
CIVIL AND ARCHITECTURAL ENGINEERING GROUP

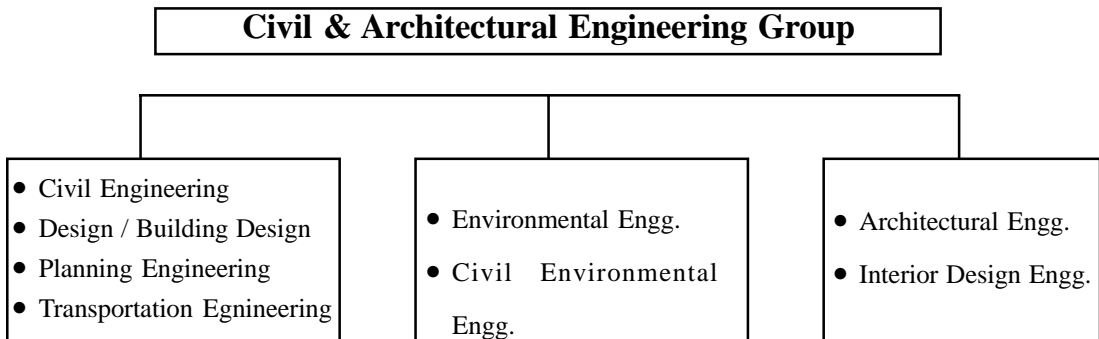


Civil Engineering hailed as the harbinger of Modern India, was the first and foremost choice of post independent India, as the First Five-Year-Plan laid equal emphasis on agriculture and industrial development. Consequently, demand for Civil Engineering with its focus on construction activities naturally rocketed to the skies.

Of course, that is not to say Civil Engineering lost its glamour with the advent of other disciplines, and more particularly, the Information Technology, in recent times.

True, demand for streams under IT or Mechanical or Chemical Engineering are more but, with the present boom in the construction activities and Government laying more and more stress on building infrastructural facilities, this area has again gained significance.

This group does not limit itself strictly to construction or architecture, but, it encompasses a wide range of areas as illustrated below:-



Civil Engineering may, broadly be classified into two areas:-

- * Civil Engineering (CIV)
- * Civil Environmental Engineering (CEE)

We shall discuss these in detail in the ensuing pages.

CIVIL ENGINEERING (CIV)



Prosperity of a nation is directly proportional to the infrastructural facilities it creates for smooth flow of goods and services.

Civil engineering is concerned with the building up of infrastructure and creation of construction facilities suitable to different situations and different locations as per specific requirements, construction of Highways or Sky Scrappers in metros like Mumbai or huge Hydroelectric Projects. Civil engineers are basically problem shooters endowed with the basic qualities of curiosity and constructive approach. They can, handle all construction works relating to buildings, roads, infrastructure, water management, irrigation works etc.

Their activities involve

- a) Planning, Research, Survey and Construction of all kinds of buildings, roads, highways, rail roads , water ways, canals, dams, bridges and tunnels, transport systems, power plants, water supply and sewage disposal plants, airports, harbours, oil rigs etc.
- b) Improving human lifestyles by judiciously utilising the available natural resources.
- c) Designing and executing the required / planned projects as per the needs.
- d) Making effective use of computers, information technology in all construction works and projects.

JOB OPPORTUNITIES

Civil Engineers can work as

- Structural Engineers, Transportation Engineers, Environmental engineers, highway engineers etc.
- Engineers in major construction projects carried out by Government such as Public Works Departments (PWD), Airports, Harbours, Ports, Water & Sewage Boards, Railways, Military Engineering Services, Private Constructional Companies, Consultancy services etc.
- Researchers.
- Faculty members in Colleges or Universities.
- Entrepreneurs offering consultancy services.

CIVIL ENVIRONMENTAL ENGINEERING (CEE)



Civil Environmental engineering is an exceptionally important discipline providing sustainable environmental solutions that are crucial for the survival of the human as well as other beings on the planet. This is a course dealing with basic civil engineering with a special focus on environmental aspects such as Sanitary and Public Health Engineering, Solid Waste Disposal Treatment, Water and Air Pollution etc.

The major elements of the course content and structure are shared with civil engineering with inclusion of environmental subjects. The following are special features of the course

- Environmental engineering which aims at developing solutions to environmental problems using the principles of Biology and Chemistry.
- Subjects that lay emphasis on water and air pollution control, recycling, waste disposal and public health issues, hazardous waste (solid, liquid & both) etc.
- Management studies involving the treatment and containment as per the stipulated regulations of the contemporary world to prevent mishaps.

The services of Civil & Environmental engineers are required in various areas as given below:-

- Designing of municipal water supply and industrial wastewater treatment systems.
- Conducting research on the environmental impact of proposed construction projects.
- Analysis of scientific data and perform quality control checks.
- Formulating, implementing and monitoring the local and worldwide environmental issues.
- Minimising the effects of acid rain, global warming, automobile emissions and ozone depletion.
- Measures essential for protection of wild life.

JOB OPPORTUNITIES: Civil and environmental engineers have job opportunities in Civil Engineering industries relating to environmental issues. Apart from this, they also find placement in

- Works and services involved in effective use of natural resources.
- Consultancy agencies involved in the preparation of environmental impact assessment for small, medium & large scale industries.
- Regulatory Authorities involved in monitoring of pollution in industries.
- Government departments
- Mining, Forestry and Construction industries.