KOENIG SOLUTIONS · COURSE OUTLINE

Architectural Modelling with BIM Management Essentials

Learn BIM concepts, ISO 19650 standards and document management, then apply them through hands-on architectural modelling in Autodesk Revit.

18
MODULES

88
TOPICS

COURSE OVERVIEW

This course provides a comprehensive foundation in Building Information Modelling (BIM) and its integration with digital transformation, Industry 4.0, and global standards. Participants will learn BIM concepts, levels of maturity, standards (ISO 19650), and document management strategies, followed by practical training in Autodesk Revit Architecture for architectural modelling, parametric design, visualization, and collaboration. The course bridges BIM management principles with hands-on Revit practices to prepare learners for real-world AEC projects.

WHO THIS COURSE IS FOR

- **Architects, designers, engineers, and project managers in the AEC industry**
- **BIM coordinators, BIM managers, and digital transformation professionals**
- **Students and beginners aiming to learn BIM concepts and Revit modelling**
- **Professionals transitioning from CAD to BIM workflows**

PREREQUISITES

- Basic knowledge of architecture or construction industry workflows
- Familiarity with computers and design software (CAD exposure beneficial, not mandatory)

LEARNING OBJECTIVES

What You Will Learn

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

- Understand BIM fundamentals, terminology, dimensions, maturity levels, and benefits
- Apply Industry 4.0 and digital transformation concepts within construction workflows
- Implement BIM standards, ISO 19650 requirements, and document naming strategies
- Create and manage BIM models using Autodesk Revit Architecture
- Design and document architectural components including walls, roofs, floors, stairs, and families
- Collaborate effectively on BIM projects with linked files, worksets, and scheduling tools
- Produce high-quality drawings, legends, and renderings for project delivery

COURSE SYLLABUS

18 Modules, 88 Topics

01

Building Information Modelling (BIM) & Digital Transformation

TOPICS

- Building Information Modelling (BIM)
- Digital Transformation
- Digital Transformation in the Construction Industry
- Advantages of Digital Transformation
- Challenges in Digital Transformation

02

Industry 4.0 in AEC

TOPICS

Concepts & Principles of Industry 4.0 · Impact on AEC Industry

03

BIM Fundamentals

TOPICS

Introduction to BIM · Uses & Benefits of BIM · Components of BIM · BIM Terminology

04

BIM Dimensions

TOPICS

3D, 4D, 5D, 6D, 7D, 8D, 9D & 10D BIM · Evolution of BIM Dimensions

05

BIM Maturity Levels

TOPICS

Level 0, 1, 2, 3 · Benefits of Implementing BIM Levels

06

RIBA Plan of Work

TOPICS

Stages of RIBA Plan of Work

07

Level of Development (LOD)

TOPICS

- Introduction to LODs
- LOD 100, 200, 300, 350, 400, 500
- LOD & LOIN
- Importance of LOD in AEC Industry
- Benefits of Adopting LOD in BIM-based Projects

08

Information Requirements & Delivery Plans

TOPICS

Organisational Information Requirements (OIR) · Asset Information Requirements (AIR) · Project Information Requirements (PIR) · Master Information Delivery Plan (MIDP) · Task Information Delivery Plan (TIDP)

09

BIM Standards & ISO 19650

TOPICS

- Various BIM Standards
- Importance of ISO 19650
- ISO 19650 Part 1 - Concepts & Principles
- ISO 19650 Part 2 - Delivery Phase of Assets
- ISO 19650 Part 3 - Operational Phase of Assets
- ISO 19650 Part 4 - Information Exchange
- ISO 19650 Part 5 - Security-minded Approach in Information Management

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Document Naming & Classification

TOPICS

- Document Naming Strategy
- Structure of Naming
- Rules for Naming Conventions
- Classification of Categories
- OmniClass - Elements by Function, Elements by Form, Products
- UniClass - Systems, Elements/Functions

11

Autodesk Revit Architecture - Essentials

TOPICS

- Introduction
- **Revit File Types:** Project, Project Templates, Families
- Project Units
- **Levels:** Adding, Modifying, Creating Level Head, Constraining Levels

12

Modelling Core Elements

TOPICS

- **Walls:** Creation, Layers & Materials
- Curtain Walls, Grids & Mullions
- Editing Curtain Walls
- Wall Sweeps & Reveals
- Split Walls & Wall Openings
- Doors & Windows Placement
- Floors & Ceilings
- Roof by Footprint & Extrusion

13

Views & Visualization

TOPICS

3D Interface · Visibility/Graphics · View Range · Overlay · Sectional Views · Color Schema · Section Box · Sun Path & Solar Study

14

Structural & Circulation Elements

TOPICS

Horizontal & Vertical Grids Creation · Columns & Footings · Ramp, Staircase & Railing

15

Detailing & Documentation

TOPICS

Dimensions & Text · Detailing of Components · Tags & Keynotes · Door & Window Legends · Sheet Creation · View Management in Sheets · Scheduling & Quantities

16

Families & Parametric Modelling

TOPICS

- Loadable Components
- In-Place Components
- Extrude, Blend, Sweep
- Revolve, Swept Blend
- Void Forms
- Families Creation
- Parametric Modelling
- Massing
- X-ray
- Adding Profiles & Edges

17

Site & Collaboration

TOPICS

Site & Site Settings · Subdivide & Building Pad (Excavate) · Linking Files to Revit Project · Collaboration · Copy/Monitor · View Templates & WorkSets Creation

18

Rendering & Presentation

TOPICS

Material Override · Hide in View · Rendering (Interior & Exterior)

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

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