

# Civil Engineering

## What is Civil Engineering?

“Civil engineers are changing the world. They dream up creative, practical solutions that benefit the everyday lives of people and the communities in which we live. They work with smart and inspiring people to invent, design and build things that matter.”



## Different Roles and Area of Civil Engineer

Civil Engineering is considered to be the most versatile branch among all the engineering branches.

The main areas of Geotechnical Engineering, Hydraulics Engineering, Surveying, Analysis and Design of Structural Engineering, Hydraulics Engineering, Environmental Engineering, Transportation Engineering, Construction Engineering.

The following are some of the important branches of civil engineering:

- **Geotechnical Engineering:** Geotechnical engineers analyze the properties of soil and rock to determine engineering properties. It includes projects such as tunnels, foundations, offshore platforms, etc.
- **Hydraulic engineering:** Engineers in this field primarily make their contribution in setting up structures associated with different water bodies. They contribute in the development of hydroelectric plants, dams, irrigation and navigable canals, reservoirs, bridges, culverts, storm sewers, water pipelines, etc.
- **Environment engineering:** These engineers have to develop strategies for protecting the environment from air, water and land pollution. They have to manage issues such as solid waste management, water treatment, air and water pollution, safe disposal of hazardous materials. Another dimension of this profile is the construction of buildings that are environmental friendly, energy efficient and green.
- **Transportation engineering:** Engineers in this branch are concerned about the development of city roads, interstate highways, railroads, airfields, pavements, canals and urban mass rapid transport systems. They also play an active role in urban development and planning, traffic management and betterment of the transport system in the country.
- **Construction engineering:** This branch involves construction of highways, railroads, airports, power plants, bridges, tunnels, skyscrapers and so on. They have to manage project planning, costing and budgeting, scheduling, quality assurance, quality control, on site layout survey, material testing, material procurement, etc.
- **Structural engineering:** Structural engineers are responsible for analysing different types of stresses and strains that a structure has to endure during and after it has been built. The study generally involves the identification of different types of loads that would act upon a structure and plans for making the structure safer from these loads.

- **Earthquake engineering:** Seismic activity is the biggest enemy of all types of manmade structures. Experts who research the impact of earthquake on different types of edifices and implement quake resistant measures are referred to as earthquake engineers.

## **Job Prospects**

There is huge demand for civil engineers in India and it is also expected to get a boost as the country gets ready to upgrade its infrastructure with growing economic and political clout in the world. The career opens a lot of opportunities in numerous government departments. Civil engineers are employed in all major construction projects carried out by central and state government agencies.

There are equally good opportunities in the private sector for civil engineers. A major opening for qualified civil engineers is also in armed forces where they can make vital contribution to the protection of the country. Last but not the least you can set up your own engineering consultancy.

## **Pay Packet**

Pay packet of a civil engineer depends on a number of things such as educational qualification, type of employer, industry, location of work and so on. It's a job that pays a reasonably high income due to the level of skills and expertise required. Starting monthly salary of a graduate in civil engineering could be around Rs 15,000 to Rs 45,000. With due experience and continuous upgrade of skills, the salary increases by leaps and bounds.

## **Market Watch**

Growth in the economy as a whole and the construction industry in particular has brought cheers to youth seeking to make a career in civil engineering. This demand has been further pushed higher with more multinational engineering companies setting up their footprint across India. Further, the rapid increase in population and the steady technological progress made by the country has considerably enhanced the market for civil engineers.

## TOTAL INTAKE OF CIVIL ENGINEERING IN GUJARAT

| Sr. No. | College Name                   | City        | Seats |
|---------|--------------------------------|-------------|-------|
| 1       | GDEC, Navsari                  | Jalalpore   | 60    |
| 2       | ADIT, VallabhVidhyanagar       | V.V.Nagar   | 60    |
| 3       | Ahmedabad Institute, Ahmedabad | Ahmedabad   | 60    |
| 4       | Alpha, Gandhinagar             | Kalol       | 120   |
| 5       | Amiraj, Ahmedabad              | Ahmedabad   | 60    |
| 6       | Arrdekta, Khedbrahma           | Khedbrahma  | 120   |
| 7       | ArunMunchhala, Dhari, Amreli   | Dhari       | 60    |
| 8       | Atmiya, Rajkot                 | Rajkot      | 120   |
| 9       | B.H.Gardi, Rajkot              | Rajkot      | 60    |
| 10      | Babaria, Vadodara              | Vadodara    | 120   |
| 11      | BhagwanMahavir, Surat          | Surat       | 180   |
| 12      | BVM GIA, VallabhVidhyanagar    | V.V.Nagar   | 120   |
| 13      | C.K.Pithawala, Surat           | Surat       | 60    |
| 14      | C.U.Shah, Wadhwan              | Wadhwan     | 60    |
| 15      | Charotar Institute, Chanaga    | Changa      | 120   |
| 16      | Chhottubhai, Surat             | Surat       | 60    |
| 17      | D.A.Degree, Vadodara           | Kheda       | 120   |
| 18      | Darshan, Rajkot                | Rajkot      | 120   |
| 19      | DDIT GIA, Nadiad               | Nadiad      | 60    |
| 20      | Engineering College, Godhra    | Godhra      | 120   |
| 21      | FETR, Bardoli                  | Bardoli     | 60    |
| 22      | G.K. Bharad, Rajkot            | Rajkot      | 60    |
| 23      | GEC, Bharuch                   | Bharuch     | 60    |
| 24      | GEC, Bhavnagar                 | Bhavnagar   | 60    |
| 25      | GEC, Bhuj                      | Bhuj        | 120   |
| 26      | GEC, Dahod                     | Dahod       | 120   |
| 27      | GEC, Godhra                    | Godhra      | 60    |
| 28      | GEC, Modasa                    | Modasa      | 120   |
| 29      | GEC, Palanpur                  | Palanpur    | 60    |
| 30      | GEC, Patan                     | Patan       | 60    |
| 31      | GEC, Rajkot                    | Rajkot      | 60    |
| 32      | GEC, Surat                     | Surat       | 60    |
| 33      | GEC, Valsad                    | Valsad      | 60    |
| 34      | GIT, Gandhinagar               | Gandhinagar | 120   |
| 35      | GITS, Prantij                  | Prantij     | 60    |
| 36      | HasmukhGoswami, Ahmedabad      | Ahmedabad   | 120   |
| 37      | HJD, Kera                      | Bhuj        | 120   |
| 38      | IITRAM, Ahmedabad              | Ahmedabad   | 44    |
| 39      | Indus, Kalol                   | Kalol       | 60    |
| 40      | Ipcowala, Petlad               | Petlad      | 60    |
| 41      | ITMUTC, Waghodia               | Waghodia    | 120   |
| 42      | J.M.Sabva, Botad               | Botad       | 60    |
| 43      | Jivraj Mehta, Anand            | Anand       | 60    |
| 44      | K.J, Vadodara                  | Vadodara    | 120   |
| 45      | LabhubhaiTrivedi, Rajkot       | Rajkot      | 120   |
| 46      | Laxmi, Valsad                  | Valsad      | 120   |

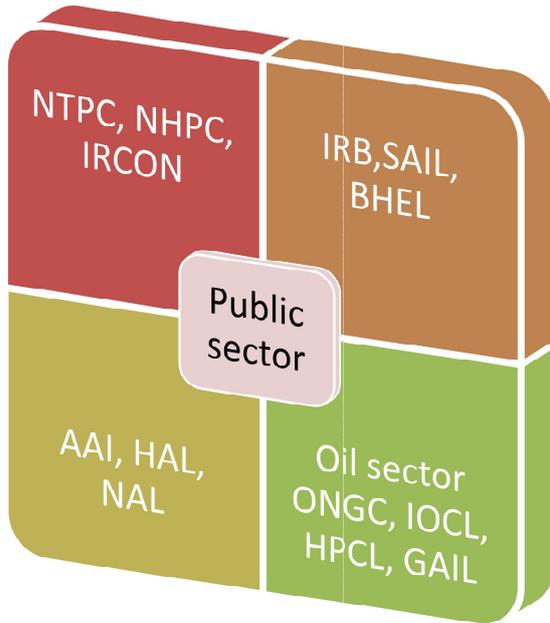
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|----|----------------------------------|-------------|-----|
| 47 | LCIT, Visnagar                   | Visnagar    | 120 |
| 48 | LDRP, Gandhinagar                | Gandhinagar | 60  |
| 49 | Leads, Bharuch                   | Bharuch     | 60  |
| 50 | LJIT, Ahmedabad                  | Ahmedabad   | 120 |
| 51 | Mahavir Swami, Surat             | Surat       | 120 |
| 52 | Marwadi, FOE, Rajkot             | Rajkot      | 120 |
| 53 | Marwadi, FOT, Rajkot             | Rajkot      | 120 |
| 54 | Merchant, Visnagar               | Visnagar    | 120 |
| 55 | MG Institute, Navasari           | Navsari     | 120 |
| 56 | MSU, Vadodara                    | Vadodara    | 110 |
| 57 | NarnarayanShastri, Daskroi       | Daskroi     | 120 |
| 58 | Navrachana, Vadodara             | Vadodara    | 60  |
| 59 | Neotech, Vadodara                | Vadodara    | 120 |
| 60 | Nirma, Ahmedabad                 | Ahmedabad   | 120 |
| 61 | Pacific, Surat                   | Surat       | 60  |
| 62 | PanditNathulal, Surendranagar    | Wadhwan     | 60  |
| 63 | Parul New, Waghodia              | Waghodia    | 120 |
| 64 | Parul Old, Waghodia              | Waghodia    | 180 |
| 65 | PDPU, Gandhinagar                | Gandhinagar | 120 |
| 66 | R.K, Rajkot                      | Rajkot      | 120 |
| 67 | Rai University, Dholka           | Dholka      | 120 |
| 68 | S.R.Patel, Unjha                 | Unjha       | 60  |
| 69 | Sadvidhyamandal, Bharuch         | Bharuch     | 60  |
| 70 | Saffrony, Mehsana                | Mehsana     | 60  |
| 71 | SAL Engineering, Ahmedabad       | Ahmedabad   | 60  |
| 72 | SAL Institute, Ahmedabad         | Ahmedabad   | 120 |
| 73 | Samarth, Himatnagar              | Himmatnagar | 120 |
| 74 | Sankalchand, Visnagar            | Visnagar    | 120 |
| 75 | Sardar Patel, Mehsana            | Mehsana     | 60  |
| 76 | Sarvjanik, Surat                 | Surat       | 60  |
| 78 | Satsangi, Mehsana                | Mehsana     | 120 |
| 79 | ShankarsinghVaghela, Gandhinagar | Gandhinagar | 120 |
| 80 | Shantilal Shah, Bhavnagar        | Bhavnagar   | 120 |
| 81 | Shree Saraswati, Kadi            | Kadi        | 60  |
| 82 | Shri Swami Atmanand, Surat       | Surat       | 60  |
| 83 | Sigma, Waghodia                  | Waghodia    | 60  |
| 84 | Silver Oak, Ahmedabad            | Ahmedabad   | 120 |
| 85 | Subhash, Junagadh                | Junagadh    | 60  |
| 86 | SVIT, Vasad                      | Vasad       | 60  |
| 87 | Swaminarayan, Kalol              | Kalol       | 120 |
| 88 | Takshashila, Rajkot              | Rajkot      | 60  |
| 89 | Tatva, Modasa                    | Modasa      | 120 |
| 90 | Universal, Kalol                 | Kalol       | 120 |
| 91 | UVPEC, Mehsana                   | Mehsana     | 120 |
| 92 | V.V.P, Rajkot                    | Rajkot      | 60  |
| 93 | Vadodara Institute, Waghodia     | Waghodia    | 60  |
| 94 | Veerayatan, Mandvi               | Mandvi      | 60  |
| 95 | Venus, Gandhinagar               | Gandhinagar | 60  |
| 96 | VGEC, Ahmedabad                  | Ahmedabad   | 60  |

|    |                       |         |      |
|----|-----------------------|---------|------|
| 97 | Vidhyabharti, Bardoli | Bardoli | 120  |
| 98 | Vidhyadeep, Olpad     | Olpad   | 60   |
|    | Total Intake          |         | 8794 |

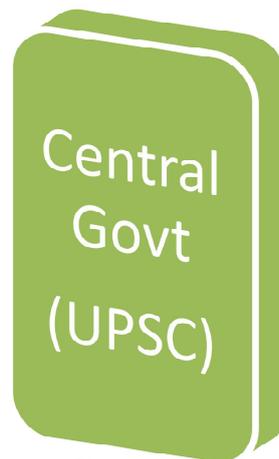
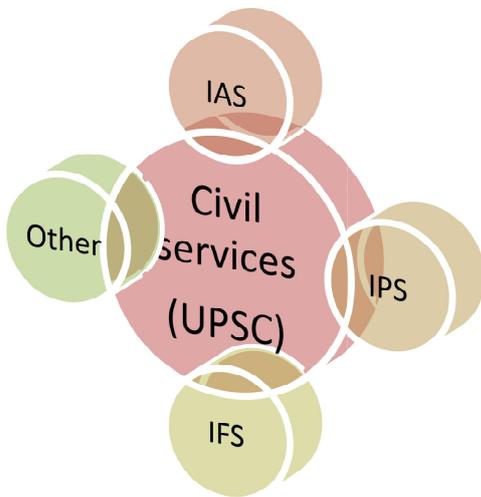
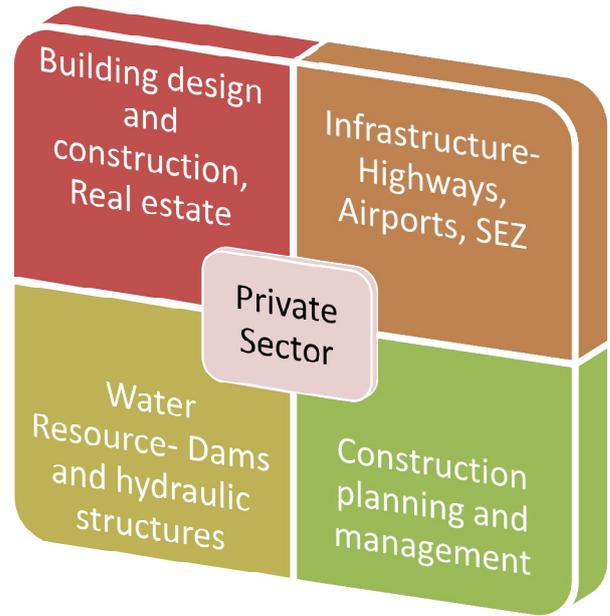
## Top Companies

1. Adani Power PVT.Ltd.
2. Essar.PVT.Ltd
3. Reliance Group Pvt.Ltd.
4. IRB Infra developer Ltd.
5. Larsen and TubroPvt.Ltd
6. Jaypee Group
7. Torrent Power PVT.Ltd.
8. TATA Group PVT.Ltd.
9. GNFC
10. GSFC
11. IL&FS
12. Gammon India Ltd.
13. SuzlonPvt.Ltd.
14. UnitachPvt. Ltd.
15. DLF Pvt.Ltd

## Non-Engineering



## Engineering



- IES
- CPWD
- Railways
- Water Resource
- Military



- GIDC
- PWD
- Water Resource
- Municipal corporation