

The field of civil engineering



The Field of Civil Engineering Introduction The field of Civil Engineering is known to be the second oldest engineering after military engineering. It is a discipline that focuses mainly on the design, construction and maintenance of the environment; both natural and physical (Civil Engineering Portal, 2010). Generally, civil engineering focuses on infrastructural development. Among its most significant subdivisions include structural engineering, irrigation engineering, transportation engineering, water resources engineering, hydraulic engineering and construction engineering, environmental engineering (Civil Engineering Portal, 2010). In this respect, some of the main constructions that civil engineers deal with include buildings, dams, roads, bridges, shipping canals and airport runways just to mention a few.

History and Major Civil Engineering Projects The history of civil engineering and its close relative, architecture, can be traced to the construction of the Egyptian pyramids between 2700 and 2500 BC. Other ancient constructions include the Parthenon, the Appian Way, and China's great wall. Modern day contributions of the discipline include the world's tallest building (Burj Khalifa), the Clifton Suspension Bridge, the Dynamic Tower and Empire State Building in the US.

Training and Qualification Civil engineers normally go through intensive training in order to be equipped with valuable skills and practical knowledge of how to accomplish various tasks and solve specific problems. Training of civil engineers involves learning of English (language), mathematics, social studies, history, physics, chemistry and drawing and design. There are different alternative routes that one may follow to achieve formal recognition as a civil engineer. An individual may take a diploma in the course and later proceed to get a degree. Alternatively, one may study for a degree in the field directly.

Beyond the first degree, civil engineers can proceed with their education to master, and doctorate levels. Almost every country has its engineering registration institutions that grant qualified persons the privilege to practice engineering. Internationally, the Institution of Civil Engineers is recognized as the body that oversees civil engineering practice (ICE, 2011).

Working Environment of Civil Engineers

The civil engineer has to consider numerous factors as they design each project. Some of these factors include life expectancy, environmental impacts, safety and health, and cost of the project as noted by Civil Engineer Blog (2011). Civil engineers can work in various capacities within an organization; as technicians, administrators, researchers, educators and designers. In the United States alone, there are about 237, 000 civil engineers employed in different organizations. The salary for a civil engineer in most countries ranges from 43, 000 USD to 90, 000USD per year (Civil Engineer Blog, 2011). This specific salary and accompanying benefits that the engineers receive widely depend on geographical location, the organization one works with, qualification, and nature of job. Qualified individuals can work with various organizations including construction companies, educational institutions, marine companies, and urban councils, the list only providing a few examples.

Conclusions

Civil engineering as a discipline mainly concerns itself with the development of the physical and built environment. To-date, civil engineering constructions have changed the world's history in a major way. In fact, it is almost beyond imagination to think of a world without the contribution of civil engineering. The field in a most significant way impacts the public's living standard, safety and health and provides numerous opportunities for work and growth to those who are interested in it.

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