



# Structural Design & Analysis using ETABS

Course Curriculum (Duration: 40 Days)

## Chapter 1: Introduction to ETABS

- a. Overview of ETABS
- b. Getting Help
- c. Templates and Defaults
- d. Graphical User Interface
- e. ETABS Screen Menus
- f. Units System
- g. Coordinate Systems

## Chapter 2: Modelling Generation , Material Properties & Basics

- a. Starting a New Model
- b. New Model Quick Templates
- c. Grid System Data
- d. Add Structural Objects
- e. Edit Stories and Grid Systems
- f. Add Grid at Selected Joints
- g. Grid & Story Setup
- h. Save the Model

## Chapter 3: Editing Properties

- a. Replicate
- b. Extrude  $\square$  Extrude Joints to Frames  $\square$  Extrude Frame to Shells
- c. Merge Joints
- d. Align Joints/Frames/Edges
- e. Move Joints/Frames/Shells
- f. Edit Frames
- g. Edit Shells

## **Chapter 4: Defining Properties**

- a. Material Properties
- b. Section Properties
- c. Load Patterns
- d. Shell Uniform Load Sets
- e. Load Cases
- f. Load Combinations

## **Chapter 5: Structural Objects**

- a. Draw Grids
- b. Draw Dimension Lines
- c. Draw Joint Objects
- d. Draw Beam/Column/Brace Objects
- e. Draw Floor/Wall Objects
- f. Draw Reference Points
- g. Draw Reference Planes
- h. Draw Wall Stacks

## **Chapter 6: Selection Properties**

- a. Select
- b. Deselect
- c. Invert Selection

## **Chapter 7: Assign**

- a. Joint
- b. Frame
- c. Shell
- d. Joint Loads
- e. Frame Loads
- f. Shell Loads

g. Choose & Customise load combination

h. Load Analysis

### **Chapter 8: Design**

a. Steel Frame Design

b. Concrete Frame Design

c. Composite Beam Design

d. Composite Column Design

### **Chapter 9: Detailing**

a. Detailing Process

b. Edit Views

c. Create and Manage Drawing Sheets

### **Chapter 10: Display & Generate Results**

a. Obtain Basic Graphical Displays

b. Graphical Displays using Model Explorer

c. Tabular Display of Results

d. Summary Report

e. Export Results

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Mob. No.: +91-9511781566 / 70381 72715, Email: [training@radiancetech.org](mailto:training@radiancetech.org),

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