Advance Steel
ESSENTIALS

Course Length: 16 Hours

Overview:

This course is recommended for Contractors and Structural Engineering students and professionals.

Learning Objectives:

- Explain the role of Autodesk Advance Steel in the BIM workflow for structural design and detailing.
- Create and organize steel projects using templates, grids, and coordinate systems.
- Model structural elements such as beams, columns, plates, and connections.
- Apply joints, welds, and parametric features to build accurate steel assemblies.
- Generate fabrication drawings, BOMs, and NC/DXF outputs for production.

Prerequisites:

It is recommended that the student has a working knowledge in Structural Engineering and are familiar with the latest versions of Microsoft Windows operating systems.

Acquisition:

Students will get a Training Module and an industry recognized Certificate of Completion.

Notes:

The course length is a guideline. Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the students.

Course Description:

This introductory level course will give the students a high-level understanding of the main productivity tools and workflows of Advance Steel for designing a building structure. During this session, the student will have a hands-on opportunity to know the capabilities and benefits of the structural workflow.

Topics Covered:

Introduction & Project Foundations
- · Introduction to Autodesk Advance Steel interface and workflow
- · Project creation and template setup
- · Working in 3D CAD: navigation, object snaps, visual styles
- · Coordinate systems and UCS control

Modeling Foundations: Grids & Basic Structures
- · Building structural grids and levels
- · Inserting columns and beams
- · Beam properties and positioning (section, alignment, offsets)
- · Simple editing tools (move, copy, mirror, trim/extend)

Joints, Plates, and Connections
- · Automatic joints and connection vault
- · Beam modifications: shorten, notch, contour, cope
- · Plates and plate features: folding, chamfering, joining
- · Connection elements: bolts, anchors, welds

Advanced Modeling & Validation
- · Creating custom connections and templates
- · Adding stairs, railings, bracing, and ladders
- · Using the project explorer, views, and queries
- · Running validation tools: collision check, technical check, marking

Documentation & Output
- · Numbering and assigning model roles
- · Drawing creation: GA, part, and assembly drawings
- · Editing and annotating drawings
- · Generating BOM and reports
- · Exporting NC/DXF files for fabrication
- · Managing document revisions