

Building Information Modelling (BIM) Professional (ISO 19650)

3-Day Theoretical Assessment Table of Contents (TOC)

Day 1: Fundamentals and Architectural Modeling

Module 1: BIM Standards and Concepts

- 1.1 BIM principles and lifecycle
- 1.2 Role of BIM in the AEC industry
- 1.3 Overview of international standards (ISO 19650, Uniclass, OmniClass)
- 1.4 Level of Development (LOD) and Level of Information (LOI) from 100 to 500

Module 2: 2D Drafting with AutoCAD

- 2.1 Role of AutoCAD in BIM workflows
- 2.2 Coordination between 2D and 3D models
- 2.3 Integration of AutoCAD outputs with Revit
- 2.4 Application in multidisciplinary environments

Module 3: Architectural Modeling

- 3.1 Creation of architectural elements (walls, doors, windows, roofs)
 - 3.2 Implementation of LOD 100 to 300
 - 3.3 Application of materials, annotations, and parameters
 - 3.4 Coordination with other disciplines
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Day 2: Site, Structural, and MEP Modeling

Module 4: Site and Topography Modeling

- 4.1 Introduction to Civil 3D
- 4.2 Terrain, grading, and surface modeling
- 4.3 Exporting and integrating models with Revit

Module 5: Structural Modeling

- 5.1 Modeling structural components (beams, columns, foundations, reinforcement)
- 5.2 Coordination with architectural and MEP models
- 5.3 Basic structural analysis
- 5.4 Preparation of construction documentation

Module 6: Modeling MEP Systems

- 6.1 HVAC system modeling
 - 6.2 Plumbing system modeling
 - 6.3 Electrical system modeling
 - 6.4 Coordination with architectural and structural models
 - 6.5 System optimization and compliance
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Day 3: Coordination and Collaboration

Module 7: Clash Detection and Coordination

- 7.1 Introduction to Navisworks
- 7.2 Clash detection processes
- 7.3 Identification of conflicts across disciplines
- 7.4 Clash report generation and interpretation
- 7.5 Resolution strategies and coordinated model reviews

Module 8: Collaboration and Work-sharing

- 8.1 BIM collaboration tools (BIM 360, Revit Work-sharing)
- 8.2 Project data management
- 8.3 Communication workflows among teams
- 8.4 Sharing and approval of construction documents
- 8.5 Best practices for large-scale collaboration