



**SCANDINAVIAN ACADEMY**  
For Training and Development

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# Course: Advanced AutoCAD Training

Code	City	Hotel	Start	End	Price	Language - Hours
IT-633	Hamburg (Germany)	Hotel Meeting Room	2027-02-15	2027-02-19	5450 €	En - 25

## Course Introduction:

AutoCAD is an essential tool for engineers, architects, and designers, allowing them to create precise 2D and 3D drawings. Advanced knowledge of AutoCAD enhances efficiency, precision, and project execution. This training program is designed for professionals who want to master advanced drafting techniques, 3D modeling, automation, and customization to optimize their workflows.

Through hands-on exercises, real-world case studies, and expert guidance, participants will develop the skills needed to efficiently work on complex projects using AutoCAD.

## Course Objectives:

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

- Utilize advanced 2D and 3D drawing tools effectively.
- Customize AutoCAD settings and automate repetitive tasks using scripts and macros.
- Apply dynamic blocks and attributes to streamline design workflows.
- Manage large-scale projects with external references (Xrefs) and sheet sets.
- Perform high-quality rendering and visualization of 3D models.
- Integrate AutoCAD with other software for improved collaboration.



## **Target Audience:**

- Experienced AutoCAD users looking to enhance their skills.
- Engineers, architects, and CAD professionals.
- Construction and manufacturing professionals.
- Project managers and BIM coordinators.
- Anyone involved in complex drafting and design projects.

## **Course Content:**

### **Advanced 2D Drawing and Editing Techniques**

- Mastering polylines, splines, and complex object editing tools.
- Advanced dimensioning techniques and annotation scaling.
- Custom linetypes, hatches, and gradient fills.
- Utilizing constraints for parametric drawing.
- Efficient selection and object isolation techniques.
- Practical exercise: Developing a complex 2D layout.

### **Working with Blocks, Attributes, and Dynamic Components**

- Creating and managing dynamic blocks.
- Using attributes and extracting attribute data.
- Linking AutoCAD with Excel for data automation.
- Nested blocks and their applications.
- Implementing standards and CAD libraries.
- Case study: Optimizing workflow with dynamic blocks.

### **External References (Xrefs) and Advanced File Management**

- Managing large projects with external references.



- Clipping, overlaying, and attaching multiple Xrefs.
- Setting up and managing sheet sets.
- Best practices for working with linked files.
- Collaboration techniques for multi-user environments.
- Workshop: Creating a structured Xref-based project.

## **Advanced 3D Modeling and Visualization**

- Solid modeling, surface modeling, and mesh modeling techniques.
- Creating complex assemblies and 3D design workflows.
- Applying materials, lighting, and realistic rendering.
- Section views, exploded views, and detailed model presentation.
- Exporting 3D models for use in other design applications.
- Hands-on project: Developing a detailed 3D design model.

## **Customization, Automation, and Productivity Enhancements**

- Introduction to AutoLISP and script automation.
- Creating custom commands and tool palettes.
- Developing macros for repetitive tasks.
- Using parametric design and constraints.
- Customizing the AutoCAD interface for efficiency.



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.