



## Advanced Structural Design & Analysis using ETABS

Course Curriculum (Duration: 70 Hrs.)

### 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 Systemes

### Chapter 2: Modelling In ETABS

- 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 Options
- h. Save the Model

### Chapter 3: Editing Properties

- a. Replicate
- b. Extrude
  - Extrude Joints to Frames
  - 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

#### **Chapter 8: Design**

- a. Steel Frame Design
- b. Concrete Frame Design
- c. Composite Beam Design
- d. Composite Column Design
- e. Steel Joist Design
- f. Shear Wall Design
- g. Steel Connection 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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