

## Lecture Plan

**Name of the college: Government College of Arts, Science and Commerce, Sanquelim- Goa**

**Name of Faculty: Dattaraj Jawdekar**

**Subject:GEOLOGY**

**Paper code: GEO 100**

**Program: FYBSC**

**Division: -**

**Academic year: 2024 - 2025**

**Semester: I**

**Total Lectures: 45**

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

**Expected 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

**Student Learning Outcome:**

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
June	28/06/2024	29/06/2024	1	Introduction			
July	01/07/2024	06/07/24	3	Introduction to Planetary Geology, Origin of the earth: Nebular Hypothesis; Shape, Size, Structure of the earth,		Chalk and Board, Videos, GIFs	
July	08/07/2024	13/07/24	3	Introduction to Plate Tectonics.		Chalk and Board, Hands on	
July	15/07/2024	20/07/24	3	Introduction to Plate Tectonics.		Chalk and Board, Field photographs	
July	22/07/2024	27/07/24	3	Elementary Crystallography and Mineralogy		Chalk and Board, Field photographs	
July	29/07/2024	03/08/24	3	crystallographic axes and systems,		Chalk and Board, Demonstrations, GIFS, Models	

July	05/08/2024	10/08/24	3	Classification of crystals,		Chalk and Board, Demonstrations, GIFS, Models	
August	12/08/2024	17/08/24	3	crystallographic axes and systems, parameters and indices		Chalk and Board, Demonstrations, GIFS, Models	
August	19/08/2024	24/08/24	3	Physical properties of minerals.		Chalk and Board, Demonstrations, GIFS, Models	
August	26/08/2024	31/08/24	3	Introduction of common rock - forming minerals:		Chalk and Board, Demonstrations, GIFS, Models	
September	02/09/2024	07/09/24	3	quartz, feldspar, micas, pyroxenes, amphiboles and olivine.		Chalk and Board, Demonstrations, GIFS, Models	
September	09/09/2024	14/09/24	0	Chaturthi			
September	16/09/2024	21/09/24	3	Rocks: their classification, Rock Cycle.		Chalk and Board, Demonstrations, GIFS, Models	

September	23/09/2024	28/09/24	3	Igneous Rocks: plutonic hypabyssal and volcanic types. Forms, structures and textures.	Chalk and Board, Demonstrations, GIFS, Models
September/ October	30/09/2024	05/10/24	3	Bowen's Reaction series. Classification based on grain size and mineral composition. Mineralization.	Chalk and Board, Demonstrations, GIFS, Models
October	07/10/2024	12/10/24	3	Sedimentary Rocks: Structures, Textures and Classification of Sedimentary Rocks. Depositional Environments.	Chalk and Board, Demonstrations, GIFS, Models

October	14/10/2024	19/10/24	3	Metamorphic Rocks: agents of metamorphism, types of metamorphism, fabric and Classification of Metamorphic Rocks.		Chalk and Board	
October	21/10/2024	22/10/2024	1	Rocks and their identification			

**\*Assessment Rubrics**

Component	Max Marks
ISA 1	7.5
ISA 2	7.5
Practical	25
Project	-
Semester End Exam	60

