

AUTOCAD SYLLABUS COPY

Engineered for skill enhancement.



PROGRAM HIGHLIGHTS

Accredited Certificates :

- ✓ Program approved ISO Certification

Internships :

- ✓ Industry-relevant opportunities provided-

Placement Assistance :

- ✓ Career guidance from industry experts-

Basic to Advanced Level Training :

- ✓ Learn from experienced AI professionals .

Live & Recorded Lectures :

- ✓ Flexible learning at your convenience .

Real-Time Projects :

- ✓ Hands-on minor & major projects



ABOUT US

- **OUR MISSION :**

Nxt Sync is a pioneering EdTech company committed to bridging the gap between theoretical learning and practical application. Our mission is to empower students with cutting-edge AI skills that enhance employability and prepare them for a tech-driven future.

- **OUR VISION--UPSKILL:** Empowering minds for the future.
- **INNOVATE:** Fostering creativity and breakthroughs .
- **EXCEL:** Preparing industry-ready professionals.

WHY AUTOCAD?

- High Demand Across Engineering & Design Industries
- Essential for Drafting & Design Professionals
- Increases Precision & Productivity in CAD Workflows
- Career Opportunities in Architecture, Civil, Mechanical, and Electrical Engineering
- Scalability in 2D Drafting & 3D Modeling
- Integration with BIM, GIS, and Industry 4.0 Technologies



LEARNING PATH

- Introduction to AutoCAD
- 2D Drafting & Annotation
- Advanced Editing & Annotation Tools
- Layers, Blocks & Attributes
- Parametric Drawing
- 3D Modeling & Visualization
- Plotting & Printing
- Industry-Specific Applications
- Capstone Projects & Research



DETAILED MODULE BREAKDOWN

Module 1: Introduction to AutoCAD

- Overview of CAD and AutoCAD
- AutoCAD User Interface & Navigation
- Basic Drawing & Editing Commands
- Units, Limits, and Precision Settings

Module 2: 2D Drafting & Annotation

- Line, Circle, Arc, and Polyline Tools
- Object Selection and Modification
- Annotation, Text, and Dimensioning
- Working with Layers and Object Properties



Module 3: Advanced Editing & Annotation Tools

- Array, Mirror, Scale, and Offset Commands
- Hatching and Gradient Techniques
- Multileaders and Annotation Scaling
- Advanced Object Snapping and Tracking

Module 4: Layers, Blocks & Attributes

- Creating and Managing Layers
- Working with Blocks and Dynamic Blocks
- Attribute Definition and Extraction
- Xref Management for Large Projects

Module 5: Parametric Drawing

- Introduction to Parametric Constraints
- Geometric and Dimensional Constraints
- Parametric Design and Applications



Module 6: 3D Modeling & Visualization

- Introduction to 3D Modeling in AutoCAD
- Solid, Surface & Mesh Modeling Techniques
- 3D Coordinate Systems and Views
- Rendering & Material Application

Module 7: Plotting & Printing

- Page Setup and Layouts
- Plot Styles and Pen Assignments
- Printing to PDF and Paper Sizes
- Output Optimization for Presentation

Module 8: Industry-Specific Applications

- AutoCAD in Architecture (Plans, Elevations, Sections)
- AutoCAD in Mechanical Engineering (Machine Components, Assemblies)
- AutoCAD in Civil Engineering (Site Plans, Roadway Design)
- AutoCAD in Electrical Engineering (Circuit Diagrams, Panel Layouts)



Module 9: Capstone Projects & Industry Research

- Hands-on Real-Time AutoCAD Projects
- Industry Collaboration & Research-Based Projects
- AutoCAD Portfolio Building
- Final Project Submission & Review



ASSIGNMENT'S & ASSESSMENTS

- Weekly hands-on assignments
- Mid-term AutoCAD mini-projects
- Final capstone AutoCAD project
- Live presentations & discussions

TOOLS & FRAMEWORKS USED

AutoCAD Software & Plugins:

- AutoCAD 2D & 3D
- AutoCAD Civil 3D
- AutoCAD Mechanical
- AutoCAD Electrical
- Revit (BIM Integration)
- Navisworks for Visualization

Visualization & Rendering Tools:

- Lumion
- SketchUp
- V-Ray
- Enscape



RECOMMENDED READING

AutoCAD Learning Resources:

- "Mastering AutoCAD" - George Omura & Brian C. Benton
- "AutoCAD 2024 for Beginners" - Cadfolks
- "Technical Drawing with Engineering Graphics" - Frederick E. Giesecke
- "Architectural Drafting and Design" - Alan Jefferis & David A. Madsen



WHY CHOOSE NXTSYNC?

- ✓ Industry-Aligned AutoCAD Curriculum
- ✓ Hands-on Real-World Projects
- ✓ Expert Mentorship & Career Guidance
- ✓ Flexible Learning Schedule
- ✓ ISO-Certified AutoCAD Training Program

Start Your AutoCAD Journey with NxtSync Today!



THANK YOU

