

Autodesk Revit Model Auditing-QA & QC

1. TARGET AUDIENCE:

This course is designed for professionals involved in creating, reviewing, coordinating, and maintaining Revit models, including:

- BIM Modelers
- BIM Engineers
- Revit Architects
- Revit Structural Engineers
- Revit MEP Engineers
- BIM Coordinators

2. COURSE OBJECTIVE:

After completing this course, learners will be able to:

- Perform comprehensive Revit model audits.
- Identify and resolve model health issues.
- Apply BIM QA/QC standards throughout the project lifecycle.
- Use audit checklists to validate Revit models.
- Configure and run Autodesk Model Checker.
- Generate professional audit reports.
- Improve model performance and maintain BIM standards.
- Prepare models for client delivery.

3. COURSE OUTCOMES:

Participants will be able to:

- Audit Revit projects using industry-standard workflows.
- Measure and improve model health.
- Detect modeling errors before project delivery.
- Execute QA and QC procedures effectively.
- Automate model validation using Autodesk Model Checker.
- Create reusable audit templates and checklists.
- Produce detailed audit reports with corrective actions.

4. COURSE OUTLINE:

The course comprises **24 hours** of theory, demonstrations, and hands-on practical exercises and is divided into **9 comprehensive chapters**. Each chapter is designed with real-world examples, guided exercises, and project-based activities to help learners develop practical skills in document review, collaboration, quantity takeoff, and digital construction workflows using Bluebeam Revu.



Module 1: Introduction to Model Auditing

- Introduction to BIM Quality Management
- What is Model Auditing?
- Importance of Model Auditing
- QA vs QC in BIM
- BIM Execution Plan (BEP) Requirements
- Model Delivery Standards
- Model Lifecycle
- Audit Workflow
- Roles and Responsibilities

Module 2: Revit Model Health

- What is Model Health?
- Indicators of a Healthy Model
- Revit Performance Issues
- File Size Analysis
- Model Statistics
- Revit Warnings
- Corrupt Models
- Central Model Health
- Compact Central Model
- Audit Option
- Purge Unused
- File Maintenance

Module 3: Project Audit Checklist

Project Setup

- Project Information
- Units
- Coordinates
- Levels
- Grids
- Shared Coordinates
- Project Base Point



- Survey Point

Browser Organization

- Views
- Sheets
- Schedules
- Legends
- View Templates
- Browser Organization

Module 4: Model Quality Audit

- Model Accuracy
- Geometry Validation
- Constraints Review
- Hosted Elements
- Duplicate Elements
- Design Options
- Phases
- Worksets
- Groups
- Arrays
- CAD Imports
- Images
- Linked Models
- Monitoring Links
- Purging Families

Module 5: QA & QC in BIM Projects

Quality Assurance (QA)

- BIM Standards
- Office Standards
- Modeling Guidelines
- BEP Compliance
- Documentation Standards
- LOD Validation
- Information Requirements

Quality Control (QC)



- Model Verification
- Clash Readiness
- Documentation Check
- Quantity Validation
- Annotation Review
- Schedule Verification
- Sheet Review

Module 6: Model Audit Checklist

Architectural Checklist

- Walls
- Doors
- Windows
- Floors
- Roofs
- Rooms
- Areas
- Stairs
- Railings
- Ceilings

Structural Checklist

- Columns
- Beams
- Foundations
- Reinforcement
- Connections

Documentation Checklist

- Sheets
- Dimensions
- Tags
- Text
- Legends
- Schedules
- View Templates
- Title Blocks



Module 7: Autodesk Model Checker

- Introduction to Autodesk Model Checker
- Installation
- Interface
- Checksets
- Rule Categories
- Running Model Checker
- Reading Reports
- HTML Reports
- Excel Reports
- Compliance Reports
- Correcting Failed Checks

Module 8: Creating Custom Rules

- Configurator
- Rule Sets
- Naming Rules
- Parameter Validation
- Shared Parameters
- View Standards
- Sheet Standards
- Family Rules
- Project Rules
- Office Standards

Module 9: Audit Reports & Documentation

- Audit Report Structure
 - Model Health Score
 - Compliance Matrix
 - QA Report
 - QC Report
 - Issue Register
 - Corrective Action Report (CAR)
 - Lessons Learned
 - Final Client Audit Report
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