

Dr. S & S. S. Ghandhy College of Engineering and Technology, Surat
| MAJURA GATE, SURAT

Civil Engineering Department

DEPARTMENTAL BOOKLET



Gujarat Technological University
CHANDKHEDA, AHMEDABAD |

About Department:

Civil Engineering Department established in 1955, is one of the pioneering departments of Dr. S. & S. S. Ghandhy College of Engineering and Technology, Surat. Institute is running under Department of Technical Education, Government of Gujarat. Diploma Civil engineering program is approved by All India council for technical education (AICTE), New Delhi and is affiliated to Gujarat Technological university, Ahmedabad.

The department has qualified faculty members engaged in teaching learning process with the aim of achieving excellence in the field of Civil engineering.

Civil Engineering is the field that reaches out far more than what you imagine it to be. A Civil Engineer is responsible for the design, construction and management of buildings, bridges, highways, airports, tunnels, water supply networks, wastewater treatment, transportation in a region and many more things which play an important role in the development of a place and add on to what a place really looks like. Often regarded as one of the earliest engineering branches, Civil Engineering is the discipline that deals with all structures that aid human life. Right from basic necessities like buildings for shelter to architectural wonders like the Taj Mahal or Pantheon. In addition, town planning, transportation planning, water supply and wastewater management, building dams and bridges and analyzing them also fall into the wide purview of Civil Engineering.

- **STUDENT INTAKE/YEAR**

Name of Department	Year	Student Intake
Civil Engineering	1955	60
	2008	124

- **DURATION OF COURSE:** 03 years, six semesters

- **ENTRY LEVEL**

1. 10th Standard Pass (1st Sem. Entry)
2. Certificate course of duration 2 years from TEB /NCVT/GCVT/IGTR (3rd Sem. Entry)

- **ADMISSION**

Admission through Central Admission Committee for Professional Diploma Courses on the basis of state level merit List. For More information visit www.acpdc.co.in

Departmental Vision:

“Achieve Excellence in Civil Engineering for sustainable and comprehensive growth of industry & society”.

Departmental Mission:

M1: To develop core competency in civil engineering.

M2: To promote learning through innovative approach for sustainable development.

M3: To inculcate professional knowledge & entrepreneurship skill with moral, ethical & professional value for industry & society.

M4: To upgrade staff with advancement in civil engineering & professional Liaoning with industry

Program Educational Objectives (PEOs):

PEO1: To understand, design and Operations of Civil Engineering Tools.

PEO2: To implement the imperative knowledge of science & fundamental concepts of Civil Engineering.

PEO3: To pursue higher education, Career development & entrepreneurship skills in Civil Engineering.

PEO4: To exhibit leadership, trigger social & economical commitments & to inculcate community services and protect environment.

Program Outcomes (POs):

1. **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

2. **Problem analysis:** Identify and analyse well-defined engineering problems using codified standard methods.

3. **Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

4. Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

5. Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

6. Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

7. Life-long learning: Ability to analyse individual needs and engage in updating in the context of technological changes.

Program Specific Outcomes (PSOs):

PSO1:- Planning, Designing and Execution of Sustainable Structures.

PSO2:- Solve Civil Engineering problems for sustainable development of society & environment.

Teaching Scheme for Diploma in Civil Engineering:

Sem	Course Code	Course Name	TEACHING SCHEME			
			Theory	Tutorial	Practical	Credit
1	4300001	Mathematics	3	1	0	4
1	4300002	Communication Skills in English	2	0	2	3
1	4300004	Applied Physics	3	0	2	4
1	4300010	Basics of Information and Communication Technology	0	0	4	2
1	4300013	Basic Engineering Drawing and Graphics	2	0	4	4
1	4300014	Basics of Electrical and Electronic Engineering	0	2	2	3
1	4300015	Sports and Yoga	0	0	2	0
1	4310002	Induction Program	0	0	0	0

Sem	Course Code	Course Name	TEACHING SCHEME			Credit
			Theory	Tutorial	Practical	
2	4300003	Environment and Sustainability	3	0	0	3
2	4300008	Engineering Mechanics	3	0	2	4
2	4300009	Applied Chemistry	3	0	2	4
2	4300016	Indian Constitution	2	0	0	0
2	4300017	Basics of Mechanical Engineering	0	2	2	3
2	4320001	Applied Mathematics	3	1	0	4
3	4330001	Summer Internship-I	0	0	2	1
3	4330601	Surveying	3	0	4	5
3	4330602	Mechanics of Structures	3	0	2	4
3	4330603	Construction Materials & Technology	3	0	2	4
3	4330604	Hydraulics	3	0	2	4
3	4330605	Computer Aided Drafting	0	0	4	2
4	4340001	Essence of Indian Knowledge and Tradition	2	0	0	2
4	4340002	Contributor Personality Development	2	0	0	2
4	4340003	Integrated Personality Development Course	2	0	0	2
4	4340601	Advanced Surveying	3	0	4	5
4	4340602	Soil Engineering	3	0	2	4
4	4340603	Estimating, Costing and Valuation	3	0	4	5
4	4340604	Basic Transportation Engineering	3	0	2	4
5	4300021	Entrepreneurship and Start-ups	3	0	0	3
5	4350601	Concrete Technology	3	0	2	4
5	4350602	Water Resource Engineering	3	0	2	4
5	4350603	Civil Engineering Project-I	0	0	4	2
5	4350604	Summer Internship-II	0	0	6	3
5	4350605	Advance Construction Technology	3	0	2	4
5	4350606	Highway Engineering	3	0	2	4
5	4350607	Irrigation Engineering	3	0	2	4
5	4350608	Environmental Engineering and Pollution Control	3	0	2	4
5	4350609	Advance Analysis of Structures	3	0	2	4

6	4360601	Design of Structures	3	0	4	5
6	4360602	Water Supply & Sanitary Engineering	3	0	2	4
6	4360603	Construction Project Management	2	0	2	3
6	4360604	Project-II	0	0	6	3
6	4360605	Building Services	3	0	2	4
6	4360606	Traffic Engineering	3	0	2	4
6	4360607	Ground Water Engineering	3	0	2	4
6	4360608	Construction Quality Control and Monitoring	3	0	2	4
6	4360609	Advance Design of Structures	3	0	2	4

Faculty Details:

The department has qualified faculty members engaged in teaching learning process with the aim of achieving excellence in the field of Civil engineering.

Civil Engineering Department:

Sr. No.	Name of Faculty	Designation	Qualification	Teaching Experience
1	Shri D. P. Rao	I/C H.O.D	M.E (civil)	32 Yr
2	Mr. Nitendra Mahajan	Lecturer	M.Tech (Structure Engineering)	12 Yr
3	Kum. Tejalbaben C. Patel	Lecturer	B.E. (Civil)	14 Yr
4	Smt. Sonali C. Patel	Lecturer	B.E. (Civil)	8 Yr
5	Shri Vikramsinh S. Rajput	Lecturer	B.E. (Civil)	10 Yr
6	Shri Dipesh C. Rajput	Lecturer	M.E (Water Resources Engineering)	10 Yr
7	Shri Mohammedtaufiq G.Shaikh	Lecturer	B.E. (Civil)	11 Yr
8	Shri Sagar V. Nimavat	Lecturer	M.E (Water Resources Management)	7 Yr
9	Kum. Rachana D.Goswami	Lecturer	M.Tech (Environment)	11Yr
10	Shri Dhruvalkumar G.Jinjala	Lecturer	B.E. (Civil)	7 Yr
11	Shri Nikhil K. Ribinwala	Lecturer	B.E. (Civil)	8 Yr
12	Shri Dharmeshkumar P.Navadiya	Lecturer	M.E.(Civil)	5 Yr
13	Shri Vinaskumar J.Vadiwala	Lecturer	B.E. (Civil)	5 Yr
14	Kum. Khushbu R. Raval	Lecturer	M.Tech (Transportation)	5 Yr
15	Kum. Kartilagauri D. Uchdadiya	Lecturer	M.Tech (Water Resources)	5 Yr
16	Shri Gopal S. Vaghasia	Lecturer	B.E. (Civil)	32 Yr
17	Shri Mahendra J. Patel	Lecturer	B.E. (Civil)	32 Yr
18	Shri Jignesh M. Vala	Lecturer	B. Tech (Civil)	10 Yr

Technical & Supporting Staff

Sr.No.	Name of the Technical Staff	Designation	Qualification
1	Mr. Bharat R. Patel	Curator	Diploma Civil. Engg.
2	Miss. Vidhi K. Mevada	Lab Assistant	Diploma Civil. Engg.

Applied Mechanics Department:

Sr. No.	Name of Faculty	Designation	Qualification	Teaching Experience
1	Shri. Jaswantsingh Gabra	H.O.D	M.E (Structure)	30 Yr
2	Shri Vikaskumar A. Jha	Lecturer	M.E (Structure)	29 Yr
3	Smt. Dipali N. Gaywala	Lecturer	M.E (Structure)	25 Yr
4	Shri Jitendra D. Vaghela	Lecturer	B.E. (Civil)	23 Yr
5	Shri Jaymin A. Patel	Lecturer	M.Tech (Structure)	7 Yr
6	Shri Dhruvkumar B. Partiwala	Lecturer	M.E (Structure)	7 Yr

Technical & Supporting Staff

Sr.No.	Name of the Technical Staff	Designation	Qualification
1	Mr. Anilbhai. M. Makwana	Lab Assistant	S. S. C

Infrastructure of Department:

- Civil Engineering Department is equipped with well-ventilated classrooms with adequate flexible furniture. Department is equipped with seven well equipped laboratories.
- **Computing Facilities:** Department is equipped with adequate computing facilities. ICT tools like Laptop, projector, speakers are frequently used in classrooms to enhance the teaching learning process. Free Access NaMo Wifi facility available at department.
- **Department Library:** Many reference books for automobile engineering is available in department library. Students can access the books as per their will and convenience.

Laboratory Facilities:

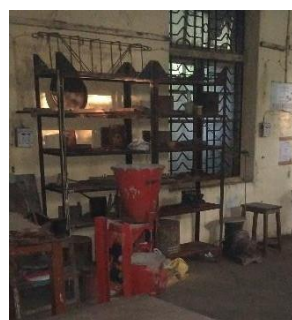
Sr. No	Name of Laboratory	Description
1	Computer Lab	Computer Lab is a Lab, where student will be able to write, Draw, Tabulate, Report, Store and Retrieve and also print on Computer using various Hardware and Software.

2	Civil Engineering Workshop	The Civil Engineering Workshop Lab would facilitate the development of basic skills a Diploma holder is expected to possess. He/she should be able to supervise construction activities like brick masonry, woodwork, concreting, welding, finishing etc. including quality control and maintenances of safety to self, co-workers and the constructed components of the building.
3	Material Testing Lab	The selection of materials for engineering purpose is very much crucial activity. In civil engineering any material of construction, the first and for most necessity is to know its properties, suitability, strength and durability. Based on this, one can suggest the most suitable material which may fit the exact requirement of the construction items. In this Lab, the technology related to some of the important and widely used construction materials has been dealt with. This course will enrich civil engineering technicians in performing their jobs with ease and confidence and will be able to select appropriate material for the given item of work on site.
4	Environment Lab	This Lab focuses on students' acquisition of knowledge, skills & practices in water supply and sanitary engineering. Knowledge about domestic water supply & sanitation system (external & internal) and house drainage & disposal facilities is imparted. The technician must know about the quality of domestic water to be supplied to the society and treatment of waste water. The knowledge and application of such aspects is essential in developing a good technician who should be conversant with the collection, conveyance, treatment, maintenance and disposal of waste water.
5	Survey Store	The diploma pass outs/technicians should therefore know the various methods and instruments required for surveying. They should also have the skill and information to handle and operate the needed survey instruments. It is also important for them to

		be well aware about the use of advance surveying instrument such as total station, GPS and related software to enhance the knowledge and abilities required for surveying in field.
6	Fluid Mechanics	This laboratory is necessary for civil, environmental and transportation engineers to understand the behaviour of fluid flow in different conditions in pipes, channels, canals, notches, weirs etc. In the field these conditions are very common and diploma pass outs has to solve problems related to water seepage and discharge.
7	Transpiration Lab	The lab is facilitating knowledge and understanding of various design, construction and maintenance aspects of roads, railways and bridges are very important for engineers working at site in order to make transportation system safe and efficient. At diploma level, students are expected to study about these aspects of roads, railways and bridges so as to develop their understanding in order to apply their knowledge in improving civil infrastructure for transportation.
8	Soil Lab	Knowledge and understanding of soil and its engineering properties are very important for engineers working at site in order to make Civil Engineering Structures safe and serviceable. In INDIA, from region to region soil varies in properties and characteristics. Under different loading conditions soil is subjected to various stresses and problems like water logging, liquefaction of soil, seepage through soil and settlement. At diploma level students are expected to study about these aspects of soil so as to develop their understanding in order to apply their knowledge in construction industry.
9	Concrete Technology Lab	This course focuses on students' acquisition of knowledge, skills & practices in concrete works. The knowledge and application of such aspects is essential in developing a good technician who should be conversant with the tests of various

		components of concrete and site practices to maintain quality of concrete works.
10	Applied Mechanics Lab	Applied mechanics lab, as its name suggests, bridges the gap between physical theory and its application to technology. In this context, it is commonly referred to as engineering mechanics. To impart basic knowledge of Engineering Mechanics where in Laws of Physics are applied to Solve Engineering problems, this lab will help the student to develop basic know how & awareness of the various laws of physics & it's real life applications in the various fields of engineering

Glimpse of Laboratory Facilities



Glimpse of Laboratory Facilities



B.O.D Incubator



Total Station



PH Meter



Pensky Martin



Glimpse of Laboratory Facilities



Digital Penetrometer



Auto Level



Computer Lab



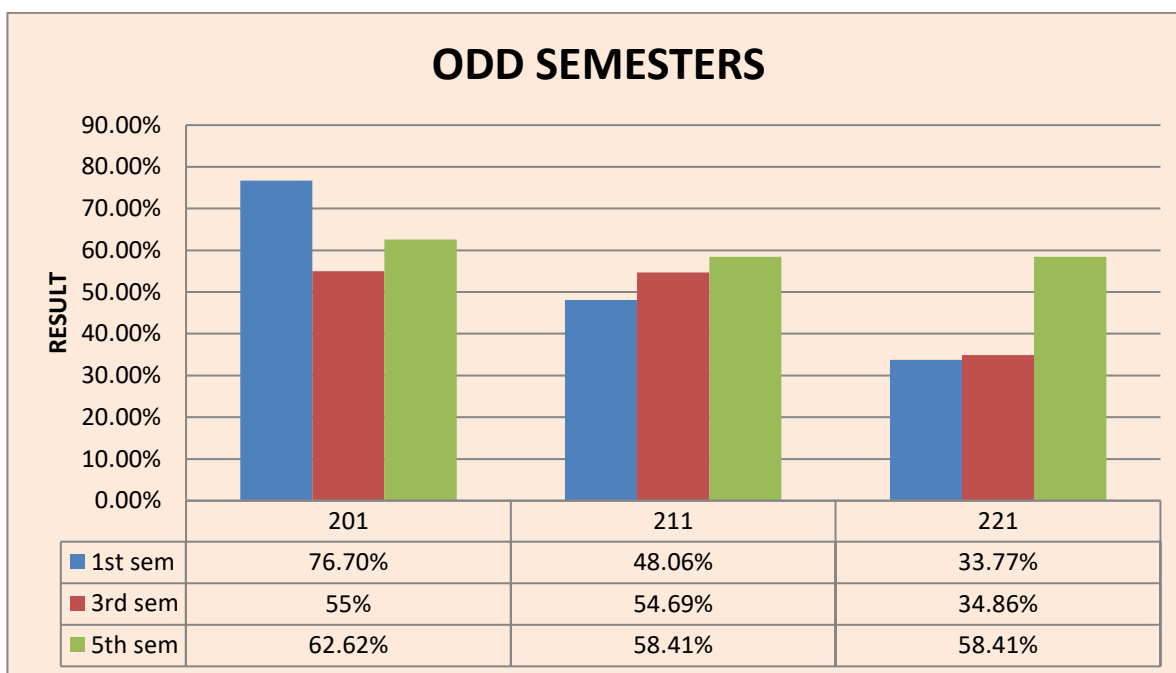
Pring and Ball Apparatus

Result Analysis:

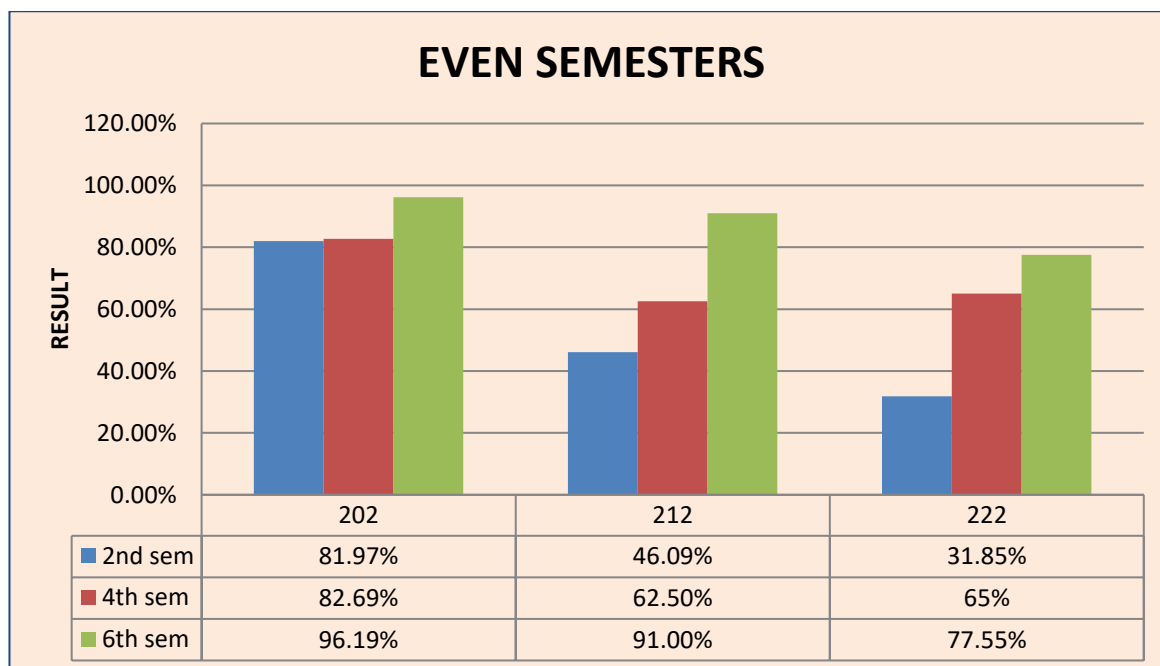
RESULT FROM 201 TO 222

TERM	Semester			TERM	Semester		
	1st	3rd	5th		2nd	4th	6th
201	76.70%	55%	62.62%	202	81.97%	82.69%	96.19%
211	48.06%	54.69%	58.41%	212	46.09%	62.50%	91.00%
221	33.77%	34.86%	62.04%	222	31.85%	65%	77.55%

ODD SEMESTERS



EVEN SEMESTERS



Training & Placements Opportunities:

Each year campus drives are held at Institute by various Construction industries. Many students are placed every year through on/off campus drive. Diploma Civil graduates are also eligible to apply for the post of Additional Assistant Engineer (AAE) (Class-3). Many diploma Graduates of this program are recruited in Government of Gujarat as AAE. Approximately 60% of diploma Civil graduates are getting admission in degree engineering program. List of industries/companies hired our graduates in past few years is given below.

Sr.No	Name of Compony	No. of Students per Year		
		2022-23	2021-22	2020-21
1	Larsen & Tubro Ltd.	-	-	3
2	Wonder Cements	-	-	2
3	ARCELLOR MITTAL NIPPON STEEL	2	5	-
4	ACC Ltd.	-	4	-
5	Linde Engineering India Pvt.Ltd.	--	1	-
6	MeinhardtEPCM India Pvt.Ltd	4	-	-
Total		6	10	5

Institute - Industry Interaction:

Strong institute-industry linkage is established by department to keep pace with technological advances and stay updated with dynamic behavior of real estate sector, in mutual benefit of institute and society. MoUs are done with various industries/service stations to share resources and knowledge. Industries also provide support and advice to academic program and identify best practices standards.

Co - Curricular and Extracurricular Activities

Series of Co-curricular and extracurricular activities like Group Discussions, Expert lectures, Industrial visits, Tree plantation, Cleanliness drive, Yoga celebrations, Sports week, NCC and NSS activities are planned and organized in department and institute for a harmonious development of students in respect to their morality, humanity, honesty, character and health. These activities also contribute to the development of soft skills or employable skills to great extent, which are ultimately required at the world of work.

CONTACT US

Civil Engineering Department

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