No. of Days	Topic
Day 1	Overview of Structural Analysis andDesign • Introduction STAAD.ProV8i • Staad Pro Workspace • Staad Pro Interface A. Menu bar B. Toolbar C. Mode Bar D. Page Control E. Datasheet
Day 2	• Co-ordinateSystems o Global Co-ordinate o Local Co-ordinate • Units o Input Unit o Graphical Display Unit • Dimensions
Day 3	• Labels o Node Labels o Beam Labels o Supports Labels • Tools o Rotation Tools o Zoom Tools o View Tools
Day 4	Geometry creation Methods o Snap /Grid Method o A. Linear Grid o B. Radial Grid o Copy Cut Method
Day 5	Geometry creation Methods o Run Structure Wizard o Co-ordinate Method DXF Method/ Import CAD Models
Day 6	• InsertNode o For a SingleMember o For MultipleMembers • AddBeam o Point toPoint o BetweenMidpoints

Day	Topic
	o PerpendicularIntersection o CurvedMember
Day 7	• Model EditingTools o TranslationalRepeat o CircularRepeat
Day 8	• Model EditingTools o Move o Mirror o Rotate o Copy
Day 9	• Model EditingTools o Connect BeamsAlong o Stretch SelectedMembers o Intersect SelectedMembers o Create Collinear Bea
Day 10	• Model EditingTools o Merge SelectedMembers o Renumber o SplitBeam Break Beams at SelectedNodes
Day 11	• Section Properties o Circular o Tee o Trapezoidal o Tapered • Section Database • Assignment Method • User table Beta Angle
Day 12	• Structure Diagrams o Full Section o Section Outlines • Cut Sections/Plane o Range By Joint o Range By Min/Max Select to View
Day 13	Supports Assignment • Introduction of structural supports o Fixed Support o Pinned Support o Enforced

	o Enforced But • Assignment Methods Member Offset

Day 14	Loading
	• NodalLoad
	• Nodal Moment
	• MemberLoad
	  o Uniform Force andMoment
	  o Concentrated Force andMoment
	  o Linear VaryingLoad
	  o TrapezoidalLoad
	  o HydrostaticLoad
	• AreaLoad
	FloorLoad

Day 15	Understanding & Calculating Building Loads • Self-Weight of Members & Self Weight factor • Linear Load- Wall Loads • Calculation of Floor Dead Loads • Distribution of Floor load One way & Two way Special Loads- Lift machine load, Sunken load

Day 16	• Introduction to Floor load & Live load as per IS 875-I & II
	• Creation of Primary Load Cases
	  o Primary Dead Load case
	  o Primary Live Load case
	• Load Combinations
	  o Manual Combination Method
	  o Auto Load Combination Method
	• Analysis & Print Command
	• Post Processing
	  o Result setup
	  o Node reaction & displacement
	  o Beam Forces
	  o Beam Graphs

Day 17	Understanding Staad Editor
	• Job Information
	• Input width
	• Join Coordinates
	• Member incidences
	• Finish
	• Writing notes/ information in editor
	Geometry Verification
	• Tools Menu
	  o Orphan Nodes
	  o Duplicates Nodes/ Members
	  o Overlapping Collinear Members
	• Unit Convertor
	• Calculator
	
	Member Specifications
	• Member Release
	• Member Offset

Day 18	Introduction to RCC Design As per IS 456 • Defining Various RCC Design Parameters • Beam Design • Column Design • RCC Detailing Methods
Day 19	WindLoad Design As per IS 875 III • Introduction to wind design • Design factors and Coefficient
Day 20	Calculation of Wind load as per IS 875 Part 3 • Create Wind definition • Primary Load Case for Wind load • Load combinations

Day 21	Seismic Analysis & Design as per IS-1893
	• Introduction
	• Terminologies
	  o Standards for EarthquakeDesign
	  o General Principals for EarthquakeDesign

Day 22	Seismic Analysis & Design as per IS-1893 • Static Analysis Method • Seismic Definition ,Seismic

	Parameters
	
	• Elementary Introduction –
	
	   A. IS Code 1893(2002/2005)
	
	   B. IS Code 13920

Day 23	STEEL Design inSTAAD Pro As Per IS-800
	• Steel Design Mode
	  o Load Envelopes
	  o Member Setup
	  o Member Restraints
	  o Design Briefs
	Design Groups

Day 24	• Interactive SteelDesign • Introduction Of Transmission Line Towers • Design of Transmission LineTowers

Day 25	FEM Modelling inSTAAD.Pro
	• FEM Modelling introduction
	  o SnapPlate
	  o AddPlate
	  o Create InfillPlates
	  o Create surfaces
	  o Generate SurfaceMeshing
	  o Generate PlateMesh
	• Adding PlateThickness
	• PlateLoad
	  o Pressure on FullPlate
	  o ConcentratedLoad
	  o Partial Plate PressureLoad
	  o TrapezoidalLoad
	  o HydrostaticLoad

Day 26	Water Tank Design
	• Creating a RCC underground rectangular tank using plates
	  o Tank empty
	  o Tank Full
	• Creating circular water tank

Day 27	Shear Wall Design • Introduction to Shear wall Shear wall Modeling andDesign
Day 28	Moving (Rolling) Loads • Vehicle definition • Primary load case for moving load

	• Analysis of a RCC deck slab for moving load Viewing Influence line Diagram

Day 29	Foundation Design
	
	• Introduction to structural foundation
	
	• Importing files from Staad Pro to Staad Foundation
	
	  I. Isolated Footing design
	
	    o Basic of Isolated Footing
	
	    o Creating a Isolated Footing job
	
	    o Specification of design parameters
	
	    o Design result
	
	  II. Combined Footing Design
	
	    o Basic of combined Footing
	
	    o Creating a Combined Footing job
	
	    o Specification of design parameters
	
	    o Design result

Day 30	FINAL PROJECT