



# AUTOCAD SYLLABUS COPY

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**Engineered for skill enhancement.**



# PROGRAM HIGHLIGHTS

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## **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

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- **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?

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- 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

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- 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

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## 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

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



# TOOLS & FRAMEWORKS USED

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## 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

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### **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?

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- 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

