

Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Dipesh Sakharam Harmalkar	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	Practical/Labs Scheduled Date	No. of Practical /Labs planned	List of Experiments	Reference books
June	24-06-2026	1 (Batch I)	Organic preparations: a) m-dinitrobenzene from nitrobenzene	[1-4]
July	01-07-2026	1 (Batch I)	Organic preparations: b) Hippuric acid from glycine	[1-4]
	08-07-2026	1 (Batch I)	Organic preparations: c) diazoaminobenzene from aniline	[1-4]
	15-07-2026	1 (Batch I)	Organic preparations: d) Cinnamic acid from benzaldehyde	[1-4]
	22-07-2026	1 (Batch I)	Organic preparations: e) Chalcone from acetophenone and benzaldehyde	[1-4]
	29-07-2026	1 (Batch I)	Recrystallization and melting point determination	[1-4]
August	05-08-2026	1 (Batch I)	Recrystallization and melting point determination	[1-4]
	12-08-2026	1 (Batch I)	Organic Estimations experiments: a) Estimation of acid and amide.	[1-4]
	19-08-2026	1 (Batch I)	Organic Estimations experiments: b) Estimation of acid and ester.	[1-4]
	26-08-2026	1 (Batch I)	Organic Estimations experiments: c) Estimation of number of acetyl groups.	[1-4]
September	02-09-2026	1 (Batch I)	Interpretation of Infra-Red Spectra	[1-4]
	16-09-2026	1 (Batch I)	Interpretation of Infra-Red Spectra	[1-4]
	23-09-2026	1 (Batch I)	Revision	[1-4]
	30-09-2026	1 (Batch I)	Revision	[1-4]
October	07-10-2026	1 (Batch I)	Revision	[1-4]
	14-10-2026	1 (Batch I)	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