

ZENUS INFOTECH INDIA PVT. LTD.

CURRICULUM OF STAAD PRO.

Course Duration: 6/8 Weeks*

STAAD Pro Course Contents

- Introduction of Staad.Pro
- Starting Staad.Pro
- Creating New file
- Opening Existing File
- Closing a file
- Saving & Saving As
- Module Review
- Salient Features
- Hardware Requirements
- Staad.Pro Screen information
- Overview of Structural Analysis and Design
- Types of Structures
- Idealization of Structures
- Various Unit Systems
- Coordinate Systems
- Global Coordinate System
- Local Coordinate System
- Staad Commands and Input Instructions
- Command Formats
- Free Formatting Input
- Commenting Input
- Meaning of Underlining in the Manual
- Problem Initiation and Title

- How things are done in the Input File
- Geometry Creation Methods
- Using Structure Wizard
- Things you can do in Structure Wizard
- Drafting the Geometry using a Snap / Grid
- Viewing
- Selecting
- Using Selecting While viewing 3D Geometry
- Joint Coordinate Specification
- Graphical User Interface
- Member Incidence Specification
- Graphical User Interface

OTHER USEFUL FUNCTION TO COMPLETE THE GEOMETRY

- Introduction
- Translation Repeat
- Circular Repeat
- Insert Node
- Add Beams between midpoints
- Add beams by perpendicular intersection
- Connect beams along an Axis
- Cut Section
- Undo / Redo
- Dimensioning

STRUCTURAL MODELING

- What are Nodes, Beams, and Plates

PROPERTY DETAILS

- Material Specification
- Material Constants
- Constant Specifications
- Member Property Specifications
- Prismatic Property Specifications
- Tapered Member Specifications
- Specifying Properties from Steel Table
- User Table Specifications
- Member Orientation Specifications
- Beta Angle

MEMBER

- Inactive / Delete Specifications
- Listing of Members / Joints by Specifications of Groups
- Member Offset
- Member Release Specifications
- Member Truss Specifications
- Member Tension / Member Compression Specifications
- Global Support Specifications
- Fixed / Pinned / Fixed but Release / Spring Supports
- Inclined Supports
- Curved Member Specifications
- Member Cable Specifications

LOADING PARTICULARS

- Loading Specifications
- Self weight Loading Specifications
- Member Load Specifications
- Area Load / Floor Load Specifications

- Area Load
- Floor Load
- Load Combination Specifications

ANALYSIS

- Analysis Specifications
- Print Specifications
- Pre Analysis Print Commands
- Post Analysis Print Commands
- Load List Specifications
- Report Generation
- Output file

POST PROCESSING

- Introduction
- First Steps
- Node Displacement
- Node Reactions
- Beam forces
- Beam Stresses
- Beam Graphs
- Plate Contour
- Plate Results Along line
- Animation
- Reports

R.C. DESIGN

- Concrete Design As per IS 456
- Design Parameters
- Design of Beams
- Design for Flexure
- Design for Shear
- Design of Columns
- Concrete Design Specifications

- Concrete Design Parameter Specification
- Concrete Design Command
- Concrete Take of
- Concrete Design Terminator
- Interactive Design
- Beam Brief
- Column Brief

STEEL DESIGN

- Steel Design As per IS 800
- Allowable Stresses
- Axial Stresses
- Bending Stresses
- Shear Stress
- Combined Stress
- Parameter Specifications
- Code Checking Specifications
- Member Selection Specifications
- Tabulated Results Of Steel Design
- Interactive Designs

SEISMIC ANALYSIS

- Introduction to Seismic analysis
- Earthquake loading in high rise buildings

- Implementation of various load combinations of Earthquake analysis using IS 1893
- Analysis and Design of building considering Earthquake loading

WIND LOAD ANALYSYS

- Introduction to Wind load analysis
- Calculation of wind forces in High rise building
- Analysis and Design of building for Wind loading

DESIGN OF ELEVATED WATER TANKS

- Modeling of Intz tank, circular tank, rectangular tank
- Hydro Static loading in these tanks
- Analysis and Design of these tanks

DESIGN OF SLABS

- Introduction to Slabs
- Design of Slabs using IS 456
- Modeling of 1 way , 2 way and Cantilever Slab using Staad.Pro
- Analysis and Design of these Slabs using Staad.Pro