Learning *Autodesk Revit* Architecture 2010, Volume 1

Hands-on exercises guide new users through the concepts of building information modeling and tools for parametric building design and documentation.
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Introduction


Although this guide is designed for instructor-led courses, you can also use it for self-paced learning. The guide encourages self-learning through the use of the Autodesk® Revit® Architecture 2010 Help system.

This introduction covers the following topics:
- Course objectives
- Prerequisites
- Using this guide
- CD contents
- Completing the Exercises
- Installing the exercise data files from the CD
- Imperial and metric datasets
- Notes, tips, and warnings
- Feedback

This guide is complementary to the software documentation. For detailed explanations of features and functionality, refer to the Help in the software.

Course Objectives

After completing this course, you will be able to:
- Describe building information modeling, bidirectional associativity, and parametric relationships in Revit.
- Understand the user interface, parametric objects, and families, and start projects using templates.
- Create and modify levels and grids.
- Create a basic floor plan, add and modify walls and compound walls, use editing tools, and work with doors and windows.
- Work with component families.
- Duplicate and manage views, control object visibility in views, and create elevation, section, and 3D views.
- Learn how to use dimensions and constraints.
- Create floors and ceilings, add roofs and curtain walls, and work with stairs and railings in a building model.
- Learn how to create callout views and work with text and tags, detail views, and drafting views.
- Create schedules, rooms and room schedules, and legends and keynotes.
- Work with drawing sheets and titleblocks, manage revisions, and present the building model using rendering, walkthroughs, and sun and shadow settings.
Prerequisites
This guide is designed for new users of Revit Architecture. No previous CAD experience is necessary. It is recommended that you have:
- Architectural design, drafting, or engineering experience.
- Microsoft® Windows® 2000, Microsoft® Windows® XP, or Microsoft® Windows® Vista.

Using This Guide
The lessons are independent of each other. However, it is recommended that you complete these lessons in the order that they are presented unless you are familiar with the concepts and functionality described in those lessons.

Each chapter contains:
- **Lessons**
  Usually two or more lessons in each chapter.
- **Exercises**
  Practical, real-world examples for you to practice using the functionality you have just learned.
  Each exercise contains step-by-step procedures and graphics to help you complete the exercise successfully.

CD Contents
The CD attached to the back cover of this book contains all the data and drawings you need to complete the exercises in this guide.

Completing the Exercises
You can complete the exercise in two ways, using the book or on screen.
- **Using the book**
- **On screen**
  Click the Learning Autodesk Revit Architecture 2010 icon on your desktop, installed from the CD, and follow the step-by-step exercises on screen. The onscreen exercises are the same as those in the book. The onscreen version has the advantage that you can concentrate on the screen without having to glance down at your book.
After launching the onscreen exercises, you might need to alter the size of your application window to align both windows.

**Installing the Exercise Data Files from the CD**

To install the data files for the exercises:

1. Insert the CD.
2. When the setup wizard begins, follow the instructions on screen to install the data.
3. If the wizard does not start automatically, browse to the root directory of the CD and double-click `setup.exe`.

Unless you specify a different folder, the exercise files are installed in the following folder:

`C:\Autodesk Learning\Autodesk Revit Architecture 2010\Learning` 

After you install the data from the CD, this folder contains all the files necessary to complete each exercise in this guide.
Imperial and Metric Datasets

In exercises that specify units of measurement, alternative files are provided as shown in the following example:

- Open i_export_ifc.rvt (imperial) or m_export_ifc.rvt (metric).

In the exercise steps, the imperial value is followed by the metric value in parentheses as shown in the following example:

- For Length, enter 13'2" (4038 mm).

For exercises with no specific units of measurement, files are provided as shown in the following example:

- Open c_boundary_conditions.rvt (common).

In the exercise steps, the unitless value is specified as shown in the following example:

- For Length, enter 400.

Notes, Tips, and Warnings

Throughout this guide, notes, tips, and warnings are called out for special attention.

- Notes contain guidelines, constraints, and other explanatory information.

- Tips provide information to enhance your productivity.

- Warnings provide information about actions that might result in the loss of data, system failures, or other serious consequences.

Feedback

We always welcome feedback on Autodesk Official Training Guides. After completing this course, if you have suggestions for improvements or if you want to report an error in the book or on the CD, please send your comments to learningtools@autodesk.com.