



MANAGED BY PLATINUM FOUNDATION  
**GANDHINAGAR INSTITUTE OF TECHNOLOGY**

"WHERE SUCCESS IS A TRADITION"  
(Approved by AICTE and Affiliated to Gujarat Technological University)

DOC NO: 1426



# A Report on

Expert Talk

on

“Essential Skills required for Civil Engineer”

Organized by

Civil Engineering Department & GIT-IQAC

on

05/03/2022

Gandhinagar Institute of Technology

Academic Year  
2021-22



**Level:** - Department

**Category:** - Expert talk

**Date:** - 05/03/2022

**No. of Resource Person:** 1

**No. of Participants:** - 70

**Coordinator:** Prof. Juhil Kapatel

**Mode:** - Offline

**Inspiration:**

As per new Gujarat technological university syllabus in 8<sup>th</sup> semester Summer Internship subject introduced for the students. In this subject, it is mentioned that supervision skills, soft skills, communication & relation skills and special skills required for the students which is useful in the field work. Also 4<sup>th</sup> & 6<sup>th</sup> semester students should know the practical aspects with respect to field examples.

**Objective:**

Civil Engineers should be equipped with technical skills such as surveying, bar bending schedule & construction project management and soft skills such as estimation, project billing & quantity which can develop or enhance the essential skill they need for professional career.

**About Expert talk:**

The Expert talk on "Essential Skills required for Civil Engineer" was attended by around 70 participants. It focused on necessity of technical skills such as identification and solving of civil engineering problems in depth understanding of design techniques and working with maps drawings and models as well as structural analysis software applications of MS-Excel in Civil Engineering. Also work in major fields like:

- i. Quantity Surveying
- ii. Estimation
- iii. Project Billing
- iv. Bar Bending Schedule
- v. Construction Project Management

**Inaugural Session:**

Prof. Pooja Patanwal (Assistant Professor & IQAC member, CL) started the session with a welcome note about civil engineering & its importance.

Prof. Pooja Patanwal introduced expert of the seminar Mr. Kaushal Shah to participants.

Mr. Kaushal Shah (Expert of the seminar) has 8 years of experience in Gujarat Energy Transmission Corporation Limited as Junior Engineer (Civil), Halvad. He has astonishing profile with several work in analysis & design of structure and has supervised execution work of various 66kV Sub-Station and 220kv GEB Sub-Station.



**Prof. Pooja Patanwal Inaugurating the session**

**Content of speaker:**

Our Expert Mr Kaushal Shah discussed about various Essential skills required in current era and explained skills which use at the different position of the work. He discussed supervision skills required for the quality of raw material, measurements, proportion of material, application & finishing, special care and percussions, total stations/dumpy level. Soft skills required for estimate work, drawing work, document work, presentation of work, instructions, latest laws, tenders, typing. Communication & relation skills required for teamwork, instructions pass, manage people, various department and carder peoples, associations. Special skills required for tools and tackles, political support, purchase & sales, scheduling, planning, tender work, lease/lone work, specialization in various work. He discussed in detailed supervision skills like material quality, method of execution quality check safety, problem & solution and measurement & payment with different case study use in the on filed work.

Project Management evaluation as well as proper allocation of work in each project and at the same time ensuring proper compliance within the applicable laws, regulations and Indian standards is one of the key roles of a civil engineer. To efficiently perform the job as a civil engineer, project management skills are necessary.

Problem Solving and identifying problems and finding solution is the key aspect of a civil engineer's job. When some problem a rise every-person involved in the project looks upon the engineer for guidance and resolution. Therefore, it is important that a Civil Engineer can identify and solve the problem in an efficient way.



Leadership skills are responsible for the outcomes of the projects, which are managed by them. Therefore, it is necessary for the civil engineers especially the ones working at managerial positions to have significant leadership skills when overseeing planners, technologists, technicians, contractors, and surveyors. This involves the ability to effectively plan and prioritize, delegate duties, when necessary, manage time effectively, make decisions with confidence & authority and most importantly motivate the members of the team. Attention to detail is another key skill necessary for the civil engineers. As we know, civil engineering is about details and perfection a small mistake in this regard can lead to significant risks in project as well as the career of a civil engineer.

He explained about soft skills drawing work, earth work, estimate & bill work in Microsoft Excel – Word – PowerPoint. He explained what special skills are useful for the doing the office work. In detailed explained the different software use in the Construction Planning, Structure, Geotechnical and Environmental subject.

In concluding he discussed how to get skills from the online platform which we are using in the MOOCs.



**Introduction of topic by Expert**



MANAGED BY PLATINUM FOUNDATION  
**GANDHINAGAR INSTITUTE OF TECHNOLOGY**

"WHERE SUCCESS IS A TRADITION"  
(Approved by AICTE and Affiliated to Gujarat Technological University)



**Expert explaining comparison in every sector of civil engineering**



**Discussion about the Quality, Checks & Safety**



**Expert describing concrete work & its various equipment**



**Expert explaining soft skills in detailed**

**Outcome: -**

Overall, the session was so brief and informative that participants were convinced that different skills are useful for field and office work in the civil engineering jobs.



**Feedback: -**

A feedback form was shared with all the participants and got very good feedback from them. All participants found the session useful by understanding all the necessary skills for civil engineering.

**Concluding remark/vote of thanks:**

On behalf of Gandhinagar Institute of Technology & Civil Engineering department Prof. Juhil Kapatel gave vote of thank to Mr. Kaushal Shah for making this session informative as well as useful. He also thanked expert to mention several on field examples like soil investigation report, formwork of members, concrete quality, cover for structural members and inspect to ensure the systematic progress of a project.

Prof Juhil Kapatel gave thanks to dynamic and foresighted leader, respected Director Dr H N Shah sir who source of inspiration & motivation with a clear vision & passion connected with novelty in all the activities of the institute and respected trustees who always act as a pillar of support and strength. He also shows his gratitude to the GIT Research cell, GIT-IQAC cell & Prof. Pooja Patanwal for sorting out the whole session smoothly. He thanked all the faculty members & students for their active participation.



**Group photo with Expert, Faculty members and Participants**