

Activity report – ETABS Training for students of B.Tech and M.Tech Civil Engineering

(Under TEQIP III Twinning activity with REC REWA)

A training activity on design and analysis of structures using ETABS was arranged for the students of final year B.Tech Civil Engineering and M.Tech Civil (Structural Engineering) of SPCE and REC REWA under TEQIP III. The training was given in different sessions as mentioned below and these sessions were carried out during March-April 2021. The software skills are highly beneficial to students for their final year projects as well as add to their skill set while seeking job. The training was provided by Mr. Naresh Mistri. A summary of training sessions conducted is given below :

| Session no. | Duration in hours | Topics covered |
|--------------------|--------------------------|--|
| S1 | 02 | Introduction to software and various tools available in the software, unit system, Grids and storey data entry |
| S2 | 02 | Analysis of Simply Supported Beam subjected to UDL and validation of SF and BM values with manual calculations |
| S3 | 02 | Analysis of multiple Beams with different loadings and Support conditions |
| S4 | 02 | Analysis of G+1 Structure_Part-1_Model geometry creation by using Grid Pattern |
| S5 | 02 | Analysis of G+1 Structure_Part-2_Assigning dead load and live load and analysing of the structure |
| S6 | 02 | Analysis and design of G+3 Structure_Part-1_Defining materials, frame sections, and slab sections. |
| S7 | 02 | Analysis and design of G+3 Structure_Part-2_Model geometry Creation with different model editing tools |
| S8 | 02 | Analysis and design of G+3 Structure_Part-3_load calculation and Gravity load assignment to all elements |
| S9 | 02 | Analysis and design of G+3 Structure_Part-4_Static Earthquake load definition and assignment |
| S10 | 02 | Analysis and design of G+3 Structure_Part-5_Static Wind load definition and assignment |
| S11 | 02 | Analysis and design of G+3 Structure_Part-6_Analysis and interpretation of results obtained. |
| S12 | 02 | Analysis and design of G+3 Structure_Part-7_Expalining various clauses related to reinforcement detailing as per IS code |
| S13 | 02 | Analysis and design of G+3 Structure_Part-8_Designing Beam Elements and interpretation of results obtained |
| S14 | 02 | Analysis and design of G+3 Structure_Part-9_Designing Column and Wall Elements and interpretation of results obtained |

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| S15 | 02 | Introduction to dynamic analysis_Defining Response spectrum cases and combination in etabs |
| S16 | 02 | Introduction to dynamic analysis_Defining Gust wind load cases and combination in etabs |
| S17 | 02 | Analysis of Steel Truss_Finding out the forces in etabs and comparison with manual calculations |
| S18 | 02 | Basics of foundation design using SAFE |