Semester Lecture Plan

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

Name of Faculty: Shritesh Mhapsekar	**Subject:** Geology	
Paper code: GEO-111; Introduction to Geology	**Program/Course: FY B.Sc.**	**Division:**
Academic year: 2024- 2025	**Semester: I**	**Total Lectures: 60**

Course Objectives:
1. To discuss the origin and various components of earth system.
2. To describe minerals and rocks using physical properties.

Course Learning Outcome:
1Distinguish between the layers of the earth based on the structure and composition (CL2)
2. Explain the Earth System (CL2)
3. Identify the minerals based on their physical properties (CL3)
4. Categorize different rock types (CL4)

Month	Lectures From:	Lectures To:	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
	July 1, 2024	July 7, 2024	4	Introduction to Geology			
				Applications and Career opportunities in Geosciences.	Origin and shape of the earth		

				Origin, Shape, Size internal structure of the earth			
JUlLY	July 8, 2024	July 14, 2024	*4*	internal structure of the earth internal structure of the earth Introduction to Plate Tectonics Introduction to Plate Tectonics	Plate tectonic models		Singh, P. (1978). A textbook of engineering and general geology (3rd ed.). S. Chand & Company Ltd. Rutley, F. (2019). Rutley's Mineralogy. Routledge
	July 15, 2024	July 21, 2024	4	Introduction to Plate Tectonics Atmosphere: Structure and Composition Hydrosphere: Occurrence and distribution of water, Hydrological Cycle Biosphere: Evolution of life through geologic time	Atmospehere column		
	July 22, 2024	July 28, 2024	4	Biosphere: Evolution of life through geologic time Cryosphere			Winter John: Igneous and metamorphic petrology, Prentice

				Geosphere: Minerals and Rocks			Hall, 2010.
				Introduction to Minerals and Rocks			Best M.: Igneous and Metamorphic rocks, Wiley-Blackwell, 2002.
AUGUST	July 29, 2024	August 4, 2024	4	ISA I	Identifying the properties of minerals		
				colour, streak, lustre			
				diaphaneity, cleavage			
				fracture, form			
	August 5, 2024	August 11, 2024	4	habit, hardness,			Winter John: Igneous and metamorphic petrology, Prentice Hall, 2010.
				specific gravity and crystal system			
				Uses of Minerals			
				Introduction of common rock –			
	August 12, 2024	August 18, 2024	4	Introduction of common rock –			Best M.: Igneous and Metamorphic rocks, Wiley-Blackwell, 2002.
				Introduction of common rock –			
				Holiday			
				Introduction of common rock –			
	August 19, 2024	August 25, 2024	4	Introduction of common rock –	Identifying classifying the rocks		Best M.: Igneous and Metamorphic rocks, Wiley-Blackwell, 2002.
				Scope and importance of Petrology			
				Rocks: their classification			
				Rocks: their classification			

	August 26, 2024	September 1, 2024	4	Rock Cycle Rock Cycle ISA Revision ISA II			
SEPTEMBER	September 2, 2024	September 8, 2024	4	Igneous Rocks: Mode of occurrence, Forms Holiday Holiday			
	September 9, 2024	September 15, 2024	4	Holiday Holiday Holiday structures			Winter John: Igneous and metamorphic petrology, Prentice Hall, 2010.
	September 16, 2024	September 22, 2024	4	textures Bowen's Reaction series Bowen's Reaction series Classification based on grain size			Best M.: Igneous and Metamorphic rocks, Wiley-Blackwell, 2002.
	September 23, 2024	September 29, 2024	4	ISA III Classification based on mineral composition Sedimentary Rocks Structures			Winter John: Igneous and metamorphic petrology, Prentice Hall, 2010.
OCTOBER	September 30, 2024	October 6, 2024	4	textures textures	Identifying classifying the rocks		

				classification			
				Metamorphic Rocks			
	October 7, 2024	October 13, 2024		Agents of metamorphism			
				types of metamorphism			
				types of metamorphism			
			4	fabric and classification			
	October 14, 2024	October 20, 2024		fabric and classification			
				revision			
				revision			
			4	revision			

Assessment Rubrics

Component	Max Marks
ISA 1	10
ISA 2	10
ISA 3	10
Project	-
Semester End Exam	80