ETABS **Duration: 32 Hours**

Module 1

- Interface
- Define the grids
- Import the file
- Define
  - Materials
  - The columns
  - Shear walls
  - The slabs
- Draw the slabs
- Assign
  - The slabs
  - shear wall
  - columns
  - beams
- Load Cases-Load Combination
- Analysis Cases
- Analysis of Beams
  - Edit Grids
  - Define of Beam Section
  - Draw the elements
  - Restrains
  - Loads
  - Display Options
  - Degree Of Freedom
  - Deflection
  - Straining Actions
  - Global Axis – Local Axis

Module 2:

- Analysis of Concrete and Steel Frames
  - Edit Grids
  - Define Frame Sections (R-section& T-section)
  - Draw the frame
  - Loads (Triangular Distributed load – Uniform Distributed load)
  - Load Combinations
  - Concentrated Moments-Loads
  - Degree of Freedom
  - Deformed Shape
  - Straining Actions

- Analysis of Solid Slabs
  - Design a primary thickness with excel sheet
  - Get a primary straining actions with first principles
  - Define the slab shell
  - Define Area Sections
  - Edit Grids
  - Draw The slab
  - Joint Restrains
  - Load cases
  - Load combinations
  - Assign the loads

- Mesh The Areas
- Analyze
- Straining Actions
- Stresses
- Reinforcement (Mesh and additional)
- Home work

Module 3:

Analysis of Multi-Story Frames

- Define Grid Data
- Define Frames (internal column – external column – beams)
- Draw Elements (columns – beams)
- Replicate the model
- Loads (Uniform Loads – joint loads)
- Deformed Shapes

The Analyze of Flat Slab

- Get a primary thickness of the flat slab
- Determine the allowable deflection
- Columns (wanted check punching)
- Edit Grids
- Define the (Slabs – Beams)
- Draw the areas
- Mesh the areas
- Check deflection
- Check punching
- Load cases – load combination
- Loads
- Analyze
- Stress
- Reinforcement

Module 4:

Working with data tables

Classification of tabular data

- Model definitions
- Analysis results
- Design results

Tables and fields

Uses of tabular data

- Selecting using tables
- Formatted tables for presentation
- Structured database tables

Displaying tabular data

Printing tabular data

Custom report writer

Format control for display and printing

Interactive Table editing

- Exporting Tabular data
- Importing tabular data
- Automatic export during save
- Export during analysis
- Tabular database file formats
  - Microsoft access data base
  - Microsoft Excel spreadsheet
  - Plain text file

- Analyze of Stairs (Two flight stair)
  - Define the materials
  - Define the frames
  - Draw the levels
  - Load cases - Load combination
  - Loads
  - Draw the areas
  - Mesh the areas
  - Analyze
  - Straining Actions
  - Reinforcement

Module 5: (Appling On The Project)

- Step No 1

1.1 Export From AutoCAD
1.2 Statical System
1.3 Define The Frames (Slabs-Beams)
1.4 Draw the area
1.5 Mesh the area
1.6 Join Restrains
1.7 Load Cases _ Load Combinations
1.8 Assign Loads
1.9 Replicate The Floors
1.10 Analyze
1.11 Export The Columns
1.12 Design The Columns
1.13 Reinforcement

Module 6:

- Step No 2
  - 2.1 Get Straining Actions From The Beams (B.M.D-S.F.D)
  - 2.2 Design primary with first principles the sections
  - 2.3 Put the data in excel sheet
  - 2.4 Design the beams on excel sheet according to ECP
  - 2.5 Draw a design drawing for the beams and sections

- Discuss the full Job with the students and make their presentations