

Engineering geology for engineers

ABSTRACT

This learning program is solely intended for the civil engineers to understand, appreciate and utilize the beauty of Engineering Geology, a branch of the science of Geology. Geology itself is a very vast discipline; it is the Science of Earth and can be extended to the Science of the Planets. Apart from engineering geology, the other branches of geology include geochemistry, geophysics, seismology, volcanology, paleontology, petrology, sedimentology, hydrology, mineralogy, economic geology, petroleum geology and others. In general, this learning program is divided into three sections. In the first section, it intends to introduce the basics of identifying minerals and rocks, which are the fundamental constituents of the earth (and planets) above which all civil engineering structures lies on. The second section will introduce the understanding, analyses and usage of Stereographic methods, geological and geotechnical mappings and bore hole-drilling data in civil engineering field. The third section will be experimental testing rock testing: Slake Durability Test, Point Load Strength Test, Rock Shear Box Test and Rock Triaxial Test.