

Autodesk Professional in BIM Management for Building Design with BIM Automation

Target Audience

This course is intended for BIM Managers, BIM Coordinators, Digital Delivery Leads, and senior AEC professionals involved in managing BIM standards, collaboration, and data across multidisciplinary projects. It is also suitable for professionals preparing for the Autodesk Certified Professional (ACP) in BIM Management for Building Design certification.

Course Objective

The course aims to equip participants with advanced BIM management knowledge and practical workflows required to plan, implement, and govern BIM processes in alignment with industry standards and successful completion of the Autodesk Certified Professional (ACP) in BIM Management for Building Design exam.

Course Outcome

After completing this course, participants will be able to:

1. **Develop and implement BIM standards and BIM Execution Plans (BEPs)** aligned with organizational goals, project requirements, and industry standards such as ISO 19650.
2. **Manage collaboration and coordination workflows** using Common Data Environments (CDE), model coordination, clash detection, and multidisciplinary data exchange.
3. **Monitor and maintain model health, data quality, and compliance**, ensuring accurate, consistent, and reliable project deliverables throughout the project lifecycle.
4. **Demonstrate certification-ready BIM management expertise**, enabling confident preparation for and successful completion of the Autodesk Certified Professional (ACP) in BIM Management for Building Design exam.

Course Outline: The course comprises **40 hours** of theory and practical labs and is divided into 6 comprehensive chapters. Each chapter will be followed by hands-on lab exercises to reinforce learning and gauge understanding of the topics covered.

Table of Contents:

Module 1: Orientation & BIM Management Foundations

- Overview of ACP – BIM Management Certification
- Exam format, domains, and weightage
- Role of BIM Manager in project lifecycle
- Review of prerequisite skills and tools
- Introduction to BIM standards and global frameworks (ISO 19650 overview)

Module 2: Corporate BIM Standards & Documentation

2.1 Establishing Organizational BIM Standards

- BIM maturity and standardization strategy
- Defining model health thresholds
- Researching and applying industry data standards

2.2 Project & Content Template Development

- Creating Autodesk Construction Cloud (ACC) project templates
- Developing multidisciplinary model templates
- Customizing content creation templates
- Supporting graphic standards
 - View templates
 - Annotation standards

2.3 BIM Execution Plan (BEP) – Corporate Templates

- BEP structure and purpose
- Risk management system templates
- Mobilization plan templates
- Information Delivery Plans
 - TIDP, MIDP
 - AIA / ConsensusDocs
- Defining project roles and responsibilities

2.4 Digital Tool Evaluation & Optimization

- Establishing a tool evaluation framework
- Evaluating add-ins, software, hardware, and AI tools
- Building a business case for technology adoption

2.5 Corporate QA/QC & Best Practices

- Defining QA/QC processes for milestone reviews
- Reviewing and updating BIM standards
- Conducting post-project BIM evaluations

2.6 Training & Learning Path Development

- Assessing staff competencies
- Creating structured training programs
- Supporting BIM career pathways

Module 3: Project Needs Assessment & BIM Planning

3.1 Project Requirements Analysis

- Understanding client BIM requirements
- Identifying BIM goals, uses, milestones, and deliverables
- Tool ecosystem planning for project execution
- Assessing team capability and training needs

3.2 Project-Specific BIM Execution Plan (BEP)

- Establishing project BIM goals and uses
- Defining project-specific templates and content
- Implementing risk management strategies
- Establishing information delivery plans
- BEP distribution and confirmation
- Defining Level of Development (LOD) / Level of Information Need

3.3 Project Initialization & Setup

- Establishing project datums
 - Shared coordinates
 - Levels and grids
- Assembling interdependent discipline models
- Implementing BIM processes
 - Shared parameters
 - Worksets
 - Phases
 - ACC folder structure and permissions
 - Model coordination workflows
- Conducting project kickoff meetings

3.4 Quality Control Implementation

- Model performance and health analysis
- Identifying improvement areas
- Checking model completeness and compliance

Module 4: Collaboration Process & Model Coordination

4.1 Common Data Environment (CDE) Management

- CDE principles and workflows
- Sharing BIM data with third parties
- Managing data security
- Implementing issue tracking systems

4.2 Geolocation & Coordinate Management

- Extending shared coordinates across disciplines
- Managing building location changes
- Resolving geolocation conflicts
 - Unit mismatches
 - Unintentional coordinate shifts

4.3 3D Coordination & Clash Management

- Managing clash detection processes
- Using coordination and clash detection tools
- Creating focused clash reports and analytics
- Clash matrix and responsibility allocation

4.4 Multi-Model & Multi-Disciplinary Management

- Assembling multi-building models
- Managing multidisciplinary linked models
- Mapping phases across linked models
- Implementing shared parameters across stakeholders

4.5 Consultant & Subcontractor Deliverable Review

- Validating QA standards
- Checking LOD / Level of Information Need compliance
- Evaluating geometry and content quality
- Enforcing standards compliance

Module 5: Data Management & Model Health

5.1 Standards-Based Model Creation

- Naming and numbering compliance
 - ISO 19650
 - Client and company standards
- Controlling output visibility
 - Templates
 - Filters
 - Graphic overrides

5.2 Model Auditing & Issue Resolution

- Educating teams based on model issues
- Managing warnings and journal files
- Troubleshooting project files
 - Corrupt families
 - External references
 - Visibility issues
- Periodic model health reviews
 - Workset strategy
 - Browser organization
 - Layer and subdivision management
- Compliance validation with project and industry standards

5.3 Project Closeout & Data Handover

- Archiving BIM project data
- Facilitating structured data handover
- Deliverables for client and facilities management

Module 6: Introduction to Dynamo

- Introduction to Dynamo: Visual Programming Interface
- Dynamo Data Manipulation: Lists, Nodes and Logic
- Dynamo and Revit Connection: Automating Repetitive Tasks
- Advanced Dynamo Topics: Custom Scripts and Packages
- Practical Applications: Automated Tagging, Renaming and Data Export

