

# Autodesk Revit BIM Modeling for Facilities Management Training Course

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Toronto

AGILE LEADERS
Training Center

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## Overview

Autodesk Revit BIM Modeling for Facilities Management Training Course is a one-week course for estate engineers, asset coordinators, and maintenance planners who require operational digital models for maintenance delivery. Facility teams often inherit design models saturated with geometric detail yet missing critical equipment tagging, room relationships, and operational schedules needed for Computerized Maintenance Management Systems. This course applies ISO 19650 information principles and COBie standards to build, verify, and export maintenance-ready Revit assets. Agile Leaders Training Center delivers the Autodesk Revit BIM Modeling for Facilities Management Training Course.

## Who Should Attend

- Asset coordinators responsible for verifying contractor model handovers and non-graphical equipment data.
- Facilities managers directing preventive maintenance operations, space utilization, and service contractor tasks.
- Mechanical and electrical maintenance planners supervising equipment tagging and operational spare replacement.
- BIM coordinators structuring operational model deliverables for long-term real estate portfolios.
- Estate documentation officers overseeing computerized maintenance databases and operational asset registers.

The course assumes participants already coordinate facilities operations or work with building drawings, and it leaves out introductory computer drafting instruction.

## Departments and Industries

The course draws operational scenarios from organizations operating critical infrastructure and corporate estates.

- Facilities management and corporate real estate divisions
- Operations and maintenance directorates in healthcare networks
- Airport and transit hub infrastructure maintenance units
- Commercial retail and multi-tenant property management groups
- Campus operations and physical plant departments in higher education

## Learning Objectives

By the end of this course, participants will be able to:

- Apply ISO 19650 information management workflows to structure maintenance deliverables across asset lifecycles.
- Build operational Revit models containing required parameter sets for computerized maintenance handovers.
- Diagnose parameter discrepancies in mechanical, electrical, and architectural elements using model auditing tools.
- Extract standardized COBie data sheets from Revit to populate facility maintenance databases.
- Evaluate federated coordination models in common data environments to verify operational clearance zones.
- Prioritize corrective updates to asset data drops based on operational exchange information requirements.

## Course Agenda

### Day 1: Information structures and operational modeling requirements

- ISO 19650 information lifecycle principles and the role of asset information models
- Exchange Information Requirements alignment with Organizational Information Requirements
- Common Data Environment states covering Work in Progress, Shared, Published, and Archived
- BIM Execution Plan specifications for operational facilities management deliverables
- Asset classification systems including OmniClass and UniFormat parameter tagging

### Day 2: Parametric asset modeling and space management

- Autodesk Revit modeling workflows for rooms, spaces, and usable area boundaries
- Mechanical, electrical, and plumbing equipment parameter setup for maintenance tracking
- Family parameter configuration for manufacturer details, serial numbers, and warranty dates
- Asset numbering conventions matching operational Computerized Maintenance Management Systems
- Clearance zone modeling for equipment service access and maintenance access routes

### Day 3: Non-graphical data integration and model audits

- Shared parameters file setup for portfolio-wide asset attribute consistency
- Autodesk Revit schedule views for equipment audit and attribute completion tracking
- Dynamo visual scripts for automated room-to-equipment parameter association
- Model auditing tools for isolating orphaned components and unassigned systems
- IFC export setup for non-proprietary model validation and cross-platform exchange

## Day 4: COBie data structuring and handover workflows

- COBie data architecture covering Facility, Floor, Space, Type, and Component tables
- Autodesk Revit BIM Interoperability Tools configuration for COBie data generation
- Attribute mapping protocols connecting Revit parameters to standardized COBie fields
- Quality assurance auditing of COBie spreadsheets against handover specifications
- Maintenance documentation hyperlinking within the model and external data repositories

## Day 5: Operational model federation and handover simulation

- Exercise: audit an MEP Revit model for missing maintenance attributes and clearance violations
- Exercise: map room and equipment data using Dynamo visual scripts for database synchronization
- Exercise: generate and validate a multi-level COBie spreadsheet for an educational facility
- Exercise: federate multi-discipline models in Autodesk Navisworks to verify equipment service paths
- Capstone exercise: produce a verified Asset Information Model handover pack with validated COBie datasets

## Practical Exercises

The course uses practical modeling files and asset checklists reflecting live operational environments.

- Suggested activity: Configure Revit shared parameters and assign operational attributes across major air handling unit families.
- Suggested activity: Execute a Dynamo visual script to associate maintenance zones and room numbers with electrical panels.
- Suggested activity: Export and validate a multi-discipline COBie asset drop against contractual exchange requirements.
- Suggested activity: Audit maintenance clearances in a federated facility model using clash detection rules.

## FAQs

### Who suits the Autodesk Revit BIM Modeling for Facilities Management Training Course?

The Autodesk Revit BIM Modeling for Facilities Management Training Course suits facilities engineers, estate managers, and maintenance coordinators. The course assumes foundational familiarity with technical facility drawings or property maintenance, and it leaves out general introductory computer literacy and drafting basics.

### How does this course differ from general architectural BIM modeling courses?

General architectural BIM courses focus on schematic design, permitting drawings, and architectural detailing. This course focuses on asset data structures, parameter mapping, maintenance access clearances, and operational data extraction like COBie for facility management systems.

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## What is COBie in the context of Revit BIM modeling?

COBie, or Construction Operations Building Information Exchange, is a standard format for delivering non-graphical facility and equipment data. It transfers equipment lists, warranties, and maintenance spare schedules from the Revit model directly into maintenance databases.

## How does ISO 19650 guide facilities management modeling?

ISO 19650 guides modeling by defining clear information requirements, common data environment workflow states, and structured asset information models. This ensures that the digital model contains the specific data required for ongoing operations rather than unnecessary design clutter.

## Conclusion

Participants return to their organizations with a verified Asset Information Model handover pack containing standardized parameters and validated COBie spreadsheets. This work product establishes a reliable baseline for populating maintenance databases and scheduling preventive servicing directly from digital building models. The resulting documentation shortens handover transition timelines and ensures long-term operational data integrity.