

**B.Tech II Year I Semester**

**Course Structure**

<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>

**ENGINEERING GEOLOGY LAB**

**Internal marks : 40**

**COURSE CODE: P18ESL03**

**External marks :60**

**Part- A**

**Introduction to Engineering Geology**

1. **Study of Mineralogy** : Minerals definition, identification studies and advantages Physical properties of minerals.
2. **Study of Petrology** : Rock definition, classification of rocks Dykes and sills, common structures and textures of Rocks Megascopic study of rocks
3. **study of Structural Geology** : Out crop, Strike and dip Folds, Faults and Joints - types, importance and occurrence

**Part- B**

**List of Experiments**

1. Physical properties of minerals: Mega-scopic identification of
  - a) Rock forming minerals – Quartz group, Feldspar group, Garnet group, Mica group & Talc, Chlorite, Olivine, Kyanite, Asbestos, Tourmelene, Calcite, Gypsum, etc...
  - b) Ore forming minerals – Magnetite, Hematite, Pyrite, Pyralusite, Graphite, Chromite, etc...
2. Megascopic description and identification of rocks.
  - a) Igneous rocks – Types of Granite, Pegmatite, Gabbro, Dolerite, Syenite, Granite Poryphery, Basalt, etc...
  - b) Sedimentary rocks – Sand stone, Ferruginous sand stone, Lime stone, Shale, Laterite, Conglomerate, etc...
  - c) Metamorphic rocks – Biotite – Granite Gneiss, Slate, Muscovite & Biotite schist, Marble, Khondalite, etc...
3. Study and Observation of folds, faults and joints.
4. Structural Geology-Problem on strike, Dip.

5. Interpretation and drawing of sections for geological maps showing tilted beds, faults, unconformities etc.

**Text Books:**

1. Engineering geology by Dr.N.Chennakesavulu
2. Engineering Geology by Parbin Singh.

**Reference Books:**

1. Applied Engineering Geology Practicals' by M T Mauthesha Reddy, New Age International Publishers, 2nd Edition.
2. Foundations of Engineering Geology' by Tony Waltham, Spon Press, 3rd edition, 2009.

**Web References:**

1. [www.nptel.ac.in](http://www.nptel.ac.in)
2. [www.easyengineering.net](http://www.easyengineering.net)

