

Semester I Lecture Plan

Name of the college: Government College of Arts Science & Commerce, Sanquelim

Name of Faculty: Mr. Dattaraj Jawdekar

Subject: Geology

Paper code: GEO 100

Program/Course: B.Sc.

Division:

Academic year: 2025-26

Semester: I

Total Lectures: 45

Course Objective:

The objectives of this course are to:

1. Discuss the origin, shape, and size of the Earth. CL2
2. Explain the concepts of continental drift and plate tectonics. CL2
3. Demonstrate the symmetry in crystals. CL2
4. Describe minerals and rocks using physical properties. CL2

Course Outcome:

At the end of the course the student will be able to:

1. Differentiate the layers of the Earth based on their structure and composition. CL2
2. Identify minerals based on their physical properties. CL3
3. Deduce the symmetry of crystals. CL4
4. Categorize rocks based on their properties. CL4

Month	Lectures From: To:	No. of lectures allotted	Topic, Subtopic to be covered	Exercise and assignments	ICT Tools	Reference books
June	23 June - 28 June 2025	3	Introduction to Geology; Applications and Career opportunities in Geosciences			
July	30 June - 5 July 2025	3	Introduction to Planetary Geology, Origin of the earth: Nebular Hypothesis;		Chalk and Board	Marshak, S. (2015). Earth science
July	7 July - 12 July 2025	3	Introduction to Plate Tectonics.		Chalk and Board	Marshak, S. (2015). Earth science
July	14 July - 19 July 2025	3	Elementary Crystallography and Mineralogy: Scope and importance, states of matter, crystalline state, atomic arrangement in crystals.		Chalk and Board/ Model	Dexter Perkins
July	21 July - 26 July 2025	3	External characteristics of crystals, face, form, interfacial angles, law of constancy of interfacial angles. Goniometers, crystal symmetry.		Chalk and Board	Dexter Perkins

July–Aug	28 July - 2 August 2025	3	Classification of crystals, crystallographic axes and systems, parameters and indices, study of the normal symmetry classes. Applications of crystal properties.		Hands on/Chalk and Board	Dexter Perkins
August	4 August - 9 August 2025	3	Physical properties of minerals, colour, streak, lustre, diaphaneity, cleavage, fracture, form, habit, hardness, specific gravity, electrical and magnetic properties.		Hands on/Chalk and Board	Dexter Perkins
August	11 August - 16 August 2025	3	Physical properties of minerals, colour, streak, lustre, diaphaneity, cleavage, fracture, form, habit, hardness, specific gravity, electrical and magnetic properties.		Hands on	Dexter Perkins

August	18 August - 23 August 2025	3	Introduction of common rock - forming minerals: quartz, feldspar, micas, pyroxenes, amphiboles and olivine. Rocks: their classification into three broad classes, igneous, sedimentary and metamorphic, Rock Cycle. Igneous Rocks: plutonic hypabyssal and volcanic types.		Chalk and Board	Dexter Perkins
September	2 September - 6 September 2025	3	Igneous Rocks: plutonic hypabyssal and volcanic types.		Chalk and Board	Singh, P. (1978). A textbook of engineering and general geology
September	8 September - 13 September 2025	3	Igneous Rocks: plutonic hypabyssal and volcanic types.		Chalk and Board	Singh, P. (1978). A textbook of engineering and general geology
September	15 September - 20 September 2025	3	structures and textures. Bowen's Reaction series		Chalk and Board	Singh, P. (1978). A textbook of engineering and general geology

September	22 September - 27 September 2025	3	Classification based on grain size and mineral composition. Sedimentary Rocks: Structures, Textures and Classification of Sedimentary Rocks. Depositional Environments.		Chalk and Board	Singh, P. (1978). A textbook of engineering and general geology
October	29 September - 4 October 2025	3	Metamorphic Rocks: agents of metamorphism, types of metamorphism, fabric and Classification of Metamorphic Rocks.		Chalk and Board	Singh, P. (1978). A textbook of engineering and general geology
October	6 October - 11 October 2025	3	Revision			

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Assessment Rubrics

Component	Max Marks
ISA 1	
ISA 2	
Practical	
Project	
Semester End Exam	

Mr. Dattaraj Jawdekar
Assistant Professor in Geology