

# Revit®

Structure 2008

**Advanced**

Autodesk Official Training Courseware  
(AOTC)

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# Introduction

Welcome to the *Revit Structure 2008: Advanced* Autodesk Official Training Courseware (AOTC). This courseware can be used in Authorized Training Center (ATC®) locations, corporate training settings, and other classroom settings.

This courseware covers a wide range of advanced topics in Revit® Structure 2008, continuing to build on concepts introduced in the *Revit Structure 2008: Essentials* courseware. Although this courseware is designed to be used as a teaching tool for instructor-led courses, it can also be used for self-paced learning. In addition to the courseware, this book encourages self-learning through the use of the Revit Structure 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:

- Create and work with 2D detail components and detail component groups.
- Model 3D rebar in beams and columns and add area and path reinforcement to walls and slabs.
- Work with families and create a slab on metal deck, a precast hollow core slab, a tapered moment frame, steel gusset plates, steel stiffeners and stepped footings.
- Create and work with trusses and attach trusses to roofs.
- Work with the analytical model and add point, line, and area loads, check the structural model for missing supports and for inconsistencies between the analytical and physical models, and learn how to add and modify boundary conditions to an analytical model. You will also learn about working with Revit Structure and other applications such as ROBOT Millennium, RISA, and the ADAPT-Builder suite of programs to analyze and update your model.

- Import and export data such as 2D files, views, and sheets between AutoCAD® and Revit Structure projects and import and export data between AutoCAD® Architecture and Revit Structure projects.
- Link Revit models, coordinate and monitor changes in the current project and in a linked project, and check and fix interference conditions in Revit Structure projects.
- Create and use worksets and manage worksets.
- Import and publish files using DWF™ format and work with Design Web Format (DWF) markup files.
- Import Industry Foundation Classes (IFC) format files and export data to the IFC format from Revit Structure.

## Prerequisites

This course is designed for existing Revit Structure users and covers advanced topics. However, it is recommended that you:

- Complete the *Revit Structure 2008: Essentials* course prior to using this courseware.
- Have structural engineering and/or design, drafting, or engineering experience.
- Have a working knowledge of Microsoft® Windows® 2000 or Microsoft® Windows® XP.

## Using This Courseware

The lessons are independent of each other. However, we recommend 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.

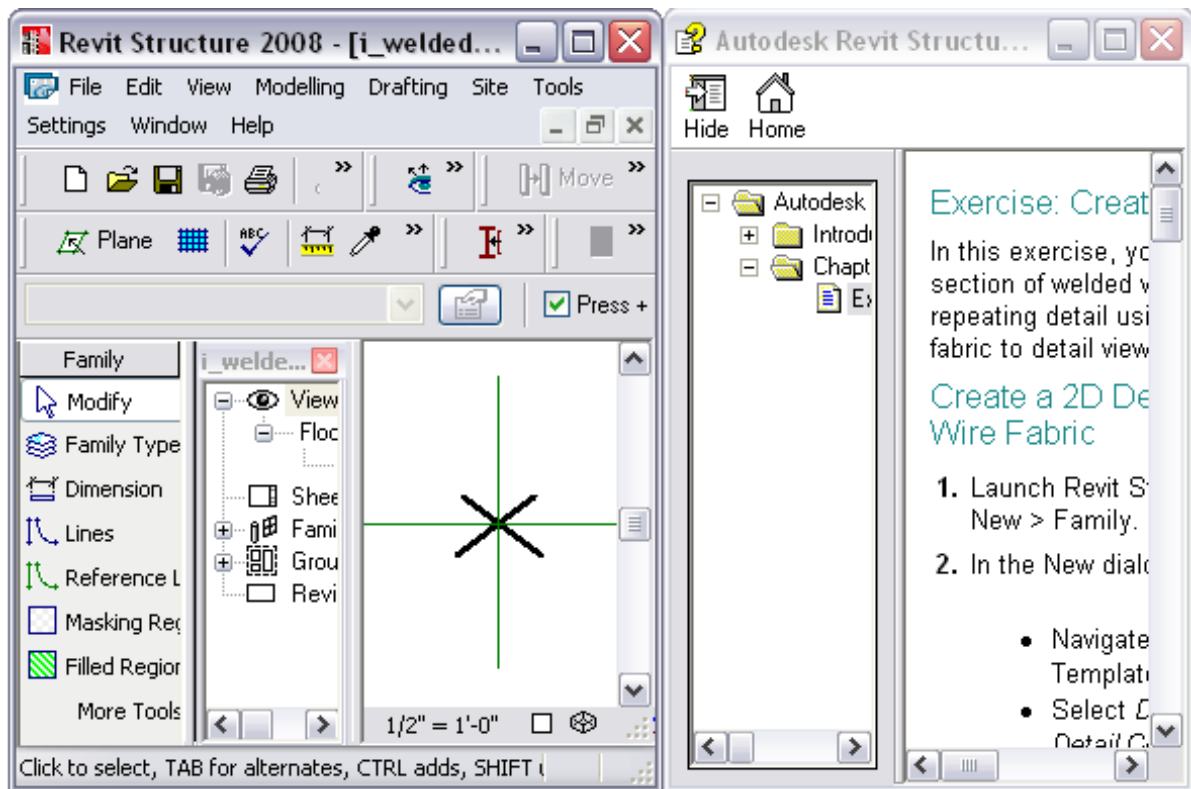
## CD Contents

The CD attached to the back cover of this book contains all the data files 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.
- **Onscreen**  
Click the AOTC - Revit Structure 2008 Advanced 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 Structure 2008\Advanced\*

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\_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 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](mailto:AOTC.feedback@autodesk.com).