



**SCANDINAVIAN ACADEMY**  
For Training and Development

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# Course: Specialist AutoCAD Training

Code	City	Hotel	Start	End	Price	Language - Hours
IT-634	Doha (Qatar)	Hotel Meeting Room	2027-02-28	2027-03-04	3450 €	En - 25

## Course Introduction:

AutoCAD is a leading design and drafting tool used across various industries, including engineering, architecture, manufacturing, and construction. This training program is designed for professionals seeking to master specialized AutoCAD functionalities, including advanced 2D and 3D design, industry-specific applications, automation, and customization.

Through hands-on exercises, industry case studies, and real-world applications, participants will enhance their technical expertise and efficiency in using AutoCAD for complex design projects.

## Course Objectives:

**By the end of this course, participants will be able to:**

- Utilize specialized AutoCAD tools tailored for industry-specific applications.
- Apply advanced 2D and 3D drafting techniques for complex designs.
- Customize AutoCAD settings, templates, and workflows for efficiency.
- Automate repetitive tasks using AutoLISP and scripting.
- Manage large-scale projects with external references (Xrefs) and sheet sets.
- Optimize collaboration by integrating AutoCAD with other software.



## Target Audience:

- Engineers, Architects, and Designers using AutoCAD for specialized applications.
- Construction and Manufacturing Professionals.
- Project Managers and BIM Coordinators.
- CAD Technicians and Drafting Experts.
- Anyone seeking mastery in advanced AutoCAD functionalities.

## Course Content:

### Advanced 2D Drafting and Customization

- Mastering polylines, splines, and advanced object editing tools.
- Complex annotation techniques and parametric drawing.
- Custom linetypes, hatch patterns, and annotation scaling.
- Creating and using dynamic blocks and attributes.
- Customizing tool palettes and user interface settings.
- Practical exercise: Developing industry-specific 2D layouts.

### Industry-Specific Applications of AutoCAD

- AutoCAD for Mechanical Design: Gears, fasteners, and assembly drawings.
- AutoCAD for Architecture: Floor plans, elevations, and detailing.
- AutoCAD for Electrical Engineering: Circuit layouts and schematics.
- AutoCAD for Civil Engineering: Road layouts, site plans, and grading.
- Case study: Applying AutoCAD in different industries.
- Workshop: Designing a specialized project based on participant industry.

### Advanced 3D Modeling and Visualization

- Solid modeling, surface modeling, and mesh modeling techniques.
- Advanced rendering and material application.



- Using 3D scanning and point cloud data in AutoCAD.
- Section views, exploded views, and presentation drawings.
- Exporting 3D models to external software (Revit, SolidWorks, etc.).
- Hands-on project: Developing a specialized 3D design model.

## **Automation and Productivity Enhancements**

- Introduction to AutoLISP and VBA for AutoCAD scripting.
- Developing macros and command automation techniques.
- Creating custom scripts for repetitive drafting tasks.
- Using parametric design and constraints for precision.
- Customizing AutoCAD settings for workflow optimization.
- Workshop: Automating a real-world drafting scenario.

## **Collaboration, File Management, and Best Practices**

- Managing external references (Xrefs) and linked files.
- Using AutoCAD sheet sets for project documentation.
- Best practices for CAD standards and file organization.
- Integration with cloud-based collaboration tools.
- Industry compliance and documentation best practices.



The Scandinavian Academy for Training and Development adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training and Development.

### **Program Timings:**

- 9:00 AM to 2:00 PM in Arab cities.
- 10:00 AM to 3:00 PM in European and Asian cities.

### **The program includes:**

- A daily Coffee Break provided during the sessions to ensure participants comfort.