**20CE21P2 - ENGINEERING GEOLOGY LABORATORY**

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| **Course Category** | Professional Core | **Credits**  | 1.5 |
| **Course Type**  | Practical | **Lecture - Tutorial - Practical**  | 0-0-3 |
| **Prerequisite** | - | **Sessional Evaluation**  | 40 |
| **Semester End Exam Evaluation**  | 60 |
| **Total Marks**  | 100 |
| **Course Objective(s)** | To understand various geological aspects of minerals, rocks and landforms for their application in engineering projects. |
| **Course Outcomes** | CO1 | Identify the minerals using basic geologic classification systems. |
| CO2 | Identify the rocks using basic geologic classification systems. |
| CO3 | Categorize the various landforms of the earth surface. |
| CO4 | Calculate the elements of structural geology and thickness of rock strata. |
| CO5 | Study the structural elements of surface and subsurface strata. |
| CO6 | Interpret various types of topographical and geological maps. |
| **Course Content** | **LIST OF EXPERIMENTS.**1. Study of physical properties of minerals
2. Identification of minerals
3. Identification of Rocks
4. Study of Dipping beds and their thickness
5. Study of true dip, apparent dip and strike direction of beds
6. Three-point problem or Borehole problem.
7. Study of geological maps of
	1. Horizontal beds
	2. Dipping beds
	3. Dipping beds with dyke
	4. Folded beds
	5. Faulted beds
	6. Beds with unconformity
	7. Completion of outcrop
8. Study of geological models
9. Handheld GPS – Demonstration.
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**CO-PO Mapping:** 3-High Mapping, 2-Moderate Mapping, 1-Low Mapping, - -Not Mapping

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|  | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** | **PO11** | **PO12** |
| **CO1** | 1 | 1 | - | - | - | - | 1 | - | - | - | - | 1 |
| **CO2** | 2 | - | - | - | - | - | 1 | - | - | - | - | 1 |
| **CO3** | 2 | - | - | - | - | 1 | - | - | - | - | - | - |
| **CO4** | 1 | 2 | - | - | - | - | 1 | - | - | - | - | 1 |
| **CO5** | 1 | 1 | - | 1 | - | 1 | 3 | - | - | - | - | 2 |
| **CO6** | - | - | - | 2 | - | - | - | 2 | 1 | - | - | 1 |