



# BIM Kida Institute of Engineering Software

## Revit Course Syllabus

[Revit RCC](#)[Revit Architecture](#)[Revit MEP](#)

### Revit Architecture Syllabus

#### **Week 1: Introduction to Revit & Project Setup**

Understanding the Revit interface and workflow

---

Setting up a new project and configuring units

---

Creating levels and grids

---

Importing and linking CAD files

---

Understanding the difference between families, components, and system elements

#### **Week 2: Walls, Floors, & Openings**

Creating walls (basic, compound, and curtain walls)

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Modifying wall profiles and layers

---

Adding and modifying floors

---

Creating openings: Doors, Windows, and Custom Openings

---

Wall and floor join techniques

### **Week 3: Roofs, Stairs, & Railings**

Creating different types of roofs (gable, hip, shed, curved, etc.)

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Roof modification tools (edit footprint, slopes, overhangs)

---

Designing staircases (straight, L-shape, U-shape, spiral)

---

Customizing railings and balusters

---

Creating ramps and landings

### **Week 4: Ceilings, Furniture, & Interior Elements**

Adding ceilings and customizing ceiling types

---

Placing lighting fixtures and MEP coordination basics

---

Inserting furniture and fixture families

---

Applying materials and textures for interior spaces

---

Interior detailing (baseboards, moldings, trims)

### **Week 5: Site Planning & Massing**

Creating a site topography and adding contour lines

---

Placing building pads and site components

---

Adding trees, roads, and landscape elements

---

Introduction to mass modeling and conceptual design

---

Massing for complex architectural forms

### **Week 7: Rendering, Walkthroughs & Presentations**

Applying materials and textures for realistic rendering

---

Setting up cameras and perspective views

---

Creating walkthrough animations

---

Sunlight and shadow analysis

---

Exporting high-quality rendered images

## **Week 8: Project Work & Documentation**

Working on a real-world architecture project

---

Sheet creation and title blocks

---

Setting up print layouts and exporting PDFs

---

Coordination with consultants (importing/exporting DWG, IFC)

---

Final project submission & review

## **Week 9: Introduction to Navisworks**

Overview of Navisworks and its applications

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Understanding the Navisworks interface

---

Navigating 3D models (Orbit, Walk, Fly modes)

---

Creating viewpoints and saving camera angles

---

Using sectioning tools

---

File formats and importing models (NWC, NWD, and NWF)

## **Week 10: Clash Detection**

Introduction to clash detection

---

Setting up clash tests

---

Reviewing and managing clash results

---

Exporting and reporting clashes

---

Using sectioning tools

---

File formats and importing models (NWC, NWD, and NWF)

## **Week 11: Revit Add-ins & Tools**

DiRoots (Automation & Productivity Tools)

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PyRevit

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## Dynamo for Revit



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### Revit MEP Syllabus

#### **Week 1: Introduction to Revit MEP & Project Setup**

Understanding Revit MEP Interface & Workflows

Setting up a new MEP project (Templates, Units, Levels)

Linking Architectural & Structural models

Understanding MEP families and categories

Project Browser and View Templates

#### **Week 2: HVAC (Mechanical Systems) Modeling**

Creating and placing Air Terminals, Ducts, and HVAC Equipment

Defining ductwork types and duct routing principles

Adding mechanical systems (Supply, Return, Exhaust)

Sizing ducts and airflow calculations

Working with mechanical spaces and zones

### **Week 3: Plumbing Systems Modeling**

Placing plumbing fixtures and equipment

---

Pipe routing techniques and slope settings

---

Cold water, Hot water, and Drainage systems

---

Creating and modifying pipe fittings and accessories

---

Pipe sizing and flow calculations

### **Week 4: Fire Protection & Hydronic Systems**

Designing Fire Protection systems (Sprinklers, Pumps)

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Pipe layout and sprinkler placement

---

Hydronic piping systems (Chilled Water, Heating)

---

Equipment connections and system validation

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Pressure loss calculations

### **Week 5: Electrical Systems Modeling**

Placing Electrical Fixtures (Lights, Switches, Receptacles)

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Power distribution systems (Panels, Transformers, Circuits)

---

Cable tray and conduit routing

---

Load calculations and Panel schedules

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Circuiting and Voltage drop analysis

### **Week 6: MEP Coordination & Clash Detection**

Understanding BIM Coordination for MEP

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Performing Clash Detection using Navisworks

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Adjusting MEP layouts to avoid conflicts

---

Using Worksets for multi-user collaboration

---

Linking Revit models with external consultant files

## **Week 7: Documentation & Scheduling**

Creating MEP Sheets, Sections, and Callouts

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Generating schedules (Duct, Pipe, Lighting, Panel)

---

Annotations, Dimensions, and Tagging

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Printing and exporting MEP documentation

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Exporting models to DWG, IFC, and Navisworks

## **Week 8: Project Work & Final Review**

Working on a real-world MEP project

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Applying best practices for modeling and coordination

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Reviewing MEP system efficiency and compliance

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Final project submission & feedback

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Industry standards and career guidance

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### RCC Modeling Syllabus

#### **Week 1: Introduction to Revit Structure & RCC Modeling:**

Understanding the Revit interface for structural modeling

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Setting up project templates for RCC structures

---

Project Units and Levels setup

---

Importing and linking CAD files

---

Grid and column placement for RCC structures

#### **Week 2: Structural Components – Columns, Beams & Slabs**

Creating RCC columns (rectangular, circular, custom)

---

Placing beams and defining beam systems

---

Project Units and Levels setup

---

Beam-column joints and load-bearing considerations

---

Modeling floor slabs and setting thickness & reinforcements

### **Week 3: Foundations & Structural Walls**

Types of foundations (isolated, combined, raft, pile)

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Creating and modifying structural walls

---

Assigning wall types and reinforcement parameters

---

Footing design and reinforcement detailing

### **Week 4: Reinforcement Modeling & Detailing**

Introduction to Rebar modeling in Revit

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Creating manual and automatic reinforcement

---

Rebar constraints, shapes, and bar bending schedules

---

Reinforcement for beams, columns, and slabs

### **Week 5: Staircase & Ramp RCC Modeling**

Designing RCC staircases (straight, L-shaped, U-shaped)

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Reinforcement detailing for staircases

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Modeling ramps and providing necessary reinforcements

### **Week 6: Structural Analysis & Load Applications**

Assigning loads (Dead Load, Live Load, Wind Load, Seismic Load)

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Understanding Load Combinations

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Integrating Revit with structural analysis tools (like Robot Structural Analysis)

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Checking model stability and resolving warnings

### **Week 7: Documentation & Sheet Creation**

Generating structural plans, sections, and details

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Creating and editing schedules (Rebar schedule, Beam schedule)

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Annotating and dimensioning RCC drawings

---

Sheet setup and print settings

## **Week 8: Project Work & Final Submission**

Working on a real-life RCC project

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Exporting sheets in PDF, DWG, and IFC formats

---

Final project submission & feedback

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