

LESSON PLAN (WINTER-26)

Discipline: Mining Engineering	Semester: 3rd semester	Name of the Teaching Faculty: SMT.SAMAPIKA DASH
Subject: Mine Geology - I Sub code: Th.3	No of days /week class allotted: 02/ week	Semester from Date: 01/07/2026 to 05/11/2026 No of weeks: 21

Course Outcomes	Statement
CO1	Discuss the concept of Geomorphology
CO2	Identify the fundamentals of Igneous, Sedimentary and Metamorphic rocks along with their texture and structures.
CO3	Explain the basics of structural geology.
CO4	Demonstrate the elements of crystallography.
CO5	Interpret the elements of mineralogy.

Mon th	Week	No of periods available	Class Day	Theory topics to be covered	(COs)	MODE OF TEACHING
JULY	1 st	02P	01.07.2026	Introduction & Briefing about the Syllabus. Introduction about Geology, syllabus discussion and basic concepts and scope of Geology for Mining Engineering	-	Lecture/ PPT
			02.07.2026	Elements of Mineralogy Minerals and rock forming and ore forming minerals with examples <u>Physical properties of minerals</u> Color, streak, luster, Hardness, Moh's hardness scale	CO5	Lecture/ Specimen Demonstration
	2 nd	02P	08.07.2026	<u>Physical properties of minerals;</u> Cleavage, fracture, tenacity, habit, odor, feel.	CO5	Lecture/ Specimen Demonstration
			09.07.2026	<u>Physical properties of minerals;</u> Specific gravity, fluorescence, phosphorescence, magnetism.	CO5	Lecture/ Specimen Demonstration
	3 rd	01P	15.07.2026	Petrology Rocks and minerals with Example. Igneous rocks and its types & how Igneous Rocks are formed?	CO2	Lecture & Sample Study
	4 TH	02P	22.07.2026	Sedimentary rocks and its types & how Sedimentary rocks are formed?	CO2	Lecture & Sample Study
			23.07.2026	Metamorphic rocks and its types. & How Metamorphic Rocks formed?	CO2	Lecture & Sample Study
	5 TH	02P	29.07.2026	Texture and Various textures found in Igneous rocks	CO2	PPT & Diagram
			30.07.2026	Texture and Various textures found in Igneous rocks	CO2	PPT & Diagram

AUGUST	6 TH	NA	NA	NA	NA	NA
	7 TH	02P	05.08.2026	Monthly Test-01	CO2 & CO5	Assessment
			06.08.2026	Porphyritic and poikilitic texture with diagram.	CO2	PPT & Diagram
	8 TH	02P	12.08.2026	Description of Various structures found in sedimentary rocks.	CO2	PPT & Diagram
			13.08.2026	Description of Various structures found in metamorphic rocks.	CO2	PPT & Diagram
	9 TH	02P	19.08.2026	Structural Geology Introduction to structural Geology and Description of Outcrop, bed, Dip, Strike, True dip and apparent dip with diagram	CO3	PPT & Diagram
			20.08.2026	Monthly test results and discussion.	CO2 & CO5	Lecture & Discussion
	10 TH	NA	NA	NA	NA	NA
SEPTEMBER	11 TH	02P	02.09.2026	Fold and different parts of fold with diagram.	CO3	PPT & Diagram
			03.09.2026	Description of different types of fold. - Types based on symmetry of fold - Based on Thickness of fold - Types based on appearance in cross-section	CO3	PPT & Diagram
			01.09.26 - 08.09.26	1st Internal Assessment/Class Test	CO2, CO3 & CO5	Assessment
	12 TH	02P	09.09.2026	Description of different types of fold. - Based on interlimb angle - Based on Attitude of fold - Special types of fold.	CO3	PPT & Diagram
			10.09.2026	Faults and terminology of fault.	CO3	PPT & Diagram
	13 TH	01P	17.09.2026	Description of different types of Faults with diagram.	CO3	PPT & Diagram
	14 TH	02P	23.09.2026	Recognition of faults in the field.	CO3	Lecture PPT & Diagram
			24.09.2026	Joints and its types.		
	15 TH	01P	30.09.2026	Monthly Test-02	CO3	Assessment
OCTOBER	16 TH	01P	01.10.2026	Unconformity and how the unconformities have been formed in nature	CO3	PPT & Diagram
	17 TH	02P	07.10.2026	Study of different types of unconformities - Angular Unconformity - Disconformity - Para unconformity	CO3	PPT & Diagram

NOVEMBER	18 TH	02P	08.10.2026	Non -conformity Monthly Test-03 (GOOGLE FORM) ONLINE QUIZ	CO-1 TO CO5	Assessment
			14.10.2026	Seminar and extension lecture	CO5	Seminar
			15.10.2026	Vacancies, Interstitials and impurities, Types and causes of line defects: Effect of deformation on material properties.	CO4	PPT & Diagram
	19 TH	02P	21.10.2026	Edge dislocation and screw dislocation	CO4	PPT & Diagram
			22.10.2026	Effect of imperfection on material properties,	CO4	PPT & Diagram
	20 TH	02P	28.10.2026	Deformation by slip and twinning	CO4	PPT & Diagram
			29.10.2026 (26.10.26-31.10.26)	2ND Internal Assessment/Class Test	CO1 & CO5	Assessment
	21 ST	02P	04.11.2026	Revision (CHAPTER-01,2,3,4 & 5) & Previous year question & Answer discussion.	CO1-CO5	Lecture & Discussion
			05.11.2026	VERY SIMILAR TEST/MOCK TEST	CO1-CO5	Lecture & Discussion


 30/06/2026
 PREPARED BY
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