

## LESSON PLAN

Discipline: <b>Drilling Engineering</b>		Semester: <b>4th semester</b>	Name of the Teaching Faculty: <b>MRS.SAMAPIKA DASH</b>	
Subject: <b>Engineering Geology-II</b> Sub code: <b>TH.3</b>		No of days /week class allotted: <b>02</b>	Semester from Date: <b>14/02/2023 to 23/05/2023</b> No of weeks: <b>16</b>	
Month	Week	No of periods available	Class Day	Theory topics to be covered
FEBRUARY	1 <sup>st</sup>	02P	15.02.2023	<b>Briefing about the Syllabus.</b> <b>PREVIOUS SEMSTER IMPORTANT TOPIC DISCUSSION.</b> e.g- ROCKS AND MINERALS ,IMPORTANT STRUCTURES AND OTHER BRANCHES OF GEOLOGY.
			15.02.2023	Stratigraphy and types of stratigraphy.
	2 <sup>nd</sup>	02P	22.02.2022	Principles of Stratigraphy. <ul style="list-style-type: none"> <li>• Principle of Uniformitarianism</li> <li>• Principle of Original horizontality</li> <li>• Principle of Superposition</li> <li>• Principle of Original Lateral Continuity</li> </ul>
			22.02.2022	<ul style="list-style-type: none"> <li>• Principle of Cross-Cutting Relationships</li> <li>• Principle of Inclusion</li> <li>• Principle of Faunal Succession</li> </ul>
	3 <sup>rd</sup>	NA	NA	NA
MARCH	4 <sup>th</sup>	02P	01.03.2023	<u>Geological time scale.</u> <ul style="list-style-type: none"> <li>• Pre-Cambrian</li> <li>• Paleozoic</li> <li>• Mesozoic</li> <li>• Cenozoic</li> </ul>
			01.03.2023	Stratigraphy sequence, lithology of Iron Ore Series.
	5 <sup>th</sup>	02P	NA	NA
	6 <sup>th</sup>	02P	15.03.2023	Distribution and economic minerals deposit of Iron Ore Series
			15.03.2023	Stratigraphy sequence, lithology of gondwana supergroup. Two fold classification of gondwana supergroup. Three fold classification of gondwana supergroup
	7 <sup>th</sup>	02P	22.03.2023	<b>Monthly Test-01</b>
			22.03.2023	Distribution and economic minerals deposit of Gondwana Supergroup and different lower gondwana coal fields in India.
	8 <sup>th</sup>	02P	29.03.2023	Stratigraphy sequence, lithology of Cuddapah Supergroup . Distribution and economic minerals deposit of Cuddapah Supergroup.
			29.03.2023	Stratigraphy sequence, lithology of Vindhyan Supergroup. Distribution and economic minerals deposit of Vindhyan Supergroup.

APRIL	9 <sup>TH</sup>	02P	05.04.2023	Monthly test results and discussion. Doubt Clearing Class.
			05.04.2023	<b>Economic Geology</b> Definition of ore, ore minerals with examples. Gangue, tenors & grade with examples.
	10 <sup>TH</sup>	02P	12.04.2023	Important ore minerals of IRON ore.
			12.04.2023	Mode of occurrence of Iron deposits in India. Distribution and uses of Iron deposits in India.
	11 <sup>TH</sup>	02P	19.04.2023	Description of mineralogy of Copper deposits.
			19.04.2023	Mode of occurrence and origin of copper ore. Distribution and uses of Copper ore deposit.
	12 <sup>TH</sup>	02P	26.04.2023	<b>Internal Assessment/Class Test AS PER SCTE &amp; VT ACADEMIC CALENDER</b>
MAY	13 <sup>TH</sup>	02P	03.05.2023	Description of mineralogy of Lead & Zinc deposits. Origin and mode of occurrence of Lead and Zinc deposits.
			03.05.2023	Distribution and uses of Lead & Zinc deposits.
	14 <sup>TH</sup>	02P	10.05.2023	Mineralogy, origin and mode of occurrence of Chromite deposits
			10.05.2023	Distribution and uses of Chromite deposits in India.
	15 <sup>TH</sup>	02P	17.05.2023	<b>Previous year question &amp; Answer discussion</b>
			17.05.2023	<b>Previous year question &amp; Answer discussion</b>
	16 <sup>TH</sup>	NA	NA	<b>VERY SIMILAR TEST /MOCK TEST</b>

*Samapika Dash*  
14/02/22

**PREPARED BY  
SAMAPIKA DASH  
SENIOR LECTURER  
MATH AND SC. (GEOLOGY)  
OSME, KEONJHAR**

*Day*  
14.02.2023

**HOD  
DRILLING ENGINEERING  
OSME, KEONJHAR**

*Principal*  
**PRINCIPAL  
OSME, KEONJHAR**



## LESSON PLAN

Discipline: <b>Drilling Engineering</b>		Semester: <b>4th semester</b>	Name of the Teaching Faculty: <b>Sabyasachi Biswal (PTGF)</b>	
Subject: <b>Engineering Geology-II</b> Sub code: <b>TH.3</b>		No of days /week class allotted: <b>02</b>	Semester from Date: <b>14/02/2023 to 23/05/2023</b> No of weeks: <b>16</b>	
Month	Week	No of periods available	Class Day	Theory topics to be covered
FEBRUARY	1 <sup>st</sup>	NA	NA	NA
	2 <sup>nd</sup>	02P	20.02.2023	<b>Briefing about the Syllabus.</b> Introduction /Most important topic taught in last semester
			20.02.2023	<b>Fossil fuels</b> Coal & the different ranks of coal. 1)Peat 2)Lignite 3)Sub bituminous 4)Bituminous 5)Anthracite Different grades of coal viz.A,B,C,D
	3 <sup>rd</sup>	2P	27.02.2022	<b>Chemical properties of coal.</b> 1)moisture content 2)volatile matter 3)fixed carbon 4)fuel ratio
			27.02.2022	<b>Chemical properties of coal</b> 5)ash content 6)sulfur content 7)calorific value
	4 <sup>th</sup>	NA	NA	NA
MARCH	5 <sup>th</sup>	02P	06.03.2023	In-situ theories accounting for the origin of coal
	6 <sup>th</sup>	02P	06.03.2023	Drift theories accounting for the origin of coal
			13.03.2023	Description of different lower gondwana coal fields of India.
			13.03.2023	Petroleum and its composition. Organic theories accounting for the origin of petroleum.
	7 <sup>th</sup>	02P	20.03.2023	Inorganic theories accounting for the origin of petroleum
			20.03.2023	Migration of petroleum.
	8 <sup>th</sup>	02P	27.03.2023	<b>Monthly Test-01</b>
			27.03.2023	Oil traps, its formation and types of oil traps. Oil pool and its formation
APRIL	9 <sup>th</sup>	02P	03.04.2023	Process of accumulation of oil.
			03.04.2023	Description of different important oil fields of India.
	10 <sup>th</sup>	02P	10.04.2023	Sampling and assaying

MAY			10.04.2023	Methods of preparation of sample assay <b><u>TYPES OF SAMPLING</u></b> • Grab Sampling • Chip Sampling • Channel Sampling
	11 <sup>TH</sup>	02P	17.04.2023	<b><u>TYPES OF SAMPLING</u></b> • Bulk Sampling • Dump Sampling • Trench Sampling
			17.04.2023	Different methods of sampling outlined by BIS
	12 <sup>TH</sup>	02P	24.04.2023	<b><u>Prospecting and exploration</u></b> Definition of Prospecting and exploration & difference between exploration and prospecting.
			24.04.2023	Use of Multishot camera for Borehole direction test.
	13 <sup>TH</sup>	02P	01.05.2023	Geological exploration.
			01.05.2023	Description of various criteria for geological exploration
	14 <sup>TH</sup>	02P	08.05.2023	Geophysical prospecting and Different methods of geophysical prospecting.
			08.05.2023	Different methods of geophysical prospecting.
	15 <sup>TH</sup>	02P	15.05.2023	Geo chemical prospecting and methods. Bio-geochemical & Geo botanical Prospecting.
			15.05.2023	<b>Previous year question &amp; Answer discussion</b>
	16 <sup>TH</sup>	NA	22.05.2023	<b>VERY SIMILAR TEST /MOCK TEST</b>
			22.05.2023	

Sabyasachi Biswal  
14/02/23

PREPARED BY  
SABYASACHI BISWAL  
PTGF (GEOLOGY)  
OSME, KEONJHAR

HOD  
Senior Lecturer (Drilling)  
DRILLING ENGINEERING  
OSME, KEONJHAR  
14-02-2023

Principal  
PRINCIPAL  
OSME, KEONJHAR  
Principal  
Onssa School of Mining Engineering  
Keonjhar