

ArchiCAD

Target Audience

This ArchiCAD course is designed for architects, interior designers, structural and MEP engineers, construction professionals, and students who want to develop expertise in Building Information Modeling (BIM). Architects and designers will benefit from learning how to create detailed 3D models, manage project workflows, and generate professional documentation. Structural and MEP engineers can leverage ArchiCAD's BIM capabilities to improve coordination and collaboration in multidisciplinary projects. Construction professionals involved in project planning and execution will gain insights into integrating ArchiCAD with other industry tools for better project management. Additionally, students and beginners aspiring to build a career in architectural design and BIM will find this course an essential stepping stone toward mastering industry-standard practices.

Course Objective

The objective of this ArchiCAD course is to equip learners with the necessary skills to efficiently design, model, and document architectural projects using ArchiCAD's BIM capabilities. By the end of the course, participants will be able to create professional architectural models, generate project documentation, and optimize workflow using industry best practices.

Course Outcome

- **Develop BIM-based 3D Models** – Create, edit, and manage architectural models efficiently using ArchiCAD's BIM tools.
- **Generate Professional Documentation** – Produce detailed floor plans, sections, elevations, and schedules for construction projects.
- **Enhance Collaboration & Interoperability** – Work seamlessly with other disciplines using IFC-based workflows and integrate ArchiCAD with various design and construction software.
- **Improve Workflow Efficiency** – Utilize templates, libraries, and automation tools to speed up project execution.

- **Master Visualization Techniques** – Create realistic renderings, walkthroughs, and presentations to effectively communicate design concepts.

Course Outline: The course comprises **40-hours** of theory and labs and is divided into **14** different chapters. Each chapter will be followed by **hands-on lab exercises** to reinforce learning and gauge understanding of the topics covered.

Chapter 1. Getting Started with Archicad

- Understanding the Archicad UI
- Setting up your first Archicad project

Chapter 2. Building a Basic Residential Model: Modeling the Construction Elements

- Navigating in 2D/3D and learning the basics of modeling
- Modeling tools in general Core construction – walls and slabs
- Using drawing aids in Archicad

Chapter 3. Building a Basic Residential Model: SPACE Adding Roofs, Zones, Beams, and Columns

- Flat and sloped roof elements
- Tidying up the model
- Defining rooms and spaces using the Zone tool
- Beams and columns – adding some structure

Chapter 4. Building a Basic Residential Model: Modeling Openings, Stairs, and Objects

- Adding Doors and Windows to the project
- Introducing the Object Library
- Basic Stairs between the building stories
- Custom shapes with the Morph tool

Chapter 5. Basic Drafting and 2D Views

- Using basic Section, Elevation, and Independent Viewpoints
- Getting started with drafting tools

Chapter 6. Adding Annotations and Creating 2D Output

- Understanding annotation
- Linking reference drawings
- Basic export and printing (output)

Chapter 7. Using Advanced Modeling Tools for Developed Design

- Advanced Composite Walls, Slabs, and Roofs
- Archicad priorities
- Complex roof geometry and skylights

Chapter 8. Using Advanced System Tools for Designing Stairs and Curtain Walls

- Complete stair systems with railings
- The basics of modeling curtain walls

Chapter 9. Using the Mesh tool and Wizards to Finalize a Design

- Creating a site model using the Mesh tool
- Truss Maker and Roof Maker

Chapter 10. Using Advanced Attributes and the Renovation Tool for a Wider Design Range

- Creating Parametric Complex Profiles and using Geometry Modifiers
- Element Properties for renovation, function, and position

Chapter 11. 2D Construction Drawings and 3D Views with Linked Annotations

- Annotating 2D documents and creating attributes

- Configuring sections and elevations in detail
- Other ways to display a 3D model
- Construction detailing in Archicad

Chapter 12. Data Extraction and Visualization

- Using Schedules for information extraction
- Graphic Overrides

Chapter 13. Automating the Publication of BIM Extracts

- Understanding Quick Options/view filters
- The Navigator and the Project Map
- Layouts and the Layout Book
- Publisher

Chapter 14. The Various Visualization Techniques in Archicad

- Creating compelling images with Archicad
- Creating rendered images
- Using external imaging software
- Real-time visualization