

Engineering geology is the application of [geology](#) to [engineering](#) study for the purpose of assuring that the geological factors regarding the location, design, construction, operation and maintenance of engineering works are recognized and accounted for.^[1] [Engineering geologists](#) provide geological and [geotechnical](#) recommendations, analysis, and design associated with human development and various types of structures.^[2] The realm of the engineering geologist is essentially in the area of earth-structure interactions, or investigation of how the earth or earth processes impact human made structures and human activities.

Engineering geology studies may be performed during the planning, environmental impact analysis, civil or structural engineering design, value engineering and construction phases of public and private works projects, and during post-construction and forensic phases of projects. Works completed by engineering geologists include; [geologic hazards](#) assessment, [geotechnical](#), material properties, [landslide](#) and slope stability, [erosion](#), [flooding](#), [dewatering](#), and [seismic](#) investigations, etc.^[3] Engineering geology studies are performed by a [geologist](#) or engineering geologist that is educated, trained and has obtained experience related to the recognition and interpretation of natural processes, the understanding of how these processes impact human made structures (and vice versa), and knowledge of methods by which to mitigate hazards resulting from adverse natural or human made conditions. The principal objective of the engineering geologist is the protection of life and property against damage caused by various geological conditions.^[4]

The practice of engineering geology is also very closely related to the practice of [geological engineering](#) and [geotechnical engineering](#). If there

is a difference in the content of the disciplines, it mainly lies in the training or experience of the practitioner.