IT and Software Quality Management Excellence Training Course



20 - 24 Dec 2026

Amman

3800 € (Per Person)

Ref: #QUA4268_235821

Course Introduction / Overview:

In the rapidly evolving digital landscape, the delivery of high-quality software is not just a technical goal but a critical business imperative. This course provides a comprehensive exploration of quality management principles and practices tailored specifically for IT and software development environments. Moving beyond traditional testing paradigms, this program delves into a holistic approach where quality is embedded throughout the entire Software Development Lifecycle (SDLC). We will explore the foundational concepts championed by quality pioneers like W. Edwards Deming and adapt them to the context of modern methodologies such as Agile and DevOps. Participants will learn how to build robust Quality Management Systems (QMS), shifting the focus from mere defect detection to proactive defect prevention. As discussed in seminal works like "The Phoenix Project," integrating quality into the workflow is key to achieving both speed and stability. BIG BEN Training Center has designed this course to equip professionals with the strategic and practical skills needed to lead quality initiatives, manage risks effectively, and foster a culture of continuous improvement within their teams and organizations. This journey will transform your understanding of quality from a final-stage gate to an ongoing, collaborative responsibility that drives value and innovation.

Target Audience / This training course is suitable for:

- Software Developers and Engineers.
- Quality Assurance (QA) Engineers and Test Analysts.
- IT Project and Program Managers.
- Scrum Masters and Agile Coaches.
- Product Owners and Business Analysts.
- DevOps Engineers and Release Managers.
- IT Managers and Team Leaders.
- Systems Architects and Technical Leads.
- Professionals aspiring to move into a quality-focused role.

Target Sectors and Industries:

- Financial Technology (Fintech) and Banking.
- Healthcare IT and Medical Device Software.
- E-commerce and Online Retail.
- Telecommunications and Network Services.
- Government and Public Sector Agencies.
- Automotive and Embedded Systems.
- Aerospace and Defense Technology.
- Gaming and Entertainment Software.
- Consulting and Professional IT Services.

Target Organizations Departments:

- Information Technology (IT).
- Software Development and Engineering.
- Quality Assurance and Testing.
- Project Management Office (PMO).
- DevOps and IT Operations.
- Product Management and Development.
- Research and Development (R&D).
- Enterprise Architecture.
- Information Security.

Course Offerings:

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

- Develop and implement a comprehensive Software Quality Assurance Plan (SQAP).
- Integrate quality practices seamlessly into Agile and DevOps workflows.
- Define, measure, and analyze key performance indicators (KPIs) and quality metrics.
- Apply various testing methodologies, including TDD, BDD, and exploratory testing.
- Conduct effective peer code reviews and utilize static and dynamic analysis tools.
- Master defect tracking, management, and root cause analysis techniques.
- Manage technical debt and its impact on long-term product quality.
- Champion a culture of quality and continuous improvement within an organization.
- Align software quality objectives with overarching business goals and strategies.
- Evaluate and implement software process improvement (SPI) initiatives.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, engaging, and practical, ensuring that participants can immediately apply their learning in a professional context. We move beyond traditional lectures to create an immersive learning environment that fosters deep understanding and skill retention. The course is built upon a foundation of expert-led instruction combined with real-world case studies that reflect the current challenges and successes in the IT and software industry. A significant portion of the training is dedicated to hands-on workshops where participants will work in teams to create quality plans, define metrics, and analyze defect reports. These collaborative exercises encourage problem-solving and peer-to-peer learning. Interactive sessions, group discussions, and Q&A segments are integrated throughout the five days to ensure concepts are thoroughly understood. Participants will receive constructive feedback from the instructor and their peers, creating a supportive atmosphere for growth. This blended approach ensures that every professional leaves not just with theoretical knowledge, but with the confidence and practical ability to drive quality excellence in their workplace.

Course Agenda (Course Units):

Unit One: Foundations of Quality in IT and Software

- Principles of Software Quality and the Quality Mindset.
- The Role of Quality Throughout the Software Development Lifecycle (SDLC).
- Distinguishing Between Quality Assurance (QA), Quality Control (QC), and Testing.
- Core Concepts of Total Quality Management (TQM) in a Tech Environment.
- Understanding the ISO/IEC 25010 Software Product Quality Model.
- Analyzing the Cost of Poor Quality (COPQ) in Software Projects.
- Introduction to Software Process Improvement (SPI) Frameworks.

Unit Two: Strategic Quality Planning and Standards

- Developing a Robust Software Quality Assurance Plan (SQAP).
- Defining Quality Gates, Acceptance Criteria, and the Definition of Done.
- Introduction to Capability Maturity Model Integration (CMMI).
- Selecting, Defining, and Tracking Meaningful Quality Metrics and KPIs.
- Proactive Risk Management and Mitigation in Software Projects.
- Ensuring Quality through Requirements Traceability and Management.
- Aligning Quality Strategy with Business Objectives and Stakeholder Expectations.

Unit Three: Quality Assurance in Modern Development Methodologies

- Integrating Quality Practices into Agile and Scrum Frameworks.
- The Role of QA in DevOps and Continuous Integration/Continuous Delivery (CI/CD) Pipelines.
- Implementing Test-Driven Development (TDD) Practices.
- Applying Behavior-Driven Development (BDD) with Gherkin Syntax.
- Mastering Exploratory and Session-Based Testing Techniques.
- Formulating Effective Automation Testing Strategies and Frameworks.
- Implementing Shift-Left Testing Principles for Early Defect Detection.

Unit Four: Quality Control, Analysis, and Measurement

- Techniques for Conducting Effective and Constructive Peer Code Reviews.
- Leveraging Static and Dynamic Code Analysis Tools for Code Quality.
- Systematic Defect Tracking, Triage, and Lifecycle Management.
- Applying Root Cause Analysis (RCA) Techniques like the 5 Whys.
- Identifying, Measuring, and Strategically Managing Technical Debt.
- Planning and Executing User Acceptance Testing (UAT) Effectively.
- Creating and Presenting Quality Status Reports for Different Stakeholders.

Unit Five: Advanced Quality Management and Continuous Improvement

- Implementing a Continuous Quality Improvement Cycle (e.g., PDCA).
- Advanced Concepts in Performance, Load, and Stress Testing.
- Fundamentals of Software Security Testing (SAST, DAST, IAST).
- Incorporating Usability and Accessibility Testing into the QA Process.
- The Future of QA with Artificial Intelligence and Machine Learning.
- Strategies for Building and Nurturing a Culture of Quality.
- Capstone Project: Developing a Comprehensive Quality Improvement Proposal.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

In an era dominated by rapid release cycles and continuous delivery, how can an organization strike the perfect balance between development velocity and uncompromising software quality without sacrificing either?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by offering a holistic and modern perspective on quality management that is deeply integrated with contemporary software development practices. Unlike traditional courses that often treat quality assurance as a separate, end-of-cycle activity, this program champions quality as a shared, continuous responsibility embedded within Agile and DevOps cultures. We focus on the "shift-left" principle, empowering participants with the skills to build quality in from the very beginning, rather than just inspecting for it at the end. The curriculum moves beyond mere testing techniques to cover strategic elements such as quality planning, risk management, process improvement, and fostering a quality-centric culture. Furthermore, the course content is highly practical, emphasizing the application of concepts through real-world case studies, hands-on workshops, and collaborative problem-solving sessions. Participants will not only learn the "what" and "why" of software quality but also the "how," gaining actionable insights and tools to drive tangible improvements in their organizations. It is this blend of strategic vision, modern methodology integration, and practical application that makes this training uniquely valuable for today's IT professionals.