

ETABS Basic

1. Introduction to ETABS

- a. Software algorithm.
- b. Capabilities of the software.
- c. Strengths and weaknesses of the software.
- d. ETABS manual.
- e. Significance of menu buttons and icons.
- f. Sample models and templates.
- g. Hands on software on sample templates.

2. Modelling: process and techniques

- a. Geometry creation process
- b. Modelling through import method: 2d import, 3d import
- c. Other import techniques.
- d. Property assignment through automation existing templates.
- e. Loadings: dead, live, wind, earthquake, temperature, notional, live load reduction.
- f. Details of wind tunnel & its loadings, standardization of wind model & ETABS model.
- g. Releases, diaphragms, all definition parameters.
- h. Checks on modelling techniques.
- i. Modelling of steel & composite structure
- j. Hands on software to perform the modelling process and techniques.

3. Analysis: process and techniques

- a. Static analysis
- b. Dynamic analysis
- c. Second order p-delta analysis
- d. Sequential analysis
- e. Time history analysis
- f. Significance of each analysis and its uses.
- g. Checks on lateral stability, deflection, storey drift, torsional irregularity, mass irregularity and stiffness irregularity.
- h. Hands on software to perform the analysis and its checks.

4. Design: methods and techniques

- a. Design of columns and beams: methodology & limitations.
- b. Design of composite columns.
- c. Design of walls & slabs