

Semester Lecture Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa-India							
Name of Faculty: Ms. Magnolia Aurea Miranda			Subject: Geology				
Paper code: GEO-241			Program/Course: SY B.Sc.			Division:	
Academic year: 2026 - 2027			Semester: III			Total Lectures: 14	
Course Objectives: 1. Discuss the occurrence of minerals in rocks and the processes involved in their formation. CL2 2. Describe the natural, synthetic, and organic gemstones. CL2 3. Describe the physical and optical properties of crystals and gemstones. CL1							
Course Learning Outcome: 1. Explain the Physical and optical properties of crystals/gemstones. CL2 2. Examine imperfections in crystals and gemstones. CL3 3. Identify crystals and gemstones.CL3							
Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
JUNE	22/6/26	27/6/26	1	Minerals and Mineraloids		Projector	Sinkankas, J., (1969) <i>Mineralogy: A First Course</i>
JULY	29/6/26	4/7/26	1	Occurrence of Minerals in rocks		Projector	
	06/7/26	11/7/26	1	Occurrence of Minerals in rocks		Projector	

	13/7/26	18/7/26	1	Crystals and their characteristics - Faces, Systems, Symmetry, Forms		Projector	Read, P. G., (1991). Gemmology, Butterworth-Heinemann Ltd.
	20/7/26	25/7/26	1	Gemstones - natural, synthetic gemstones and organic products		Projector	
August	27/7/26	1/8/26	1	ISA		Projector	
	3/8/26	8/8/26	1	Physical and optical properties of crystals/gemstones		Projector	
	10/08/26	15/8/26	0	Independence Day			
	17/8/26	22/8/26	1	Physical and optical properties of crystals/gemstones		Projector	
	24/8/26	29/8/26	1	ISA		Projector	
September	1/9/26	5/9/26	1	Imperfections in Crystals: Internal Imperfections - Internal (point defects, Inclusions), Chatoyancy, Asterism	Assignment	Projector	
	7/9/26	12/9/26	1	Factors deciding the cost of a gemstone		Projector	

	21/9/26	26/9/26	1	Enhancement and Treatments of gemstones		Projector
October	28/9/26	3/10/26	1	Synthesis of gemstones		Projector
	5/10/26	10/10/26	1	Need for Faceting. Styles of cut		Projector

Assessment Rubrics

Component		Max Marks
Theory	ISA 1	5
	ISA 2	5
Practical	ISA 1	5
	ISA 2	5
	ISA 3	5
Project	-	-
Semester End Exam	Theory	20
	Practical	40