

# **BULTCON**

## **Dreams of Construction**

### OUR DEPARTMENT 'S...

#### VISION

To develop dynamic learning environment in the field of civil engineering to congregate the professional skills and innovative needs of the society.

#### MISSION

- To impart quality technical education by dedicated faculty using innovative learning techniques.
- To bridge the gap between professionals and academic institute.
- To inculcate moral and ethical values among the students.
- To create awareness and thirst for lifelong learning keeping in mind sustainable issues, technological trends and entrepreneurship.
- To emerge as a reliable knowledge hub for the industry,



**CIVIL ENGINEERING DEPARTMENT**

**GOVERNMENT POLYTECHNIC FOR GIRLS**

**OPP. PRL, GUJARAT UNIVERSITY ROAD, NAVARANGPURA, AHMEDABAD – 380 015**



### Acknowledgment

Civil Engineering Department of Government Polytechnic for Girls, Ahmedabad feels concrete to present its genuine stakeholders "BUILTCON" a semester with newsletter. This newsletter "BUILTCON" started with an objective of knowledge sharing and spreading divergent activities of Civil Engineering Department. Civil Engineering Department would also like to focus on new technology in construction field, latest ongoing and upcoming trends and events, previous month's news and events.

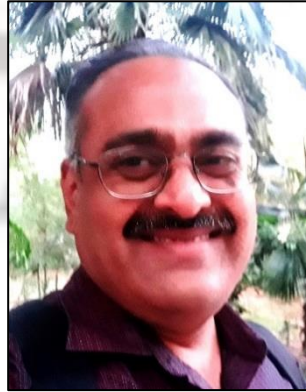
Civil Engineering Department consider this newsletter "BUILTCON" as a best place to appreciate the students, faculty members and stake holders for their achievements. Civil Engineering Department hope, this newsletter provides necessary motivation to the stake holders as well as also very much helpful to update our knowledge of fast-growing Civil Engineering and construction field.

Finally, Civil Engineering Department would like to extend our deepest gratitude to all members who directly or indirectly involved and give their valuable support for making this newsletter "BUILTCON". We know that without grace of all mighty GOD this thing is not possible. So, here by we are presenting third Volume of "BUILTCON".

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## Message from Principal's Desk



**Mr. B. J. Iyer**

***“Technology is the Gift of God. After the gift of life, it is perhaps the greatest God’s gifts. It is the mother of civilization, of arts and of sciences.”***

Freeman Dyson

Polytechnic for Girls - Ahmedabad (GPGA), a premier diploma engineering institute was established in the year 1968 with the aim to provide technical education to girls in the heritage city of Ahmedabad. It is located right opposite to PRL and adjacent to ATIRA, in the throbbing educational hub within the heart of the city and in the vicinity of reputed institutes like L.D.College of Engg., Gujarat University, L.M.College of Pharmacy and the world renowned CEPT University. It is endowed with a beautiful green campus which has its own flora and fauna.

At present, GPGA offers 3 year diplomas in 7 programmes under Commissionerate of Technical Education and is affiliated with Gujarat Technological University (GTU). These are Diplomas in Architecture Assistantship (DAA), Biomedical Engineering (DBE), Computer Aided Costume Design and Dress Making (DCACDDM), Civil Engineering (DCE), Computer Engineering (DCoE), Electronics and Communication Engineering (DEC) and Information Technology (DIT).

GPGA has a tradition of imparting quality technical knowledge and ethical values to the students. No wonder GPGA is ranked among top 10 government diploma engineering colleges in Gujarat consistently over the last five years.

For years, the institute’s major focus and concern have been our students and our institution strive to impart the best knowledge in respective fields for promoting and pursuing multidisciplinary diploma engineering in the most disciplined manner. Every student of the institute has been among some of the best talents of the vibrant state of Gujarat. Many of GPGA’s alumnae have established themselves as entrepreneurs while some have continued higher studies with well-known engineering institutes of India as well as abroad. Thus, they have carved a niche for themselves in various technical fields throughout the state, our nation and even abroad.

The institute has an excellent track record of placements in past few years and students of GPGA have proved their mettle in industry, academics, and administration over the last many years. This glory has been due to the synergetic efforts of

management, learned faculty, dedicated staff and sincere students over these years. I urge everyone, including staff and students, to make excellent careers by availing the unique opportunity that GPGA provides through classroom teaching, laboratory instructions, industrial trainings and participation in sports, cultural and other extra-curricular activities of interest. Recently, formation of GPGA's Alumnae Association has also been undertaken.

During the current academic year, three programmes of GPGA i.e. DCACDDM, DCE and DCoE have initiated the process of application for Accreditation with NBA. For the faculty and administrators, accreditation promotes ongoing self-evaluation and continuous improvement and provides an effective system for accountability. For the institute or programme, accreditation enhances its national reputation and represents peer recognition. Thus to further the institute's aim towards excellence, accreditation process has been undertaken. I extend my best wishes to all staff members and students of these programmes for getting accredited in the year 2021.

I express my sincere gratitude to all our stakeholders for their continued support, cooperation and active involvement to make GPGA a citadel of Technical Learning, which sets its own benchmark.

## Message from HOD's Desk



**Mrs. M. M. DESAI**

Dear readers,

I wish to all the students, that they are safe in pandemic situation of Corona. Due to this current situation teaching is carried out online on " MS TEAM". I hope you all are facilitated with online teaching.

Our department is committed to provide students with a strong, broad based fundamental engineering education and prepare the students for a career in the industry, teaching and national laboratories.

I personally look forward to integrate my experience of over 25 years in teaching into the learning systems and the collective efforts of faculty of the department and build a comprehensive methodology that encompasses whatever that matters for nurturing the minds of our students.

I look forward for preparing my students to face the challenges; the technology and engineering sector would offer in the future and succeed in offering technological solutions for the betterment of the society and our nation.

Wishing all our students brilliant and bright future.

With Best Wishes,

## Faculties information of Civil Engineering Department



Mrs. M. M. Desai  
(Head of Department)  
(M.E, Transport)



Mr. U. Y. Nanavati  
(M.E, WRM)



Mr. P. N. PATEL  
(M.E, WRM)



Mrs. M. B. Soneji  
(M.E, Geo.tech)



Mr. R.M. Patel  
(M.E, WRM)



Mr. H. S. Patel  
(M.E, WRM)



Mr. D. H. Dalal  
(M.E, WRM)



Mrs. F. P. Ambalia  
(M. Tech., Town  
Planning)



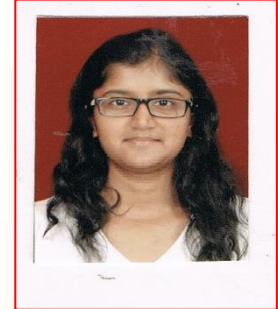
Ms. I. M. Upadhyay  
(M.E, WRM)



Ms. B. H. Dave  
(M.E, Infrastructure)



Ms. T. R. Agrawal  
(M.E, Structure )



Ms. K. J. Shah  
(B.E Civil)



Mr. K. M. Vora  
(M.E Structure)



Ms. R. C. Dave  
(M.E Structure)



## Scope of Civil Engineering:

This question may be asked by most of the Civil Engineering Graduates during the studies or after the graduation.

Studying Civil engineering is the dream of every second aspirant due to a number of reasons – growth, job opportunities, salary range and continuous industry growth.

The major driving force for the present-day Construction Technology revolution is the development in Civil Engineering. The advancements in construction technology, analog new techniques for construction have resulted in developing maximum safety, economic and environment friendly structure for society.

The basic principles and performance of new construction technics are introduced in the course. Design and analysis of different civil structure are considered in detail.

The huge career scope of civil engineers is worldwide - as according to research report by Global Marketing Insights, Inc, the market size of civil engineering is expected to grow up USD 11.72 trillion by 2025.

Best Career Options After Engineering. 1) Higher Studies. 2) Public Service Undertakings. 3) Management. 4) Entrepreneurship. 5) Campus Placements. 6) Become an Expert. 7) Civil Services. 8) Look for internships. 9) Enter the private sector. 10) Chartered valuer. 11) Join the Indian Armed Forces.

The most exciting new technologies used in civil engineering is building integrated photovoltaic (BIP) glazing, which can help buildings to generate their own electricity, by turning the whole building envelope into a solar panel.

Modern construction methods are methods that are developed in construction industry with proper planning and design so that each project reduces the construction time, cost and maintain overall sustainability.

The course also covers the study of different subjects like

- Environmental and Water Resources Engineering.
- Geotechnical Engineering.
- Structural Engineering and Materials.
- Transportation Infrastructure and Systems Engineering.
- Construction Engineering and Management.

## Core companies offer internships and jobs



Although there are numerous startups/small firms offering internships on specific domains, there are quite a lot of private/public sector companies that too offer internship opportunities for engineering students.

### Some of the top private sector companies are:

- Ambuja cement pvt.ltd
- Ultratech
- KCT Consulting service
- PSP Projects
- Adani Infra (India) Limited
- Reliance Infra structure
- CAD CENTER
- L&T
- R. B. Construction Co. (RBC)
- P.C. Snehal Construction Company – P.C. Snehal Engineers Private Limited
- Cube Construction Engineering Limited
- SCC Infrastructure Pvt. Ltd. (Formerly, Shashin Construction Company)
- Nila Infrastructures Limited
- Bridge & Roof Co (India) Limited
- Coastal Projects Pvt Ltd (CPPL)

### Some of the public sector companies are:

- R&B
- Irrigation
- Municipal Corporation
- GWSSB
- Urban development authority
- Town Planning Department
- Education Department
- IRCOL
- EIL
- ONGC
- ISRO
- AAI

- UGVCL
- Torrent
- DEFENCE SERVICE (Level Architect)

### New Technologies:



These new Technologies will become mainstream in nearest future hence one can make their proper career planning and prepare themselves as per the need of that field.

- Building Information Modelling (BIM)
- Cloud and Mobile Technology
- Drones or Unmanned Aerial Vehicles (UAVs)
- Virtual Reality
- Augmented Reality
- 3D Printing
- Artificial Intelligence
- Robotics
- Exoskeletons
- The Connected Jobsite
- Autonomous Vehicles
- Advanced Materials
- The Intelligent Built Environment
- Machine Learning
- Prefabrications
- Predictive Analytics
- Construction Software and Data Ecosystem
- Self-Healing Concrete
- Advance Uses Of GPS
- New Effective Scanning Solutions
- Timber Constructions
- Wearable Technology
- Smart Building
- Modular Construction And 3D Printed Dwellings
- Smart Buildings
- Connected Homes
- Home Analytics

### Upcoming Events:

#### ❖ Site visits:



- Water Treatment Plant, kotarpur, Ahmedabad
- Construction Site of Building, Ahmedabad
- Building Material Testing lab
- Construction Site visit at IIM Building, PSP Project, Ahmedabad
- Sewage treatment plant, Pirana, Ahmedabad
- Arrange Expert Lectures in the various fields of Civil Engineering.

#### ❖ Seminar



- Seminar on different subjects of Civil Engineering has to be prepared by group of students in various subjects of final year.

#### ❖ Project



- Survey Project: Chain and Tape, Dumpy level and Plane table Survey at Collage campus for 3rd semester Students, Project related to different Civil engineering Subject of 5th sem for their final year curriculum.

## Previous semester Events:

- **SITE VISIT TO KIDNEY HOSPITAL:-**

Our department organized a site visit to kidney hospital, Ahmedabad. The site was organized on 28th January, 2020 for the 6<sup>th</sup> semester students. So that the students can get the practical

knowledge about the various building services like HVAC system, lift, fire safety, AHU etc.



- **SITE VISIT TO ICONIC SHYAMAL: -**

Our department organized a site visit to iconic Shyamal Ahmedabad. The site was organized on 07th February, 2020 for 6th semester students. So that the students can get the practical knowledge about the designing of slab, beam columns, placement of reinforcement bars and another structural knowledge.



- **SITE VISIT TO CLOUD 9:-**

Our department organized a site visit to cloud 9 nehrunagar, Ahmedabad. It is the gold rated the site was organized on 15th February, 2020 for the 6th semester students. So that the students can gain the knowledge about the quality maintained in the site, importance of quality management, etc.



- **SITE VISIT TO BRIDGE SITE :-**

Our department organized site visit to bridge construction site at sp ring road ,Ahmedabad. The construction procedure was carried out by psp project ltd. Site visit was organized on 15 February ,2020 for 4th sem students. So that the students can get the practical knowledge about the construction procedure, management skills, different test of material are used at site, advanced techniques used for the construction of any bridge.



- **SITE VISIT TO SANT SAROVAR DAM**

Our department organized site visit to Sant Sarovar dam, Gandhinagar. the construction done by government of Gujrat. Site visit was organized on 10 January,2020 for 4th semester students. So that the students can get the practical knowledge about the collection of water and distribution of water system and water management skill, and also learn why construct the dam, etc.



- **Celebration of white day (11/02/2020):**



- Celebration of traditional day (12/02/2020)

- Food fest (04/02/2020)



- Celebration of Halloween day (13/02/2020):

- Celebration of Sports Day



- Celebration of red day & tree plantation day (14/02/2020):



5TH SEMESTER RESULT DECLARED ON 24/01/2020					
SR NO	ENROLLMENT NO	name	SPI	CPI	CGPA
1	176140306108	SHAH JEEL PANKITKUMAR	10	9.73	10
2	176140306084	PATEL PRATIXABEN SHAILESHBHAI	9.42	8.96	9.54
3	176140306033	GOHEL NIYATI RASHMINBHAI	9.12	9.04	9.21

3RD SEMESTER RESULT DECLARED ON 15/02/2020					
SR NO	ENROLLMENT NO	name	SPI	CPI	CGPA
1	186140306063	PAL KUSHWAH	9.16	8.7	9.16
2	186140306011	CHAUDHARI BHAVNABEN BALVANTBHAI	9.09	8.57	9.09
3	186140306051	KHETARIYA RASHMIBEN RAMESHBHAI	9.03	8.32	9.03

1ST SEMESTER RESULT DECLARED ON 13/3/2020				
SR NO	ENROLLMENT NO	name	SPI	CPI
1	196140306019	CHAUHAN SANIYA JAHANGIRBHAI	8.54	8.54
2	196140306028	DARJI MUDRA MITESHKUMAR	8.43	8.43
3	196140306016	CHAUHAN HIRAL DIPAKBHAI	8.25	8.25

## ❖ Shining Star of Civil



Enrollment No: 166140306067  
 PARMAR VIBHASHREE KIRTIKUMAR  
 2016 batch  
 Passing Year: 2019  
 CGPA: 9.12

Awarded by, Gujarat institute of civil engineers & architects. (GICEA) with Gold Medal & Certificate on 1<sup>st</sup> February, 2020 and Appreciation by Collage on 3<sup>rd</sup> February, 2020



GTU Results

## ❖ quotes

### वसुधैव कुटुम्बकम्

Civil Engineering Department has made " Editorial Team" of Students for "BUILTCON" newsletter, who have gathered the information regarding curricular and Extracurricular activities.

✚ कर्मण्येवाधिकारस्ते मा फलेषु कदाचन।  
 मा कर्मफलहेतुर्भूर्मा ते सङ्गोऽस्त्वकर्मणि ॥

(द्वितीय अध्याय, श्लोक 47)

✚ We shape our buildings; thereafter they shape us.: Winston Churchill

✚ Civil Engineering is the art of directing the great sources of Power in Nature for the use and convenience of man; being that practical application of the most important principles of natural Philosophy which has in a considerable degree realized the anticipations of Bacon, and changed the aspect and state of affairs in the whole world. The most important object of Civil Engineering is to improve the means of production and of traffic in states, both for external and internal Trade.: Thomas Tredgold



## OUR INSTITUTE'S

### VISION

To carve a brighter prospect for the nation through excellence in technical education to foster skills, ethical values and environmental consciousness among girls while undertaking existing and forthcoming challenges.

### MISSION

- To nurture technical and creative skills through quality education.
- To strengthen industries interaction.
- To impart real-life problem-solving skills.
- To promote care for sustainability of environment and social responsibility.

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Navarangpura, Ahmedabad-380 015.*

*Website: <http://www.ggpa.cteguj.in>  
Phone no: 079 - 2630 1581*

*Contact for Query or Suggestions:  
Civil Engineering Department,  
Government Polytechnic for Girls, Ahmedabad*

*e-mail us: [gpgcivil@gmail.com](mailto:gpgcivil@gmail.com)*

*Our blog: [ecggpblogspot.com](http://ecggpblogspot.com)*

#### **Team behind third Edition**

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**Editing-** F. P. AMBALIA

**Data Collection-** Editorial Team

**Title and Logo-** B. H. DAVE

**Proof reading-** D. H. DALAL

**Designing-** I. M. UPADHYAY

**Support-** H. S. PATEL, K. J. SHAH

**Over all Convener Now onwards:** R. M. PATEL, T. R. AGRAWAL