# LESSON PLAN

| Discipline: **Drilling Engineering** | Semester: **3rd Semester** | Name of the Teaching Faculty: **SABYASACHI BISWAL** |
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| Subject: **Engineering Geology - I** Sub code: **Th.3** | No of days /week class allotted: **02** | Semester from Date: **15/09/2022 to 22/12/2022** No of weeks: **15** |

| Month | week | No of periods available | Class Day | Theory topics to be covered |
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| September | 1st | 01P | 17.09.2022 | Introduction about Geology & Scope of Geology in Drilling Field. |
| | 2nd | 2P | 19.09.2022 | **Elements of Mineralogy**<br>Silicate structure<br>What is silicate structure, neso-silicate, soro-silicate. |
| | | | 24.09.2022 | Silicate structure<br>Cyclo-silicate, phyllo-silicate, tecto-silicate. |
| | 3rd | 01P | 26.09.2022 | Physical properties of Quartz group of minerals. |
| October | 4th | 01P | 01.10.2022 | Physical properties of Feldspar group of minerals. |
| | 5th | 02P | 10.10.2022 | Various optical properties of minerals.<br>• Birefringence,<br>• uniaxial minerals,<br>• biaxial minerals. Isotropic, anisotropic,<br>• refractive index,<br>• double refraction, |
| | | | 15.10.2022 | Various optical properties of minerals.<br>Extinction, pleochroism, interference colour. |
| | 6th | 02P | 17.10.2022 | **Surface processes causing rock disintegration**<br>Weathering and different types of weathering.<br>Physical weathering |
| | | | 22.10.2022 | Weathering and different types of weathering.<br>• Chemical weathering<br>• Biological weathering. |
| | 7th | 02P | 29.10.2022 | **Monthly Test.** |
| | | | 31.10.2022 | Erosion, difference between erosion and weathering |
| November | 8th | 01P | 05.11.2022 | Erosional land forms produced by wind;<br>• Introduction & process of wind erosion, Desert pavement, Hamada, blow-out, yardang. |
| | 9th | 2P | 07.11.2022 | **Monthly test results and discussion.**<br>Erosional land forms produced by wind;<br>• ventifacts,<br>• mushroom rock,<br>• cave rock |

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| | | | 12.11.2022 | Depositional land forms produced by wind;<br>Introduction about how wind deposits the sediments. Loess, Sand dunes; its formation and types: longitudinal dunes, transverse dunes, barchans, parabolic dunes, star dunes. |
| | 10th | 2P | 14.11.2022 | Land forms produced by river;<br>Introduction, river profile, ideas about process of river erosion, |
| | | | 19.11.2022 | **Internal Assessment.** |
| | 11th | 2P | 21.11.2022 | Erosional land forms produced by river;<br>Potholes, river valley, georges& canyon. Escarpment, dip slope, cuesta, hogback |
| | | | 26.11.2022 | Erosional land forms produced by river;<br>Mesa & butte, water-fall, peneplain, pediplain, river-terraces, wadies,Flood plain deposits, meanders & ox-bow lake. |
| | 12th | 1P | 28.11.2022 | Depositional land forms produced by river;<br>How the river deposits sediments<br>Alluvial fans & cones, Natural levee, braided river, delta. |
| December | 13th | 1P | 3.12.2022 | Process of glacier erosion Introduction about glacier movement, difference between ice, snow, glacierWhat is ice-berg? Difference between glacier & ice-berg. |
| | 14th | 2P | 5.12.2022 | Erosional features produced by glacier;<br>Cirque, arete, horn, cols, U-shape valley, Hanging valleys, tarn, nunatak, crag & tails, Roche mountains, glacial stairway, glacial groves, fiords, paternoster lake. |
| | | | 10.12.2022 | Depositional land forms produced by glacier;<br>How glacier deposits sediments, till, erratic, drumlins, basket-egg topography. |
| | 15th | 2P | 12.12.2022 | Moraine & its types;<br>Ground moraine, end moraine, terminal moraines, medial moraine, lateral moraine, recessional moraine. |
| | | | 17.12.2022 | **Previous Year Semester Question Discussion Revision & Doubt Clearing Class.** |

verified
14/9/22
Sabyasachi Biswal

**PREPARED BY**

**GUEST FACULTY(GEOLOGY)**
**OSME, KEONJHAR**

14.09.2022

**HOD**
**DRILLING ENGINEERING**
**OSME, KEONJHAR**

**PRINCIPAL**
**OSME, KEONJHAR**