

LESSON PLAN (W-26)

Discipline: Drilling Engineering		Semester: 3rd semester	Name of the Teaching Faculty: MRS.SAMAPIKA DASH			
Subject: Engineering Geology – I Sub code: DEPC203 (Th.2)		No of days /week class allotted: 01	Semester from Date: 01/07/2025 to 05/11/2025 No of weeks: 21			
Course		Statement				
CO1		Understand about the interior of earth, identify and classify rock, minerals using basic geological classification system.				
CO2		Explain the dynamic natural agencies that are constantly moulding the landscape of earth.				
CO3		Remember and Comprehend the concepts of geomorphology and its application to Geology and Engineering				
CO4		Knowledge on the properties of Minerals. Distinguish physical and chemical properties of various rock forming minerals and ore forming minerals and their identification.				
CO5		Acquire skills on field recognition of faults, folds and their types. Make judgement on Dip and Strike of strata. Analyse geological structures in the rock beds for various constructions and structures that govern location of ore deposits.				
Month	Week	No of periods available	Class Day	Theory topics to be covered	(COs)	MODE OF TEACHING
JULY	1 st	02P	03.07.2026	Briefing about the Syllabus. Introduction about Geology and different branches of geology and scope of Geology for Drilling Engineering.	CO1	Lecture/ PPT
			04.07.2026	(Extra Class) <u>The origin, nature, and geological classification of rock materials;</u> Internal structure of earth; Introduction about classification of the internal structure, The crust	CO1	Lecture/ PPT
	2 nd	01P	10.07.2025	Internal structure of earth; The Mantle. The Core	CO1	Lecture/ PPT
	3 RD	02P	17.07.2026	Rocks and minerals with example. Igneous rocks and its types & formation of Igneous Rocks	CO1	Lecture & Sample Study
			18.07.2026	Sedimentary rocks and its types & formation of Sedimentary Rocks Metamorphic rocks and its types Formation of Metamorphic Rocks	CO1	Lecture & Sample Study
	4 TH	01P	24.07.2026	<u>Elements of Mineralogy</u> Minerals and rock forming and ore forming minerals with examples <u>Physical properties of minerals</u> Color, streak, luster, Hardness	CO4	Lecture PPT/ Specimen Demonstration
	5 TH	01P	31.07.2026	<u>Physical properties of minerals</u> Hardness, Moh's hardness scale, habit, odor, feel, tenacity <u>Physical properties of minerals</u> Cleavage, fracture, Specific gravity,	CO4	Lecture PPT/ Specimen Demonstration

				fluorescence, phosphorescence, magnetism.		
AUGUST	6 TH	NA	NA	NA		
	7 TH	01P	07.08.2026	Mineralogy & Physical properties of Quartz group & Feldspar group of minerals	CO4	Lecture/ PPT
	8 TH	01P	14.08.2026	Optical Properties of minerals & Silicate Structure	CO4	Lecture/ PPT
	9 TH	01P	21.08.2025	Monthly Test-1	CO1- CO4	Assessment
	10 TH	02P	28.08.2025	Structural Geology Introduction to structural Geology and Description of Outcrop, bed, Dip, Strike, True dip and apparent dip with diagram True dip and apparent dip with diagram	CO5	PPT & Diagram
			29.08.2026	EXTRA CLASS Fold and different parts of fold with diagram.	CO5	PPT & Diagram
SEPTEMBER	11 TH	01.09.2026-08.09.2026		1 st Internal Assessment/Class Test	CO1- CO4	Assessment
	12 TH	01P	11.09.2026	Description of different types of fold. - Types based on appearance in cross-section - Types based on symmetry of fold	CO5	PPT & Diagram
	13 TH	01P	18.09.2026	Description of different types of fold. - Based on Thickness of fold - Based on interlimb angle - Based on Attitude of fold - Special types of fold	CO5	PPT & Diagram
	14 TH	01P	25.09.2026	Faults and terminology of fault. Description of different types of Faults with diagram. Recognition of faults in the field.	CO5	PPT & Diagram
	15 TH	NA	NA	NA	NA	NA
OCTOBER	16 TH	NA	NA	NA	NA	NA
	17 TH	01P	09.10.2026	Monthly Test-2	CO4 &CO5	Assessment
	18 TH	01P	16.10.2026	Joints and different types of Joints. Unconformity and how the unconformities have been formed in nature. Study of different types of unconformities - Angular Unconformity - Disconformity - Para unconformity - Non -conformity	CO5	PPT & Diagram

	19 TH	01P	23.10.2026	Economic Geology Definition of ore, ore minerals with examples. Gangue, tenors & grade with examples. Important ore minerals of IRON ore. Mode of occurrence of Iron deposits in India. Distribution and uses of Iron deposits in India.	CO4	Lecture/ PPT
	20 TH	01P	30.10.2026	Description of mineralogy of Copper deposits Mode of occurrence and origin of copper ore. Distribution and uses of Copper ore deposit.	CO4	Lecture/ PPT
			31.10.2026	Description of mineralogy of Lead & Zinc deposits. Origin and mode of occurrence of Lead and Zinc deposits. Distribution and uses of Lead & Zinc deposits Mineralogy , origin and mode of occurrence of Chromite deposits Distribution and uses of Chromite deposits in India.	CO4	Lecture/ PPT
			26.10.2026-31.10.2026		2ND Internal Assessment/Class Test	CO1-CO5
NOVEMBER	21 ST	NA	NA	NA	NA	NA
	22 nd	01P	07.11.2026 (EXTRA CLASS)	(Extra Class) Previous year question & Answer discussion REVISION AND DOUBT CLEARING CLASSES	CO1-CO5	Lecture/ PPT
	23 RD	01P	13.11.2026 (EXTRA CLASS)	Full syllabus MOCK TEST-1	CO1-CO5	Assessment


25/06/2026
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