

Semester Lecture Plan

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

Name of Faculty: Delia Cardozo

Subject: Geology

Paper code: GEO 303

Program/Course: TY B.Sc.

Division:

Academic year: 2025- 2026

Semester: V

Total Lectures: 15

Course Objectives:

1. Demonstrate the characteristics of light and its interaction with minerals.
2. Discuss the optical methods.

Course Learning Outcome:

1. Explain the optical properties of minerals. CL2
2. Identify minerals based on their optical properties and interference figure. CL3

Month	Lectures From:	Lectures To:	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
June	23/06/2025	30/06/2025	01	Optical Mineralogy: nature of light,		Smartboard, PPT, Videos, Virtual microscope; 3D Interactive figures on Sketchfab.com	1.Gribble, C. D., & Hall, A. J. (1992). Optical Mineralogy: Principles and Practice. Routledge.
July	01/07/2025	05/07/2025	01	polarized light, polarizing microscope.			
July	07/07/2025	12/07/2025	01	polarizing microscope - II			

	14/07/2025	19/07/2025	01	Properties in plane polarized light and between cross polars: colour, pleochroism,		2. Kerr, P. F. (1959). Optical Mineralogy. New York ; Toronto : McGraw-Hill. 3. Mackenzie, W., & Guilford, C. (2014). Atlas of the Rock-Forming minerals in thin section. Routledge.
	21/07/2025	26/07/2025	01	relief, twinkling		
	28/07/2025	02/08/2025	01	birefringence, interference colors		
August	04/08/2025	09/08/2025	01	ISA(Assignment -Silicate Mineral groups)		
	11/08/2025	16/08/2025	00	Independence Day		
	18/08/2025	23/08/2025	01	Twinning, zoning, extinction, inclusions		
	25/08/2025	30/08/2025	00	Ganesh Holidays		
September	02/09/2025	06/09/2025	01	Properties under conoscopic light		

	08/09/2025	13/09/2025	01	applications in the study of uniaxial and biaxial minerals.			
	15/09/2025	20/09/2025	01	Uniaxial Indicatrix			
	22/09/2025	27/09/2025	01	Biaxial Indicatrix			
October	29/09/2025	04/10/2025	01	2v, 2e.	ISA III: Viva		
	06/10/2025	11/10/2025	01	Accessory plates: Mica, Quartz, Gypsum.			
	13/10/2025	18/10/2025	01	Revision			

*** Assessment Rubrics**

Component	Max Marks
ISA 1	5
ISA 2	5
Practical	25
Project	--
Semester End Exam	20

