



## TEKLA Structural (Steel) Design

### Course Curriculum

(Duration: Classroom: 50 Hrs, Online: 40 Hrs.)

#### Chapter 1: Introduction to Tekla

- a. Overview of Tekla
- b. Understanding Environment, Role and Configuration
- c. Create model and save the file
- d. Graphical user interface

#### Chapter 2: Modelling in Tekla Basic

- a. Tekla Structures basic tools and commands
- b. Use of Snaps and Level of detail in Tekla
- c. Insertion of Reference Models
- d. Grid generation in an example project in Tekla
- e. Creation of Levels in Tekla

#### Chapter 3: Concrete Modelling

- a. Isolated Footing generation part 01
- b. Isolated Footing generation part 02
- c. Creation of piles in Tekla
- d. Creation of strip footings in Foundation with Tekla
- e. Creation of Slab and discount of materials in Tekla
- f. Creation of Structural Columns in Tekla
- g. Creation of concrete beams in Tekla
- h. Rebar modelling

#### Chapter 4: Steel Modelling

- a. Creation of Steel Columns in Tekla
- b. Creation of steel beam in Tekla – Single beam, polybeam, curved beam, twin profile, orthogonal beam
- c. Create plate, bent plate
- d. Welding
- e. Bolting

#### Chapter 5: Assembly and Part Details

- a. Modelling detail connection between steel parts
- b. Modifying and editing connection
- c. Understanding what is part and assembly details

- d. Assembly components
- e. Detecting and fixing clashes

**Chapter 6: Various types of Connections**

- a. Base plate connection
- b. Column to beam moment connection
- c. Column to beam shear connection
- d. Beam to beam shear connection
- e. Stair

**Chapter 7: Pre Engineered Building**

- a. Components of PEB
- b. Bracing
- c. Purlin connection
- d. Bracing connection

**Chapter 8: Numbering and Detailing**

- a. Detailing views
- b. Generation of 2D drawings plans, elevations and detail views
- c. Numbering of main parts and assembly parts
- d. Single Part drawings and assembly drawings

**Chapter 9: Managing drawings**

- a. Revising and updating
- b. Working with templates
- c. Printing drawings
- d. Working with NC files

**Chapter 10: BOQ**

- a. Understanding detail bill of quantities
- b. Exporting BOQ files

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