

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-202			Program/Course: SY B.Sc.			Division:	
Academic year: 2024 - 2025			Semester: IV			Total Lectures: 30	
Course Objectives: 1. Explain the binary systems and their applications to magmatic textures and processes. CL2 2. Discuss different mineral groups. CL2 3. Identify minerals megascopically. CL2 4. Demonstrate mineral chemical calculations. CL2							
Course Learning Outcome: 1. Compare the working of various binary systems and their applications to magmatic textures and processes. CL2 2. Distinguish between different minerals/mineral groups. CL2 3. Identify minerals based on their physical properties. CL3 4. Calculate mineral formula. CL3							
Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Exercise / Assignment	ICT Tools	Reference books
December	9/12/24	14/12/24	2	Introduction to mineralogy: definition of a mineral		Projector/ Smart board	2.3

	16/12/24	21/12/24	2	Phase rule, system, Phase components, degrees of variance		Projector/ Smart board	2,3
January	06/1/25	11/1/25	2	Mineralogical Phase rule		Projector/ Smart board	2,3
	13/01/25	18/01/25	2	Binary system-with eutectic (Di-An)		Projector/ Smart board	2,3
	20/1/25	25/01/25	2	Binary system-with eutectic (Di-An)		Projector/ Smart board	2,3
	27/01/25	31/01/25	2	Binary System with solid solution Ab An		Projector/ Smart board	2,3
February	03/02/25	08/02/25	2	Binary System with solid solution Ab An		Projector/ Smart board	2,3
	10/02/25	15/02/25	2	Binary System with solid solution Ab An Feldspar group of minerals		Projector/ Smart board	2,3
	17/02/25	22/02/25	2	Feldspar group of minerals		Projector/ Smart board	1,2,3
	24/02/25	28/02/25	2	Feldspathoid Group		Projector/ Smart board	1,2,3
March	3/3/25	8/3/25	2	Silica Group		Projector/ Smart board	1,2,3
	4/3/25	9/3/25	2	Non-Silicate minerals: Sulphides (Cu, Pb, Zn), oxides		Projector/ Smart board/ Smart board	1,2,3
	10/3/25	15/03/25	2	Non-Silicate minerals: hydroxides (Fe, Mn,		Projector/ Smart board	1,2,3

				Cr, Ti), hydroxides of aluminum (Bauxite).			
	17/03/25	22/03/25	2	Metamorphic minerals: garnet, staurolite, chlorite, andalusite - kyanite - sillimanite.		Projector/ Smart board	1,2,3
	24/03/25	29/3/25	2	Metamorphic minerals: garnet, staurolite, chlorite, andalusite - kyanite - sillimanite.		Projector/ Smart board	1,2,3
	31/03/25		1	Uses of X-rays in crystallography and mineralogy.		Projector/ Smart board	1,2,3
April	1/04/25	5/04/25	2	Revision		Projector/ Smart board	
	7/04/25	11/4/25	2	Revision		Projector/ Smart board	

References:

1. Deer, W. A., Howie, R. A., & Zussman, J. (1978). Rock-forming minerals: Feldspars, Volume 4A. Geological Society of London.
2. Klein, C., & Hurlbut, C. S. Jr. (2021). Dana manual of mineralogy. Wiley.
3. Perkins, D. (2013). Mineralogy: Pearson Higher Ed.

Assessment Rubrics

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

