

Essentials

Autodesk Official Training Courseware (AOTC)

Revit®

MEP 2009

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Introduction

Welcome to the *Revit MEP 2009: Essentials* Autodesk Official Training Courseware (AOTC), training courseware for use in Authorized Training Center (ATC®) locations, corporate training settings, and other classroom settings.

Although this courseware is designed for instructor-led courses, you can also use it for self-paced learning. The courseware encourages self-learning through the use of the Revit® MEP 2009 Help system.

This introduction covers the following topics:

- Course objectives
- Prerequisites
- Using this courseware
- CD contents
- Completing the exercises
- Installing the exercise data files from the CD
- Imperial and metric datasets
- Notes, tips, and warnings
- Feedback

This courseware 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 methodology.
- Use the Revit MEP user interface and work with different types of Revit elements and families.
- Explore views in the Project Browser, control the visibility and appearance of elements in different views, and create and modify section, elevation, and 3D views.
- Set up a project using different templates, define discipline settings, import and edit DWG™ details, and link Revit models.
- Represent volumes using spaces, create zones, and analyze an analytical model for building performance analysis.
- Define heating and cooling loads information and calculate heating and cooling loads.
- Create HVAC systems, generate HVAC system layouts, and create and modify ductwork using Revit MEP tools.
- Lay out and create system piping.

- Create plumbing systems.
- Create fire protection systems.
- Create electrical circuits and wiring.
- Check and fix interference conditions and monitor changes in files of other disciplines linked to Revit MEP.
- Create callout views, create and use detail views, and work with drafting views.
- Work with text and tags, dimensions, and schedules and create legends with notes, annotation symbols, and model elements.
- Add and work with titleblocks, create and modify sheets, and specify print options and print documentation sets.

Prerequisites

This course is designed for MEP engineering professionals, design professionals and drafting professionals.

It is recommended that you have a working knowledge of:

- MEP engineering and design.
- Microsoft® Windows® 2000 or Microsoft® Windows® XP.

Using This Courseware

The lessons are independent of each other. However, it is recommended that you complete these lessons in the order in which 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 course.

Completing the Exercises

You can complete the exercise in two ways: using the book or onscreen.

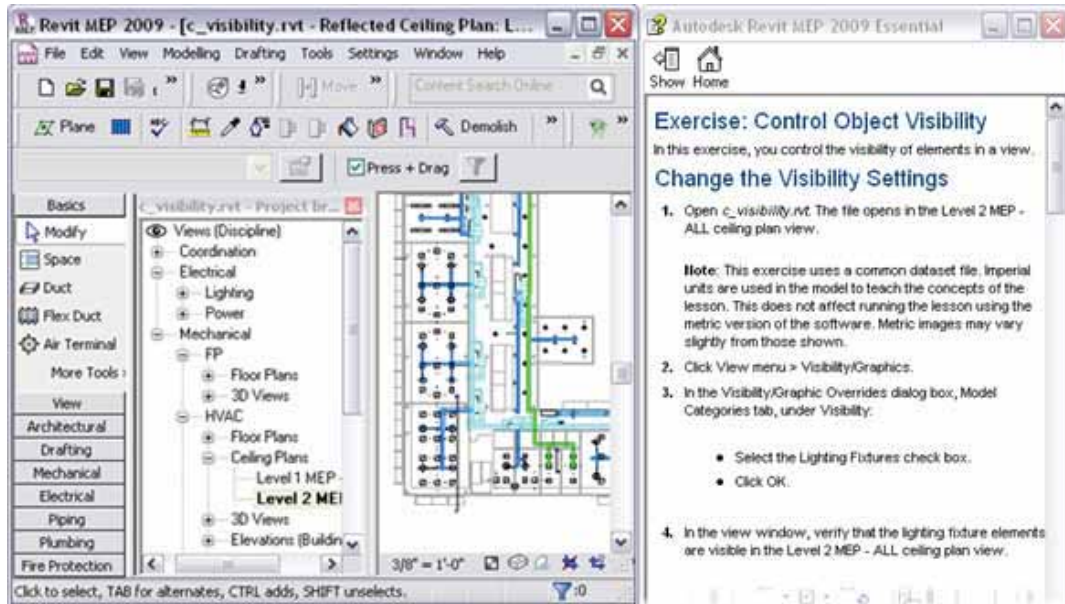
- **Using the book**

Follow the step-by-step exercises in the book.

- **On screen**

Click the AOTC - Revit MEP 2009 Essentials 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 courseware 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:\Documents and Settings\All Users\Autodesk Learning\Revit MEP 2009 Essentials

After you install the data from the CD, this folder contains all the files necessary to complete each exercise in this course.

Imperial and Metric Datasets

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

- Open *i_create_plumbing_system.rvt* (imperial) or *m_create_plumbing_system.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_elec_fixture_family.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 courseware, 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 Courseware. 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 AOTC.feedback@autodesk.com.