

Instructor's Guide for Revit for Architectural Design Professional Certification Prep

This instructor guide is a comprehensive tool for facilitating this content in the classroom. Prepare to teach this course by thoroughly reviewing this document, as well as all related course materials and resources. We suggest knowledge of building design and construction terminology would help to teach this course.

The course is split into five lessons and is designed to cover the advanced skills required to review the topics covered on the exam.

The overall course contains the following resources:

- 6 hours of video lessons covering all the topics in the course.
- Approximately 50 dataset files for use when following the video lessons.
- Quiz questions with timecodes for remedial knowledge check.
- Exam-style questions at the conclusion of the course.
- 10 practice exercises with exercise files and solution videos.
- 2 challenge assignments with recommended assessment criteria.
- 1 end-of-course challenge assignment with recommended assessment criteria.
- 1 practice exam with references to videos for remediation.

Pre-requisites:

This course covers the topics covered in the Revit for Architectural Design Professional Certification exam, including sections on modeling, documentation, collaboration and coordination, project standard and setup, and information analysis. It is intended for students who already have a basic knowledge of these topics in Revit. Some knowledge of building design and construction terminology and general computer literacy is also required.

Video lessons:

Each video lesson is between 6 and 12 minutes long. They all begin with a list of Learning Objectives covered in the video. The dataset mentioned throughout all the videos are available if students wish to follow along or practice after the video.

All the videos will take 6 hours to watch, although if you are using the datasets and following along this will increase the time.

Practice exercises:

There are 10 practice exercises included, each exploring a different set of topics. The practice exercises are designed to give students an opportunity to test their knowledge and apply what they have learned. Each practice exercise is accompanied by a video solution. The practice exercises are shown below along with recommended durations:

Practice Exercise Schedule	
Title	Duration
Practice Exercise: Create a wall type	15 Mins
Practice Exercise: Adjust family visibility	10 Mins
Practice Exercise: Create view templates	10 Mins
Practice Exercise: Create revisions	7 Mins
Practice Exercise: Use worksharing	7 Mins
Practice Exercise: Configure phasing	5 Mins
Practice Exercise: Set project location	5 Mins
Practice Exercise: Organize the browser	10 Mins
Practice Exercise: Create a schedule	7 Mins
Practice Exercise: Create area plans	10 Mins

Challenge exercises:

There are 2 challenge exercises included, each one focusing on a set of topics covered in the course. Students are presented a challenge in an applicable real-world situation, and they apply their skills and the techniques learned to solve the challenge. Additionally, there is an end-of course challenge that encompasses multiple sections of the course. The challenge assignment exercises are shown with the

relevant lesson. You can also encourage students to work in small groups, first discussing the desired outputs from the model and working collectively to derive the best process and execution in Revit.

Challenge Exercise Schedule	
Title	Duration
Challenge: Create a basic 3D parametric family	20 Mins
Challenge: Create a room tag family	20 Mins
Course Challenge: Link Revit models and use Copy/Monitor	30 Mins

Quiz questions:

Quiz questions are included with each video of the course and the timecodes are included so that students can review the related sections in the video for questions they have answered incorrectly.

Practice exam questions:

Exam-style questions are included at the conclusion of the course for students to measure what they have learned and practice with multiple-choice questions.

Teaching the Course Contents in a Class

Each lesson is listed below along with suggested time allocations for instruction. The referenced demonstrations are based on the video instruction included in the course. Review the video tutorials for the detailed instruction in each lesson.

Lesson 01: Modeling for architectural design

Total Time In-Class Required for Lesson: 175 minutes (recommend multiple sessions)

Discuss Objectives: 5 Minutes

Demonstrate: 120 Minutes

Discussion Prompts:

- What are the various wall types to be considered for design?
- What are important design considerations when building architectural components such as roofs, floors, and ceilings?
- What are the features of stairs and handrails?
- What components are included in a room?
- What does a topographical map show?

Learning Objectives

- Create and modify advanced architectural components.
- Create, configure, and apply materials.
- Configure rooms.
- Create and configure basic 3D parametric families.
- Create topography.
- Create, modify, and manage model groups.

Review Objectives: 5 Minutes

Practice exercise: Create a wall type (15 Minutes)

Practice exercise: Adjust family visibility (10 Minutes)

Challenge exercise: Create a basic 3D parametric family (20 Minutes)

Assessment: quiz questions are available with each video.

Lesson 02: Documentation for architectural design

Total Time In-Class Required for Lesson: 160 minutes (recommend multiple sessions)

Discuss Objectives: 5 Minutes

Demonstrate: 115 Minutes

Discussion Prompts:

- What types of things should you document in an architectural project?
- What annotation techniques can be used to communicate design?

Learning Objectives

- Create and control advanced model views, visibility, and graphics.
- Configure and manage annotative elements.
- Use document revisions.
- Create and manage legends.
- Create and control detail and drafting views.
- Create and configure basic 2D parametric families.
- Create, modify, and manage detail groups.

Review Objectives: 5 Minutes

Practice exercise: Create view templates (10 Minutes)

Practice exercise: Create revisions (7 Minutes)

Challenge exercise: Create a room tag family (20 Minutes)

Assessment: quiz questions are available with each video.

Lesson 03: Collaboration and coordination for architectural design

Total Time In-Class Required for Lesson: 85 minutes

Discuss Objectives: 5 Minutes

Demonstrate: 55 Minutes

Discussion Prompts:

- What are the various roles of professionals involved in building design and construction projects and how do architects and designers collaborate with them?
- What is a central model and why is it important?
- What is phasing in Revit?
- What is involved in a coordination review?

Learning Objectives

- Configure worksets and initiate worksharing.

- Link and manage various file formats.
- Perform basic model maintenance.
- Manage and configure phasing.
- Create, configure, and manage design options.
- Use the Copy/Monitor process and features.

Review Objectives: 5 Minutes

Practice exercise: Use worksharing (7 Minutes)

Practice exercise: Configure phasing (7 Minutes)

Assessment: quiz questions are available with each video.

Lesson 04: Project standards and setup for architectural design

Total Time In-Class Required for Lesson: 65 minutes

Discuss Objectives: 5 Minutes

Demonstrate: 40 Minutes

Discussion Prompts:

- What types of settings would you want to configure or customize in Revit and for what purpose?

Learning Objectives

- Configure custom Revit UI settings.
- Configure and manage project settings and location.
- Use and manage the project browser.
- Configure print and export settings.

Review Objectives: 5 Minutes

Practice Exercise: Select project location (5 Minutes)

Practice Exercise: Organize the browser (10 Minutes)

Assessment: quiz questions are available with each video.

Lesson 05: Information analysis for architectural design

Total Time In-Class Required for Lesson: 70 minutes

Discuss Objectives: 5 Minutes

Demonstrate: 40 Minutes

Discussion Prompts:

- What is a schedule used for in Revit?
- What are some of the details that typically go into a Note block?
- What are key schedules and how do they differ from standard schedules in Revit?
- What is included in an area plan?

Learning Objectives

- Create and manage advanced schedules.
- Create and edit area schemes and area plans.

Review Objectives: 5 Minutes

Practice Exercise: Create a schedule (7 Minutes)

Practice Exercise: Create area plans (10 Minutes)

Course Challenge (optional): Link Revit models and use Copy/Monitor (30 Minutes)

Assessment: quiz questions are available with each video.

Lesson 06: Practice Test

Total Time In-Class Required for Lesson: 120 minutes

Ask students to take the practice exam test that accompanies this online course. A PDF document of the practice test is provided, with references to videos for students to review for remediation. Students should complete the exam within 120 minutes.