

Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Dattaprasad D. Narulkar	Subject: Chemistry	
Paper code: CHC-141 Water and Soil Analysis	Program: F.Y.BSc.	Division:
Academic year: 2024 - 2025	Semester: II	Total Practical/Labs: 15 (30 hours)
Credits: 1		
Course Objectives: <ul style="list-style-type: none">• Demonstration of techniques of sampling soil and water studied in theory,• Determination of various physico-chemical parameters of soil and water and thereby develop related skills.		
Expected Course Outcome: At the end of the course students will be able: CO1: Perform the techniques employed for soil and water sampling. CO2: Develop skill for the determination of the various physico-chemical parameters of soil and water.		
Student Learning Outcome: At the end of the course students will be able: LO1: to acquire the knowledge and skill of soil and water analysis. LO2: to get hands on experience on the techniques employed for soil and water analysis.		

Month	Practical/Labs Scheduled Date	No. of Practical /Labs planned	List of Experiments	Reference books
December	13/12/2024	1	Techniques of soil sampling (Demonstration), Techniques of water sampling (Demonstration)	Ref 1 and 2
	03/01/2025	1	Determination of Moisture content of soil sample Determination of total hardness in the water sample	Ref 1 and 2
	10/01/2025	1	Determination of alkalinity in a given water sample Determination of pH of soil sample	Ref 1 and 2
	17/01/2025	1	Determination of acidity of a water sample Determination of pH and conductivity of a water sample	Ref 1 and 2.
January	24/01/2025	1	Determination of dissolved oxygen (DO) in a given water sample	Ref 1 and 2
	31/02/2025	1	Measurement of dissolved CO ₂	Ref 1 and 2
	07/02/2025	1	Determination of total solids in water.	Ref 1 and 2
February	14/02/2025	1	Determination of conductivity of soil sample	Ref 1 and 2
	21/02/2025	1	. Determination of organic content in soil sample	Ref 1 and 2
	28/23/2025	1	Determination of Bulk density of soil sample	Ref 1 and 2
	07/03/2025	1	Determination of magnesium content	Ref 1 and 2

March	14/03/2025	1	Repeat Practicals	
	21/03/2025	1	Repeat Practicals	
	28/03/2025	1	Repeat Practicals	
April	04/04/2025	1	Repeat Practicals	
	11/04/2025	1	Practical exams	

References

1. Vogel's Text book of Qualitative analysis
2. Vogel's Textbook of Quantitative Analysis

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