

## 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: 2025 - 2026**    **Semester: II**    **Total Practical/Labs: 15 (30 hours)**

**Credits:**

**1**

**Course Objectives:**

- 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	19/12/2025	1	Determination of total solids in water.	Ref 1 and 2
January	09/01/2026	1	Determination of total hardness in the water sample	Ref 1 and 2
	23/01/2026	1	Determination of magnesium content	Ref 1 and 2
February	06/02/2026	1	Determination of the conductivity of soil sample	Ref 1 and 2
	20/02/2026	1	Determination of Bulk density of soil sample	Ref 1 and 2
March	06/03/2026	1	Determination of pH of soil sample	Ref 1 and 2
	20/03/2026	1	Determination of pH and conductivity of a water sample	Ref 1 and 2

### References

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

* Assessment Rubrics	
Component	Max Marks
ISA	05
Practical	25
Semester End Exam	20
Total	50