# COMPUTER APPLICATIONS IN STRUCTURAL ENGINEERING LAB

Course Code: 13CE 2217

| L | P | C |
|---|---|---|
| 0 | 3 | 2 |

**Course Educational Objective** :

To provide the basic knowledge on Analysis and design of framed structures using FEM based software's.

**Course Outcomes**:

Student will be able to analyze and design a structure for the effects of wind and earthquakes forces using civil engineering software's.

1. Introduction to STAAD Pro software or equivalent.
2. Analysis of continuous beam subjected to different types of loading.
3. Analysis of 2-D building frame for gravity loads.
4. Analysis of 3D frame for gravity loads
5. Earthquake analysis of 3D frames.
6. Wind analysis of 3D 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 ANSYS software.
11. Analysis of beams using ANSYS software.
12. Analysis of trusses using ANSYS software.

********