



# **GIDC DEGREE ENGINEERING COLLEGE- ABRAMA- NAVSARI**



## **REPORT ON**

### **FIVE DAYS SHORT TERM TRAINING PROGRAM (STTP)**

### **“CREATIVITY AND INNOVATION IN INFRASTRUCTURAL DESIGN THROUGH PROFESSIONAL SOFTWARE”**

### **Organized By Civil Engineering Department**

Civil Engineering Department of GIDC Degree Engineering College, Abrama - Navsari has organized five days STTP on “Creativity and Innovation in Infrastructural Design through Professional Software” during 05<sup>th</sup> to 11<sup>th</sup> March, 2020 for the Pre-final year Civil engineering students at GIDC Degree Engineering College Campus.

This programme was organized under the banner of Student Start-up & Innovation Policy (SSIP). The objective of this programme was to develop an extensive knowledge of the Professional Civil Engineering Software and its applications which may very helpful to students for enhancing their skill in analysis of the different kinds of structural elements. This programme was sponsored by SAI CAD Navsari, SSIP Cell of GDEC Navsari and CADD Centre Valsad.

As we know analysis & design software are one of the important tools for civil engineers. Particularly ETABS software offers 3D object based modeling which gives better understanding about analysis and design results. The course aims is to offer comprehensive knowledge on the ETABS software and its applications. It is very helpful to students for enhancing their skill in analysis of the different kinds of structural elements and also helpful to predict exact behaviour of the structure. After completion of this course students can also compare their manual example with software output.

ETABS is an integrated software package for the structural analysis and design of buildings. ETABS offers 3D object based modeling and visualization tools, linear and nonlinear analytical power, design capabilities for a wide-range of materials, and graphic displays, reports, and schematic drawings that allow users to quickly and easily understand analysis and design results.

ETABS integrates every aspect of the engineering design process. CAD drawings can be converted directly into ETABS models or used as templates onto which ETABS objects may be overlaid. Design of steel and concrete frames (with automated optimization), composite beams, composite columns, steel joists, and concrete and masonry shear walls is included, as is the capacity check for steel connections and base plates.

## Day : 1 (05/03/2020)

On Thursday, 5<sup>th</sup> March 2020, the STTP was formally inaugurated in a ceremony attended by various dignitaries. The Chief Guest for the event was Dr. Nanak Pamnani, Principal of SSASIT College Surat. Along with him, CA Shri Vinodchandra Desai, Trustee member of G.I.D.C Education society and Dr. Neeraj D. Sharma, Principal of G.I.D.C Degree Engg. College, Navsari were present in the inauguration ceremony.

After completion of inaugural function Expert speech delivered by Dr. Nanak Pamnani. The topic of the speech was **“Earthquake Resistant Structures”**. And also share that their own experience related to field.









**Key Note Speaker: Prof. Hitesh Dhamaliya (Asst. Prof. CGPIT, UTU, Bardoli)**

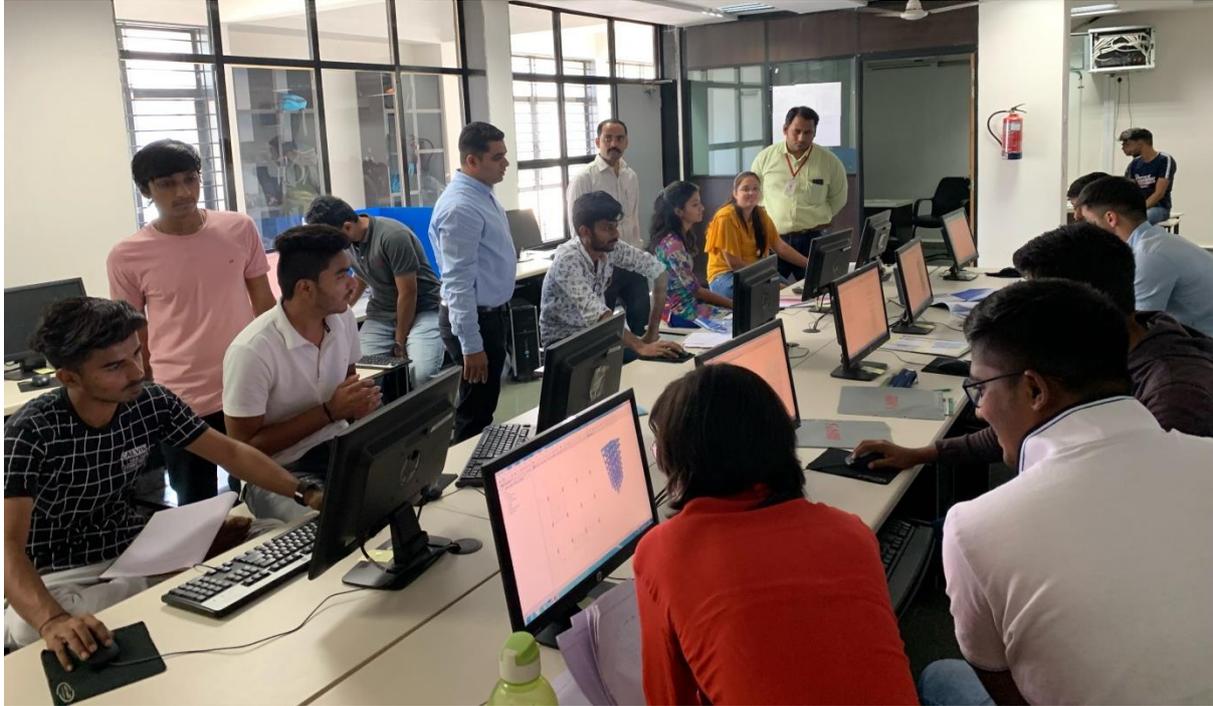
On this day , Prof. Hitesh explained basics function of ETABS software including how to model, material properties, selection of sections for structures, define & assign load and assign support condition etc. and further analysis and design. (e.g. G+1 simple structure)



## Day : 2 (06/03/2020)

**Key note speaker: Mr. Pranav kansara (Structural Consultant, Navsari)**

On the second day of this event same task was further continued , however trial was with little bit complex modelling for building including more than five stories, water tank and stair case. Also a brief idea about gravity analysis and design for RCC structure was given and explained how to understand the results provided by the software.



### Day : 3 (07/03/2020)

**Key note Speaker: Prof. Mehul Bhavsar (Asst. Prof. SSASIT College, Surat)**

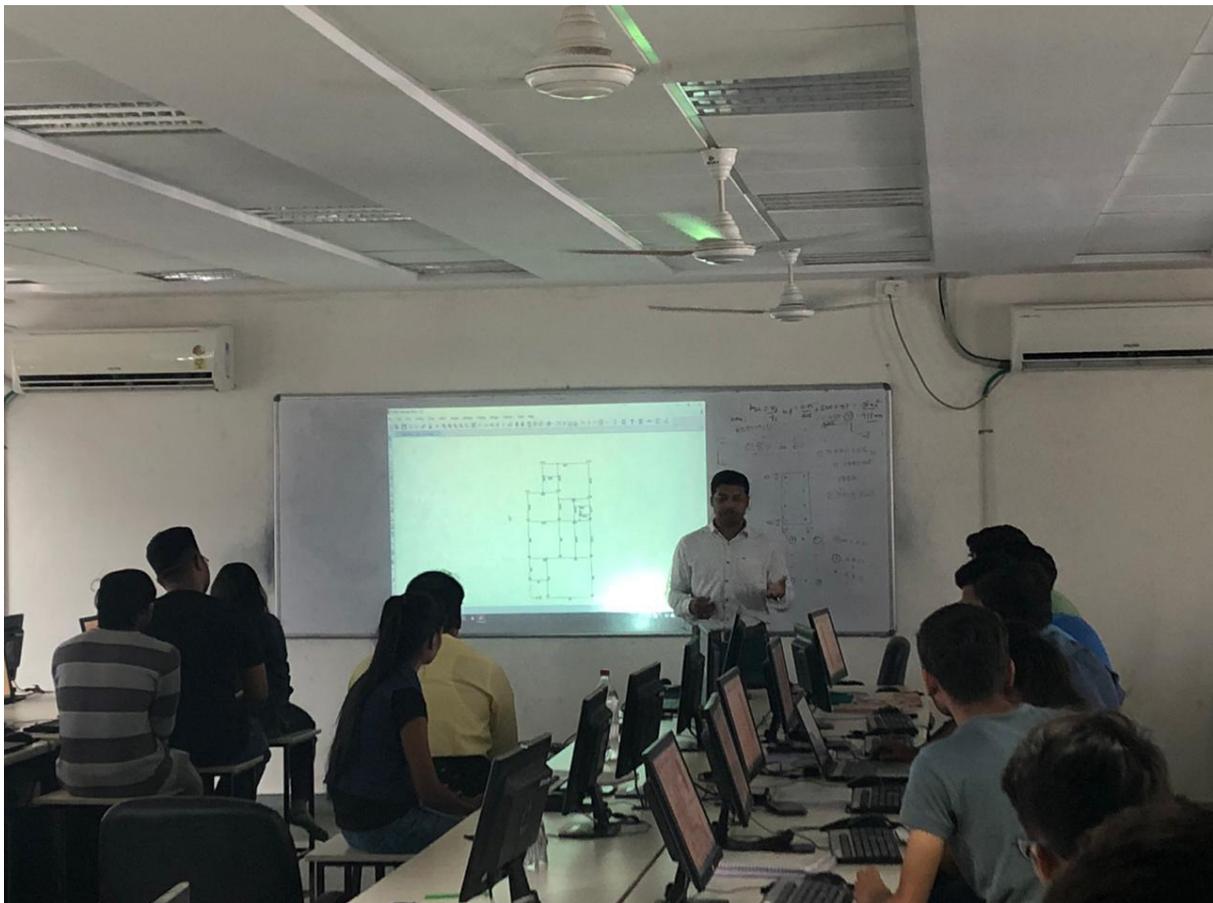
On the third day of this event Prof. Mehul emphasised on idea about how to decide element (beam & column) size of RCC structure. In this discussion some of fundamental structural engineering rules were also shared which are being used with actual starting modelling in ETABs software or any others. After the completion of that session a brief discussion about concepts of practical RCC design were explained along with kind of results usually obtained from software and its correlation with real/field based structure.



## Day : 4 (09/03/2020)

**Key note Speaker: Mr. Chetan Kapadiya (Structural Consultant, Surat)**

On the fourth day of this event basic concept of gravity design was revised with some field touch and further session was continued with dynamic analysis of structure related to earthquake resisting design. During this session codal provisions were also explained provided in IS 1893 : 2002 which are usually helpful when tackling with earthquake related design . Hands one session was also accompanied in this regard to students.



## Day : 5 (11/03/2020)

**Key note Speaker : Mr. Nikunj K. Thakor (Structural Consultant, Surat)**

On the last day of this event a brief overview of STAAD Pro software was extended by correlating previous days training. In that session topics like; Design of Steel structure , Modelling, Material properties, Selection of sections for structures, Defining and assigning loads and assigning support condition were covered with examples.









