



**SCANDINAVIAN ACADEMY**  
For Training and Development

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# Course: Managing Systems & Software Quality

Code	City	Hotel	Start	End	Price	Language - Hours
IT-676	Vienna (Austria)	Hotel Meeting Room	2027-01-04	2027-01-15	8950 €	En - 50

## Course Introduction:

Ensuring the quality of systems and software is critical in today's technology-driven world. High-quality software and system management reduce risks, enhance performance, and improve user satisfaction. This training program provides professionals with a comprehensive understanding of software quality assurance, testing methodologies, process improvements, and industry best practices for managing system quality effectively.

Through hands-on exercises, case studies, and industry insights, participants will gain the expertise needed to implement quality assurance frameworks, optimize testing strategies, and improve overall software and system reliability.

## Course Objectives:

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

- Understand fundamental concepts of software and system quality management.
- Implement quality assurance and testing methodologies.
- Identify and mitigate risks associated with software defects.
- Utilize industry standards and frameworks for quality assurance (ISO, CMMI, Six Sigma).
- Optimize software testing processes for higher efficiency.
- Ensure compliance with regulatory and industry-specific requirements.

## Target Audience:



- Software Developers and Engineers
- Quality Assurance and Testing Professionals
- IT Project Managers and System Administrators
- Software Product Managers
- Compliance and Risk Management Officers
- Anyone involved in software and systems quality control

## **Course Content:**

### **Fundamentals of Systems & Software Quality**

- Introduction to quality assurance in software development
- Key principles of system quality management
- Quality attributes: reliability, maintainability, and performance
- Common software quality issues and how to address them
- The role of automation in software testing
- Industry best practices for software quality management

### **Software Testing Methodologies and Techniques**

- Black-box vs. white-box testing approaches
- Functional and non-functional testing
- Automated vs. manual testing strategies
- Regression, unit, and integration testing
- Performance and stress testing for software reliability
- Workshop: Designing an effective testing strategy

### **Software Development Life Cycle (SDLC) and Quality Assurance**

- Quality considerations in Agile, DevOps, and Waterfall methodologies
- Continuous integration and continuous deployment (CI/CD) best practices
- Risk-based testing and defect prevention strategies



- Change management and version control
- Case study: Implementing QA in large-scale software projects
- Workshop: Creating a quality assurance roadmap for a software project

## **Compliance, Standards, and Quality Frameworks**

- Overview of ISO 9001, ISO 25010, and CMMI for software quality
- Compliance with industry regulations (GDPR, HIPAA, etc.)
- Software verification and validation processes
- Six Sigma and Lean approaches in software quality improvement
- Case study: How leading companies ensure software compliance
- Group exercise: Evaluating software quality based on industry frameworks

## **Managing Quality in Modern Software and System Environments**

- Emerging trends in software quality management
- AI-driven software testing and predictive analytics
- Cloud-based application testing and security considerations
- Open-source software quality challenges and best practices
- Implementing effective bug tracking and reporting tools
- Final assessment and certification review



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.