Demonstrate basic laboratory skills by applying theoretical knowledge.		

Month	No. of Practical /Labs planned	List of Experiments	Reference books
June	2 (Batch II & III)	Organic preparations: a) m-dinitrobenzene from nitrobenzene	[1-4]
July	2 (Batch II & III)	Organic preparations: b) Hippuric acid from glycine	[1-4]
	2 (Batch II & III)	Organic preparations: c) diazoaminobenzene from aniline	[1-4]
	2 (Batch II & III)	Organic preparations: d) Cinnamic acid from benzaldehyde	[1-4]
	2 (Batch II & III)	Organic preparations: e) Chalcone from acetophenone and benzaldehyde	[1-4]
August	2 (Batch II & III)	Recrystallization and melting point determination	[1-4]
	2 (Batch II & III)	Organic Estimations experiments: a) Estimation of acid and amide.	[1-4]
	2 (Batch II & III)	Organic Estimations experiments: b) Estimation of acid and ester.	[1-4]
	2 (Batch II & III)	Organic Estimations experiments: c) Estimation of number of acetyl groups.	[1-4]
September	2 (Batch II & III)	Interpretation of Infra-Red Spectra	[1-4]
	2 (Batch II & III)	Interpretation of Infra-Red Spectra	[1-4]
	2 (Batch II & III)	Revision	[1-4]
	2 (Batch II & III)	Revision	[1-4]
October	2 (Batch II & III)	Revision	[1-4]
	2 (Batch II & III)	Revision	[1-4]

References:

1. Furniss, B. S., Hannaford, A. J., Smith P. W. G. and Tatchell, A. R., Vogel's Textbook of Practical Organic Chemistry, 5th ed., Pearson Education Ltd., London, UK 2011.

2. Pasto, D., Johnson C. and Miller, M., Experiments and Techniques in Organic Chemistry, 1st ed., Prentice Hall, New Jersey, USA, 1992.
3. Fieser, L. F. and Williamson, K. L., Organic Experiments, 7th ed., D. C. Heath and Company, Massachusetts, USA, 1992.
4. Bansal, R. K., Laboratory Manual of Organic Chemistry, 5th ed., New Age International Publishers, New Delhi, India, 2016.

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