



Autodesk Revit: Fundamentals for Electrical

Course ID #: 7000-743-ZZ-Z

Hours: 21

Course Content

Course Description:

In this course, you will cover the concepts and principles of creating 3D parametric models of Electrical systems from engineering design through construction documentation to take full advantage of Building Information Modeling.

This introductory training course leads to knowledge of the software's user interface and the basic electrical components that brand the Autodesk Revit software a powerful and flexible engineering modeling tool. The course will also familiarize users with the tools required to create floor plans, populate construction documents as well as print the parametric model. Through the duration of the course, the examples and practices are designed to take the users through the basics of an electrical project from the initial process of linking models in various disciplines (i.e., architectural, structural) to populating construction documents.

The Autodesk Revit Fundamentals for Electrical Systems training course contains in-class exercises that are specific to the electrical discipline.

Course Objectives:

Upon successful completion of this course, students will be able to:

- Utilize Autodesk Revit software's fundamental commands for viewing, drawing, and editing.
- Incorporate and apply the Project and System browsers as well as the Properties palette.
- Place, load and insert Electrical components/families while obtaining an understanding of how to circuit fixtures and connect equipment.
- Obtain knowledge of Revit terminology, file-worksharing, and daily workflow utilization.
- Link Revit files along with knowledge of linking/importing CAD, PDF, image files and more.
- Formulate spaces.
- Circuit electrical devices, fixtures and equipment and populate panel schedules.
- Design cable tray and conduit layouts.
- Test electrical systems.
- Populate and annotate construction documents.
- Add tags and produce schedules.
- Detail in the Autodesk Revit software.



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Prerequisites:

This course introduces the fundamental skills you need to learn the Autodesk Revit software for Electrical Systems. It is highly recommended that you have experience and knowledge in Electrical engineering and its terminology.

Topics:

Lesson 1: Introduction to BIM and Autodesk Revit

- 1.1 BIM and Autodesk Revit
- 1.2 Overview of the Interface
- 1.3 Starting Projects
- 1.4 Viewing Commands
- Practice 1a Open and Review a Project

Lesson 2: Basic Sketching and Modify Tools

- 2.1 Using General Sketching Tools
- 2.2 Inserting Components
- Practice 2a Insert Components – Electrical
- 2.3 Selecting and Editing Elements
- Practice 2b Select and Edit Elements – Electrical
- 2.4 Working with Basic Modify Tools
- Practice 2c Work with Basic Modify Tools – Electrical
- 2.5 Working with Additional Modify Tools
- Practice 2d Work with Additional Modify Tools

Lesson 3: Starting Systems Projects

- 3.1 Linking and Importing CAD Files
- 3.2 Linking in Revit Models
- 3.3 Setting Up Levels
- 3.4 Copying and Monitoring Elements
- Practice 3a Copy and Monitor Elements
- 3.5 Coordinating Linked Models
- Practice 3b Coordinate Linked Models
- 3.6 Batch Copying Fixtures
- Practice 3c Batch Copy Fixtures – Electrical

Lesson 4: Working with Views

- 4.1 Modifying the View Display
- 4.2 Duplicating Views
- Practice 4a Duplicate Views and Set the View Display – Electrical
- 4.3 Adding Callout Views
- Practice 4b Add Callout Views – Electrical
- 4.4 Creating Elevations and Sections
- Practice 4c Create Elevations and Sections – Electrical

Lesson 5: Spaces

- 5.1 Preparing a Model for Spaces
- 5.2 Adding Spaces
- Practice 5a Add Spaces
- 5.3 Working with Spaces
- Practice 5b Work with Spaces
- 5.4 Exporting for Energy Analysis
- Practice 5c Export for Energy Analysis

Lesson 6: Basic Systems Tools

- 6.1 Connecting Components
- Practice 6a Connect Components – Electrical
- 6.2 Creating Systems – Overview
- Practice 6b View and Create Systems – Electrical



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Lesson 7: Electrical Systems

- 7.1 About Electrical Systems
- 7.2 Placing Electrical Components
- Practice 7a Place Electrical Circuits
- 7.3 Creating Electrical Circuits
- Practice 7b Create Electrical Circuits
- 7.4 Setting up Panel Schedules
- Practice 7c Set Up Panel Schedules
- Practice 7d Modify Panel Schedules and Electrical Circuits
- Practice 7e Design Enhancements Electrical
- 7.5 Adding Cable Trays and Conduit
- 7.6 Testing Electrical Layouts
- Practice 7f Add Conduit

Lesson 8: Creating Construction Documents

- 8.1 Setting Up Sheets
- 8.2 Placing and Modifying Views on Sheets
- Practice 8a Create Construction Documents
- 8.3 Printing Sheets

Lesson 9: Annotating Construction Documents

- 9.1 Working with Dimensions
- Practice 9a Work with Dimensions – Electrical
- 9.2 Working with Text
- 9.3 Adding Detail Lines and Symbols
- Practice 9b Annotate Construction Documents
- Practice 9c Annotate Construction Documents – Electrical
- 9.4 Creating Legends
- Practice 9d Create Legends – Electrical

Lesson 10: Adding Tags and Schedules

- 10.1 Adding Tags
- Practice 10a Add Tags – Electrical
- 10.2 Working with Schedules
- Practice 10b Work with Schedules – Electrical

Lesson 11: Creating Details

- 11.1 Setting Up Detail Views
- 11.2 Adding Detail Components
- 11.3 Annotating Details
- Practice 11a Create a Meter Pedestal Detail - Electrical

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