TRAINING CATALOGUE

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Our Training

- Bim Introduction
- Autodesk Revit Architecture
- Autodesk Revit Structure
- Autodesk Revit Electrical
- Autodesk Revit Fluide
- Autodesk Family Editor
- Autodesk Naviswork
- Autodesk Infraworks
- Autodesk Dynamo
- Autodesk BIM 360
- BIM Modeler
- BIM Coordinator
- BIM Manager

contact@tbsolution.ae

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Introduction BIM

Introduction to the Challenges and Opportunities of the BIM Process

Duration : 4 days

Target Audience:

- Project Managers
- Architects, Engineers, Consultants
- Contractors and Builders
- Clients and Owners
- Anyone involved in design, construction, or facility management

Objectives:

- Understand the fundamental principles of BIM (Building Information Modeling)
- Identify the strategic and operational benefits of BIM
- Recognize the organizational and collaborative challenges in implementing BIM
- Promote a shared vision among stakeholders regarding digital transformation in construction

Day 1: Introduction to BIM

- What is BIM? Definition and Scope
- The evolution from CAD to BIM
- BIM dimensions: 3D, 4D (time), 5D (cost), 6D (sustainability), 7D (facility management)
- National and international BIM standards

Day 2: Strategic Importance of BIM

- Why BIM matters: value for each stakeholder
- BIM throughout the building lifecycle: design, construction, operation
- BIM mandates and regulatory frameworks (e.g., ISO 19650)

Day 3: Organizational and Collaborative Challenges

- Roles and responsibilities in a BIM process
- Collaborative workflows and data sharing
- Common challenges: interoperability, change management, team alignment

Day 4: Tools and Technologies

- Overview of BIM software (Revit, ArchiCAD, Navisworks, etc.)
- Open BIM vs. Closed BIM
- Common Data Environment (CDE)

Day 5: BIM Implementation Roadmap

- Steps to adopting BIM in an organization
- Training and upskilling strategies
- Pilot projects and progressive deployment
- Success factors and lessons learned

Day 6: Case Studies and Feedback

- Real-world examples of BIM projects
- Discussion of benefits achieved and obstacles overcome
- Q&A and participant feedback

Training Materials Provided

- Slides and handouts
- Glossary of BIM terms
- List of useful resources and standards

Autodesk Revit – Building Design and Modeling Essentials

Duration: 3 to 5 days

Target Audience

- Architects
- Civil and Structural Engineers
- MEP Engineers
- Designers and BIM Coordinators
- Draftsmen and CAD Technicians

Objectives

- Understand the BIM approach and Revit's role in the design workflow
- Master the user interface, tools, and fundamental modeling concepts
- Create complete architectural models, from layout to sheets
- Produce and manage construction documentation
- Gain confidence in family creation and customization (optional)

Day 1: Introduction & User Interface

- What is BIM and why use Revit?
- Revit interface overview and navigation
- Project setup and templates
- Levels, grids, and views
- Basic drawing and editing tools

Day 2: Architectural Modeling Basics

- Walls, doors, windows, and curtain systems
- Floors, roofs, ceilings, and stairs
- Creating sections, elevations, and 3D views
- Working with design constraints (align, lock, dimensions)

Day 3: Annotation & Documentation

- Tags, dimensions, text and keynotes
- Creating and managing sheets
- Detail views and callouts
- Printing and exporting to PDF/DWG
- Introduction to Phases and Design Options

Day 4: Schedules, Materials, and Visualization

- Creating and customizing schedules (doors, rooms, etc.)
- Applying and editing materials
- Rendering basics and walkthrough creation
- View templates and graphic styles

Day 5 (Optional): Family Editor Basics

- Introduction to Revit Families
- Parametric family creation: dimensions, constraints, types
- Family categories and types (furniture, MEP components, etc.)
- Nesting and shared parameters
- Tips for best practices in family creation

Training Materials Provided

- Revit project files and sample families
- Step-by-step PDF training guide
- Revit keyboard shortcuts
- Certificate of completion (optional)

Autodesk Revit Structure

Master Structural BIM Modeling with Revit

Duration: 5 days

Target Audience

- Structural Engineers
- BIM Modelers & Coordinators
- Civil/Structural Draftsmen
- Revit Beginners to Intermediate Users

Day 1: Getting Started with Revit Structure

- Introduction to BIM & Revit Environment
- Interface Overview and Navigation
- Setting Up Levels and Grids
- Creating Columns, Beams & Foundations

Day 2: Structural Framing & Elements

- Beam Systems & Trusses
- Working with Structural Floors & Slabs
- Editing & Modifying Elements
- Managing Structural Connections

Day 3: Reinforcement & Detailing

- Rebar Tools and Placement
- Area & Path Reinforcement
- Reinforcement Tagging & Scheduling
- Creating Structural Details & Callouts

Day 4: Documentation & Sheets

- Adding Annotations and Dimensions
- Structural Schedules (Beams, Columns, Rebar)
- Creating Sheets & Layouts
- Title Blocks & Print Setup

Day 5: Collaboration & Export

- Work sharing & File Management
- Linking Revit & CAD Files
- Clash Detection & Coordination Tools
- Exporting to PDF, DWG & IFC
- Final Review & Q&A

Training Materials Provided

- Complete project workflow in Revit Structure
- Confident use of tools for structural modeling and detailing
- Effective collaboration and coordination skills
- Documentation and presentation-ready deliverables

Autodesk Revit Electrical

Practical BIM Training for Electrical Design & Documentation

Duration: 5 days

Target Audience

- Electrical Engineers and Designers
- MEP BIM Modelers & Coordinators
- Draftsmen involved in electrical design
- MEP Contractors & Consultants
- Professionals transitioning from AutoCAD to BIM workflows
- Junior engineers seeking practical Revit MEP skills

Day 1: Introduction & Project Setup

- Introduction to Revit MEP & BIM
- User interface and electrical settings
- Project setup: levels, grids, and templates
- Linking architectural models
- Voltage definitions and distribution systems

Day 2: Electrical Systems & Components

- Placing electrical devices and equipment
- Power and lighting circuit creation
- Panel creation and configuration
- Cable trays and conduit systems
- Creating and managing distribution systems

Day 3: Lighting Systems & Load Analysis

- Placing and connecting lighting fixtures
- Creating lighting circuits and control systems
- Load classification and calculations
- Balancing electrical loads
- Lighting analysis schedules

Day 4: Documentation & Annotation

- Creating views and electrical sheets
- Adding tags, symbols, and annotations
- Panel schedules, lighting schedules
- Legends and keynotes
- Sheet layout, title blocks & printing

Day 5: Collaboration & Export

- Work-sets and work-sharing in Revit
- Linking with HVAC/Plumbing/Architecture
- Clash detection and coordination workflows
- Exporting to DWG, PDF, and IFC
- Final project review and Q&A

Autodesk Revit MEP – Fluids (HVAC & Plumbing)

Model, Analyze & Document Mechanical Systems in Revit

Duration: 5 days

Target Audience

- HVAC & Plumbing Engineers
- Mechanical MEP Designers & Coordinators
- BIM Modelers and Draftsmen
- MEP Contractors & Consultants
- CAD Technicians moving to Revit
- Junior Mechanical Engineers

Day 1: Introduction & Project Setup

- Understanding BIM for MEP
- Revit interface, templates, and discipline settings
- Setting up levels, grids, and project units
- Linking architectural/structural models
- Mechanical settings and system types

Day 2: HVAC Systems Modeling

- Inserting mechanical equipment (AHUs, diffusers, FCUs)
- Creating supply, return, and exhaust duct systems
- Routing ducts and adding accessories
- Air system creation and editing
- Duct sizing and system balancing

Day 3: Plumbing Systems Modeling

- Adding plumbing fixtures (toilets, basins, pumps)
- Cold water, hot water, drainage, vent systems
- Pipe routing and sloped piping tools
- System connectors and fittings
- Pipe sizing and pressure drop review

Day 4: Annotation & Documentation

- Tagging ducts, pipes, fixtures, and mechanical equipment
- Creating duct, pipe, and fixture schedules
- Annotating with dimensions and symbols
- Sheet setup, views, legends, and title blocks
- Print setup and exporting to PDF/DWG

Day 5: Collaboration & Project Handover

- Worksharing and Revit collaboration tools
- Clash detection and coordination review
- Linking with architectural, structural, and electrical models
- Exporting to IFC and coordination file formats
- Final review, project cleanup & Q&A

Autodesk Revit Family Editor

Create Smart, Parametric Families for Real-World Projects

Duration: 2 days

Target Audience

- Revit Architects & Engineers
- BIM Coordinators & Modelers
- MEP Content Creators
- Users looking to create or modify Revit Families

Day 1: Fundamentals of Revit Family Creation

- Objective: Build smarter families, optimize them, and apply standards
- Using formulas and conditional parameters
- Visibility settings and symbolic lines
- Creating material and text parameters
- Introduction to nested families
- Hosting: face-based, wall-based, ceiling-based families
- Best practices: naming conventions, file size optimization
- Final hands-on exercise: create and test a custom family
- Tips for deploying families in company templates or libraries

Day 2: Intermediate Techniques & Best Practices

- Objective: Learn the interface and create basic parametric families
- Introduction to Revit Families: system vs. component
- Exploring the Family Editor interface
- Reference planes, dimensions & constraints
- Adding 2D & 3D geometry
- Creating and managing parameters
- Parametric controls: height, width, and depth
- Testing and loading families into a project

Learning Outcomes

- By the end of Day 2, participants will be able to:
- Confidently create and control Revit component families
- Apply parameters and formulas for smart content
- Optimize and manage families for reuse and collaboration
- Build families that comply with company or industry standard

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Autodesk Navisworks

Model Coordination, Clash Detection & Project Simulation

Duration: 3 days

Target Audience

- BIM Coordinators & Managers
- Architects, Engineers, and Contractors
- Project Managers in construction
- QA/QC teams and site engineers
- Professionals involved in model review and clash detection

Day 1: Introduction & Model Navigation

- Objective: Learn to navigate models and understand the interface
- Introduction to Navisworks: Manage vs. Simulate vs. Freedom
- User interface and navigation tools
- Opening and appending models (NWD, NWC, RVT, IFC, DWG)
- Selection tools, measuring, and sectioning
- Viewpoints: creating, saving, and organizing
- Model hierarchy, search sets, and selection sets

Day 2: Clash Detection & Coordination

- Objective: Identify and manage model clashes
- Overview of clash detection workflow
- Setting up clash rules and tests
- Clash types: hard, clearance, duplication
- Grouping, filtering, and approving clashes
- Exporting clash reports
- Coordination review and issue tracking
- Model review and redlining tools

Day 3: 4D Simulation & Collaboration

- Objective: Simulate construction and enhance collaboration
- Introduction to Timeliner (4D planning tool)
- Linking model elements to schedules (CSV, MS Project, Primavera)
- Creating and animating 4D simulations
- Exporting simulation videos for presentations
- Using Navisworks for team collaboration
- Publishing NWD files and using Navisworks Freedom
- Final project review and Q&A

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Autodesk InfraWorks

Planning, Designing & Visualizing Infrastructure Projects

Duration: 2 days

Target Audience

- Civil Engineers & Designers
- Urban Planners & Transport Engineers
- BIM Coordinators (Infrastructure)
- Landscape Architects & GIS Specialists
- Infrastructure Consultants and Project Managers

Day 1: Model Creation & Conceptual Design

- Objective: Learn the fundamentals of InfraWorks and create base models
- Introduction to InfraWorks & BIM for Infrastructure
- User interface and project setup
- Importing GIS, terrain, and aerial data
- Creating and managing model data sources (e.g., SHP, DEM, IMX)
- Road design basics: component roads and planning roads
- Placing design elements: buildings, trees, water features
- Theming and visual styles
- Saving viewpoints and creating snapshots

Day 2: Design Tools, Analysis & Presentation

- Objective: Use analysis tools and prepare visuals for stakeholders
- Bridge design & component editing
- Corridor modeling and intersections
- Drainage and water analysis overview
- Sight distance and traffic simulation (overview)
- Generating proposal alternatives
- Creating animations and presentation videos
- Exporting models and interoperability (with Civil 3D, Revit)
- Final review and Q&A

Day 3: 4D Simulation & Collaboration

- Objective: Simulate construction and enhance collaboration
- Introduction to Timeliner (4D planning tool)
- Linking model elements to schedules (CSV, MS Project, Primavera)
- Creating and animating 4D simulations
- Exporting simulation videos for presentations
- Using Navisworks for team collaboration
- Publishing NWD files and using Navisworks Freedom
- Final project review and Q&A

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Autodesk InfraWorks

Automate, Optimize & Extend Revit with Visual Programming

Duration: 3 days

Target Audience

- BIM Managers & Coordinators
- Revit Architects, Engineers, and Designers
- Parametric Modelers
- Professionals seeking to automate workflows
- Intermediate Revit users ready to scale up their efficiency

Day 1: Introduction to Dynamo & Visual Programming

- Objective: Understand the basics and create simple automations
- What is Dynamo? Introduction to visual programming
- User interface and workspace overview
- Working with nodes, wires, and data types
- Connecting Dynamo to Revit (Live mode)
- Creating your first script: placing levels, grids, or walls
- Lists, data structures, and basic logic
- Using Code Blocks for expressions and variables

Day 2: Revit Element Manipulation & Geometry

- Objective**:** Work with Revit elements and parametric geometry
- Selecting and filtering Revit elements
- Extracting and modifying element parameters
- Automating repetitive modeling tasks (e.g., views, sheets, renaming)
- Geometry generation basics: curves, surfaces, solids
- Parametric design examples: facade panels, adaptive components
- Using packages (e.g., Clockwork, Data-Shapes, Archi-Lab)

Day 3: Custom Workflows & Advanced Automation

- Objective: Build and manage reusable workflows
- Creating user interfaces with Data-Shapes
- Automating sheet creation and view placement
- Excel input/output integration
- Script optimization and error handling
- Organizing and packaging custom nodes
- Real-world case studies and best practices
- Final hands-on exercise and script presentation

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Collaborate, Manage & Coordinate Projects in the Cloud

Duration: 3 days

Target Audience

- BIM Managers & Coordinators
- Architects & Engineers
- General Contractors & Subcontractors
- Project Managers
- QA/QC Teams & Site Supervisors
- Owners & Facility Managers

Day 1: BIM 360 Docs & Design Collaboration

- Objective: Learn document control and model collaboration workflows
- Introduction to BIM 360 and Autodesk Construction Cloud
- Overview of BIM 360 Modules: Docs, Design, Coordinate, Build
- User roles, permissions, and account setup
- Document management: uploading, viewing, and version control
- Creating folders, managing file access
- Review and markup tools
- Design Collaboration module:
- Creating teams and shared folders
- Publishing models and tracking packages
- Model compare and timeline tools
- Linking Revit to BIM 360 (Cloud Work-sharing)

Day 2: BIM 360 Coordinate, Issues & Project Management

- Objective: Coordinate models, manage issues, and streamline site workflows
- Introduction to BIM 360 Coordinate
- Aggregating models (NWC, RVT, IFC)
- Running clash detection
- Creating & managing clash sets
- Issue management:
- Assigning issues from coordination or field observations
- Issue tracking, filters, and reporting
- Using checklists and forms
- Introduction to BIM 360 Build (Field tools)
- RFI and Submittal workflows (overview)
- Integration with Navisworks, Revit, AutoCAD
- Mobile access and field collaboration
- Final Q&A and real-world workflow review

BIM Modeler

Practical Skills to Deliver BIM Projects from Design to Coordination

Duration: 5 days

Target Audience

- Junior BIM Modelers
- CAD Technicians transitioning to BIM
- Revit users seeking structured project experience
- Draftsmen in architectural, structural, or MEP domains
- Fresh graduates entering BIM roles

Day 1: BIM Fundamentals & Revit Basics

- Objective: Understand BIM concepts and Revit interface
- What is BIM? BIM levels and LOD
- Introduction to Autodesk Revit (interface & tools)
- Setting up a project: levels, grids, views
- Basic modeling: walls, doors, windows, slabs
- View management, visibility control, annotations

Day 2: Discipline-Specific Modeling

- Objective: Create and modify discipline-specific elements
- Modeling architecture (floors, ceilings, stairs)
- Structural elements: columns, beams, foundations
- MEP basics: ducts, pipes, electrical fixtures
- Working with families and loading components
- Setting up sheets and printing

Day 3: BIM Standards & Project Setup

- Objective: Work within standardized BIM workflows
- Understanding project templates and file organization
- Naming conventions and shared parameters
- Working with linked models
- Shared coordinates and project base points
- Managing view templates and phases

Day 4: Collaboration & Model Coordination

- Objective: Coordinate with other disciplines and resolve clashes
- Work sharing and Revit collaboration tools
- Publishing and managing models in BIM 360/ACC
- Using Navisworks for clash detection
- Creating viewpoints and clash reports
- Coordination best practices and team roles

Day 5: Documentation & Final Project

- Objective: Deliver a complete, documented BIM model
- Creating schedules and tags (doors, quantities, etc.)
- Annotating and dimensioning drawings
- Creating sheets and exporting documentation
- Final hands-on project: model and document a small building
- Feedback session and final Q&A

BIM Coordinator

Master Model Coordination, Standards, and BIM Project Delivery

Duration: 5 days

Target Audience

- BIM Coordinators & BIM Leads
- Senior Revit Technicians
- Architects, Engineers, or Contractors transitioning into coordination roles
- Professionals overseeing multi-trade BIM delivery
- QA/QC Engineers in BIM environments

Day 1: Role of the BIM Coordinator & Project Setup

- Objective: Understand BIM coordination fundamentals and set up a collaborative project
- BIM roles & responsibilities (BIM Manager vs. Coordinator vs. Modeler)
- BIM standards (ISO 19650, PAS 1192) overview
- Model setup: levels, grids, shared coordinates
- Managing links: Architectural, Structural, and MEP
- File naming conventions & folder structures
- Setting up a central file and worksets (Revit)

Day 2: Model Coordination & Clash Detection

- Objective: Run model coordination workflows and resolve conflicts
- Aggregating models in Navisworks Manage
- Creating search sets and selection sets
- Setting up clash tests and using clash detective
- Grouping and managing clashes
- Creating viewpoints and clash reports
- Clash resolution process and coordination meetings

Day 3: Collaboration Tools & BIM 360 (Autodesk Construction Cloud)

- Objective: Manage cloud-based coordination and issue tracking
- Overview of BIM 360 Docs, Design, and Coordinate
- Managing teams and permissions
- Uploading and versioning models
- Sharing design packages and model compare
- Tracking issues in the cloud (coordination + field issues)
- Linking Revit with BIM 360 (Cloud Worksharing)

Day 4: Quality Control & Standards Enforcement

- Objective: Implement model QA/QC processes and enforce BIM standards
- Checking model health: warnings, audit tools
- Model review checklist
- Ensuring LOD compliance
- Review of naming conventions, families, and parameters
- Exporting and reviewing IFC models
- Reporting and handover documentation

Day 5: Final Project & Coordination Simulation

- Objective: Apply coordination skills in a simulated BIM project
- Group model review (multi-discipline)
- Running a full coordination cycle: detect → report → resolve
- Conducting a coordination meeting (simulated)
- Project audit and final reporting
- Feedback, Q&A, and practical tips for real-world coordination

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BIM Manager

Lead Strategy, Implementation & Delivery of BIM Projects

Duration: 5 days

Target Audience

- BIM Managers or Senior Coordinators
- Project Managers in design/construction
- Digital Delivery Managers
- Senior Architects, Engineers, and Consultants
- QA/QC Professionals overseeing BIM workflows

Day 1: BIM Management Foundations & Strategy

- Objective: Understand the role of the BIM Manager and project-wide BIM strategies
- What is a BIM Manager? Role vs. Coordinator vs. Modeler
- BIM implementation roadmap (organization and project scale)
- Overview of BIM standards: ISO 19650, BS/PAS 1192, LOD
- Employer's Information Requirements (EIR)
- Developing a BIM Execution Plan (BEP)
- Defining team roles, project goals & deliverables

Day 2: Project Setup & Team Leadership

- Objective: Establish and manage collaborative project environments
- Creating shared project environments (common data environment - CDE)
- Setting up templates, naming conventions, and folder structures
- Linking models, shared coordinates, and collaboration strategies
- Managing multi-disciplinary Revit models
- Scheduling coordination meetings and managing stakeholders

Day 3: Quality Control, Standards & Model Audits

- Objective: Implement QA/QC across all project phases
- Model validation tools and checklists
- Running audits in Revit and Navisworks
- Clash detection protocols and resolution workflows
- Reviewing LOD, metadata, and COBie compliance
- Managing model handovers and data deliverables
- Defining audit cycles and progress tracking

Day 4: BIM 360 / Autodesk Construction Cloud Leadership

- Objective: Manage cloud collaboration, data sharing, and accountability
- Setting up and administering BIM 360 / ACC projects
- Assigning roles, permissions, and access rights
- Managing versions and design collaboration packages
- Issue tracking and review workflows (Docs, Design, Coordinate)
- Dashboard reporting and analytics
- Integration with Revit, Navisworks, and other tools

Day 5: Digital Transformation & Future BIM

- Objective: Lead innovation and digital transformation initiatives
- Integrating BIM with GIS, Scan-to-BIM, and IoT
- Exploring automation and Dynamo for BIM managers
- BIM for FM and Asset Management (IFC & COBie workflows)
- Procurement strategies in a BIM environment
- Risk management in digital project delivery
- Final project presentation and team review

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