

Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Sudesh M. Morajkar	Subject: Basic Industrial Chemistry (Minor)	
Paper code: CHC 211	Program: S.Y.BSc.	Division:
Academic year: 2026 - 2027	Semester: III	Total Practical/Labs: 15 (30 hours)
Credits: 1+2		
Course Objectives: - Apply the methods of synthesizing various dyes and pigments. - Understand and evaluate the principles of colour theory and interaction of different pigments. - Understand and implement the process carried out in paper industries. - Comprehend the significance of pH and temperature measurement in industries.		
Expected Course Outcome: At the end of the course students will be able: CO1: Define and state important terms in various industries and methods of waste management. CO2: Understand the principles and working of instruments and basic requirements of various industries and methods related to industrial waste. CO3: Apply principles of temperature measurement, waste treatment in analysis of industrial waste, its treatment and segregation. CO4: Integrate knowledge gained in different modules to propose comprehensive solutions to challenges in industrial chemistry and create an awareness by evaluating the impact on the environment.		
Student Learning Outcome: At the end of the course students will be able: LO1: Synthesize and analyze various dyes, pigments, and chemical compounds. LO2: Apply principles of colour theory, prepare paper pulp, and measure pH of different formulations. LO3: Demonstrate proficiency in essential laboratory techniques, including temperature calibration, nutrient analysis, and corrosion rate determination		

Month	Practical/Labs Scheduled Date	No. of Practical /Labs planned	List of Experiments	Reference books
June	01-07-2026	1 (Batch I)	Preparation of Azo dye.	[1-2]
July	08-07-2026	1 (Batch I)	Preparation of Chrome Yellow (PbCrO ₄).	[1-2]
	15-07-2026	1 (Batch I)	Preparation of Prussian blue.	[1-2]
	22-07-2026	1 (Batch I)	Preparation of various shades of pigment by understanding the principles of colour theory.	[1-2]
	29-07-2026	1 (Batch I)	Preparation of various shades of pigment by understanding the principles of colour theory.	[1-2]
	05-08-2026	1 (Batch I)	Preparation of pulp from waste/recycled papers.	[1-2]
August	12-08-2026	1 (Batch I)	To determine the pH of different pharmaceutical formulations.	[1-2]
	19-08-2026	1 (Batch I)	To determine the pH of different pharmaceutical formulations.	[1-2]
	26-08-2026	1 (Batch I)	Calibration of thermometer and measurement of temperature.	[1-2]

	02-09-2026	1 (Batch I)	To determine the rate of corrosion on a metallic plate in acidic medium.	[1-2]
September	09-09-2026	1 (Batch I)	To determine the rate of corrosion on a metallic plate in acidic medium.	[1-2]
	16-09-2026	1 (Batch I)	Qualitative analysis of essential nutrients in different fertilizers.	[1-2]
	23-09-2026	1 (Batch I)	Qualitative analysis of essential nutrients in different fertilizers.	[1-2]
	30-10-2026	1 (Batch I)	Repeat	[1-2]

References:

[1] M. S. Hegde, B.Sc. Chemistry Experiments by, Talent Development Centre, IISc, 2021.

[2] G. Svehla, Vogel's Textbook of Macro and Semimicro Qualitative Inorganic Analysis, 7th edition Longman Group Limited, London. 2012.

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