COMPUTER APPLICATIONS IN STRUCTURAL ENGINEERING LAB

Course Code: 15CE2217

L	P	C
0	3	2

Course Outcomes:

At the end of the course, the student will be able to:

CO1: Analyse and interpret the internal forces in 2D and 3D frames, using software

CO2: Design of trusses using software

CO3: Analyse and design simple bridge decks using software.

CO4: Calculate the fundamental frequency and mode shapes of a given structure.

CO5: Analyse the internal forces in beams and truss elements using software.

1. Introduction to structural design software.
2. Analysis of continuous beam subjected to different types of loading.
3. Analysis of 2-D building frame for gravity loads.
4. Analysis of 3-D frame for gravity loads
5. Earthquake analysis of 3-D frames.
6. Wind analysis of 3-D frames.
7. Analysis and design of simple bridge deck.
8. Modal Analysis of Buildings and calculating natural frequency.
9. Calculation of mode shapes of R.C. Building.
10. Introduction to Finite Element Analysis software.
11. Analysis of beams using Finite Element Analysis software.
12. Analysis of trusses using Finite Element Analysis software.