

# Tekla Structure Essentials Training

## Course Description

The course is an extensive course designed to equip learners with the essential skills and knowledge needed to proficiently navigate and utilize Tekla Structures, a powerful Building Information Modeling (BIM) software widely used in the construction industry. Through a series of structured modules, participants will learn the fundamentals of creating, managing, and exporting structural models, as well as generating fabrication and general arrangement drawings.

## Audience

This course is ideal for aspiring and practicing structural engineers, architects, drafters, construction professionals, and anyone seeking to enhance their proficiency in Tekla Structures. Whether you're a beginner or looking to deepen your understanding, this course provides a comprehensive foundation to harness the capabilities of Tekla Structures effectively.

## Pre-requisite Knowledge/Skills

Familiarity with basic computer operations and a foundational understanding of structural engineering concepts would be beneficial but not mandatory. Participants should have access to Tekla Structures software to follow along with the practical exercises.

## Course Objectives

By the end of this course, participants will:

- Gain a thorough understanding of Tekla Structures user interface and navigation.
- Learn to create, modify, and manage structural elements such as grids, foundations, columns, walls, beams, slabs, and steel parts.
- Develop proficiency in generating fabrication and general arrangement drawings.
- Acquire skills in exporting data in various formats including drawings, PDF reports, and IFC files.
- Enhance their ability to collaborate effectively within the Tekla Structures environment.
- Apply learned concepts and techniques to real-world structural modeling and drawing projects.

# Course Outline

## Module 1: Start Learning Tekla Structures

- Launching Tekla Structures
- Creating a New Model
- User Interface
- Navigating in a Model
- Rendering Objects
- Basic Commands

## Module 2: Working with Grids

- Grid
- Importing Files
- Modifying Grids
- Creating Views Along Grid Lines

## Module 3: Creating Foundations

- Overlapping Concrete
- Creating Pad Footings
- Creating Strip Footings
- Copying Objects

## Module 4: Creating Concrete Columns and Walls

- Creating Concrete Columns
- Creating Concrete Walls

## Module 5: Creating Concrete Beams

- Creating Temporary Views
- Creating Concrete Beams
- Creating Cuts

## Module 6: Creating Concrete Slabs

- Creating Concrete Slabs
- Changing the Class Property
- Direct Modification
- Modeling the Second Floor
- Creating a Roof Slab

#### Module 7: Creating Steel Parts

- Modeling Steel Parts
- Creating Steel Columns
- Creating Steel Beams
- Simulation: Saving and Loading Object Properties

#### Module 8: Creating Steel Connections

- Components in Tekla Structures
- Adding Base Plates
- Adding Connections for Beams

#### Module 9: Managing Model Information

- View Filters
- Creating Project Thumbnails

#### Module 10: Drawings in Tekla Structures

- Principles of Drawings
- Integration Between Drawings and the Model
- Drawing Types
- Drawing Mode

#### Module 11: Creating Fabrication Drawings

- Numbering Model and Inquire Parts
- Creating Fabrication Drawings
- Modifying Fabrication Drawings

#### Module 12: Creating General Arrangement Drawings

- Creating General Arrangement Drawings

- Drawing Levels
- Revising the Model and Updating GA Drawings

### Module 13: Exporting Data

- Exporting a Drawing
- Creating a PDF Report
- Exporting an IFC File
- Printing Drawings in Tekla Structures
- Various Types of Export
- Compatible Software with Tekla Structures