

Autodesk Certified Professional in Revit for Electrical Design

Exam objectives

Target audience

The Autodesk Certified Professional (ACP) certification is designed for candidates who have advanced skills and can solve complex challenges in production workflows and design. This type of experience typically comes from having worked with Revit on a regular basis for at least two years, which is equivalent to approximately 400 hours (minimum) to 1,200 hours (recommended).

Candidates who obtain this certification will have demonstrated a comprehensive skill set and proficiency in creating and editing project documents, working with views and their behaviors, performing basic family editing tasks, using worksharing, and leveraging Revit data and documentation tools to produce quality deliverables in projects. These skills are typically required for electrical designer jobs in architecture or MEP engineering firms or a design-build environment. Earning this certification can help differentiate candidates in the job market by validating their knowledge, skills, and abilities in relevant Revit disciplines, processes, and design.

Prerequisite skills

It's expected that candidates will already know how to:

- Navigate the Revit interface.
- Understand core application settings and functions.
- Use browser organization effectively.
- View and navigate the model.
- Create and modify basic elements, annotations, and views.
- Understand the basic concept of MEP 3D modeling.
- Demonstrate basic digital literacy skills.

Exam format

You won't have access to the software during the exam, as all questions are in a selected response format and are designed to be answered without the software. Learn more about our exam format and question types in the [Autodesk Certification FAQs](#).

Exam outline

This table lists the main content domains and their weightings, followed by the complete exam content outline.

Exam domain	% of exam
Modeling	26%
Documentation	24%
Families	22%
Analysis	10%
Collaboration	18%

Exam objectives

Here are some topics and software features that may be covered in the exam.

1. Modeling

1.1. Add equipment and fixtures

1.1 a Add electrical equipment

i. May include panelboard, switchgear, transformers, and low voltage panels.

1.1 b Add devices and light fixtures

i. May include electrical fixtures and communication, data, fire alarm, lighting, nurse call, security, and telephone devices.

1.2. Create electrical systems

1.2 a Create and edit circuits

i. May include creating equipment and branch circuits, creating low voltage circuits, and editing circuit paths.

1.2 b Create and edit switch systems

1.2 c Use the System Browser

i. May include finding specific circuits, devices, and configuring columns.

1.3. Model connecting geometry

1.3 a Add conduit and cable tray

i. May include configuring type settings and fittings.

1.3 b Add wires

i. May include creating and editing wire types, controlling tick marks, number of conductors, and homeruns.

2. Documentation

2.1. Manipulate views

2.1 a Assign, apply, and edit view templates and visibility/graphic overrides

i. May include the use of view types and templates and the implications of altering existing view templates; temporary view properties and element visibility (not including analytical); filters; graphic overrides for linked files and object styles; and controlling workset visibility.

2.1 b Manage, edit, and apply panel schedule templates

i. May include creating new templates.

2.1 c Produce schedules

i. May include building components, key schedules, and embedded schedules.

2.1 d Use miscellaneous view features

i. May include view selection boxes, scope boxes, view range, plan regions, browser organization, import views, phase filters, overrides, and more.

2.1 e Work with sheets, title blocks, and revisions

i. May include revision numbering; issuing a revision; showing the tag and/or cloud; and settings such as per project/per sheet.

2.1 f Understand all view types

i. May include drafting, legend, callout, section/detail, elevation, dependent, and 3D views.

2.1 g Apply phasing

i. May include using element phase settings, phase filters, and phase graphics overrides.

2.2. Use annotations

2.2 a Use tags

i. May include equipment, device, and circuit tags.

2.2 b Use keynotes and note blocks

i. May include keynoting settings, user keynote table formatting, and keynote legend.

3. Families

3.1. Model family elements

- 3.1 a Define MEP connectors
 - i. May include electrical, cable tray, and conduit.
- 3.1 b Understand family types: System and component
 - i. May include conduit/cable tray types, loadable families, and type catalogs.
- 3.1 c Understand family creation workflow
 - i. May include constraints, reference planes, lookup tables, geometry creation, nested families, and a basic knowledge of formulas.
- 3.1 d Configure light sources
- 3.1 e Determine family category and part type
 - i. May include adding, renaming, and setting family types, and editing properties of a family type.
- 3.1 f Differentiate between family hosting types
- 3.1 g Configure element visibility settings
 - i. May include object styles, subcategories, detail level, and element visibility.

3.2. Model annotation families

- 3.2 a Create annotation families and tags
 - i. May include creating labels and tags and combining parameters.
- 3.2 b Define symbols and annotations in a family
 - i. May include nested generic annotations and symbolic lines.

3.3. Add parameters

- 3.3 a Use and understand parameter types
 - i. May include family, shared, system, project, global, and instance and type parameters.
- 3.3 b Distinguish between parameter disciplines and data types

4. Analysis

4.1. Perform analysis

- 4.1 a Perform load calculations
 - i. May include specifying load, power factor, and load classification.
- 4.1 b Perform a conceptual lighting analysis
 - i. May include using spaces and light sources to estimate illumination.
- 4.1 c Configure electrical settings
 - i. May include load classifications and demand factors.

5. Collaboration

5.1. Use reference files

- 5.1 a Understand the difference between imported and linked files

- i. May include CAD files, images, PDFs, and positioning.
- 5.1 b Manage linked files
- i. May include adding at the proper position, removing, loading, and reloading.

5.2. Define worksharing concepts

- 5.2.a Understand worksharing concepts
- i. May include display modes, worksets, central file, file synchronization, element borrowing/relinquishing.

5.3. Collaborate with others

- 5.3 a Export to different formats
- i. May include file formats and export options.
- 5.3 b Check a model for interferences
- i. May include understanding the principles and importance of Interference checks.
- 5.3 c Use copy and monitor data and monitor elements
- i. May include how to conduct a coordination review.
- 5.3 d Assign, display, and accept primary design options
- i. May include switching between design options and option sets.
- 5.3 e Transfer project standards