DevOps Quality Training Course

Professional Development Training Course Outline

Category	Quality Assurance and ISO standards	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In the modern digital economy, organizations are striving to accelerate software delivery while ensuring higher reliability, efficiency, and customer satisfaction. DevOps Quality Training Course plays a critical role in equipping professionals with the necessary tools, frameworks, and practices to integrate quality assurance seamlessly into the DevOps lifecycle. By emphasizing automation, continuous testing, monitoring, and collaboration, this course bridges the gap between development and operations, creating a sustainable ecosystem for continuous improvement and innovation.

The training provides in-depth coverage of DevOps principles, CI/CD pipelines, test automation, cloud-native strategies, and container orchestration, combined with practical case studies to foster a hands-on learning experience. Learners will acquire the ability to design and implement effective DevOps quality frameworks that boost software performance, improve scalability, enhance security, and ensure regulatory compliance. This course prepares participants to align quality objectives with business outcomes, making them indispensable assets in the global IT and software delivery landscape.

Programme Curriculum

DevOps Quality Training Course

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Course Objectives

1. To understand DevOps principles and their impact on quality assurance.
2. To implement Continuous Integration and Continuous Delivery pipelines with embedded quality checks.
3. To master test automation tools and frameworks for accelerating quality feedback.
4. To apply containerization and orchestration with Kubernetes and Docker for scalable quality solutions.
5. To leverage cloud-native practices to ensure high availability and resilience.
6. To establish monitoring, logging, and observability for improved quality visibility.
7. To integrate security practices within DevOps pipelines (DevSecOps).
8. To adopt shift-left testing practices for early defect detection.
9. To align DevOps quality with organizational business goals.
10. To analyze and apply data-driven insights for continuous quality improvement.
11. To practice cross-functional collaboration for quality-driven development.
12. To manage risks and ensure compliance through automated quality gates.
13. To evaluate and optimize quality metrics for performance measurement.

Organizational Benefits

1. Accelerated software delivery with fewer defects.
2. Reduced operational costs through automation and continuous testing.
3. Enhanced customer satisfaction with reliable product releases.
4. Increased scalability and adaptability in software projects.
5. Improved collaboration across development, QA, and operations teams.
6. Stronger alignment between IT goals and business objectives.
7. Streamlined compliance and risk management processes.
8. Higher employee productivity and technical skill development.
9. Stronger competitive advantage in the market.
10. Better resource utilization and reduced downtime.

Target Audiences

1. DevOps Engineers
2. Software Testers and QA Analysts
3. Cloud Engineers
4. IT Operations Professionals
5. Developers seeking DevOps expertise
6. Project Managers and Scrum Masters
7. Security Engineers and DevSecOps Specialists
8. Technical Architects

Course Duration: 5 days

Course Modules

Module 1: Introduction to DevOps Quality

- Understanding DevOps culture and principles
- Evolution of DevOps and Quality Assurance
- Role of QA in Continuous Delivery pipelines
- Quality gates and compliance checks
- Collaborative workflows for quality-driven delivery
- Case Study: Transitioning from Traditional QA to DevOps QA

Module 2: Continuous Integration and Continuous Delivery

- Overview of CI/CD pipelines
- Implementing build verification testing
- Automated deployment strategies
- Role of CI servers like Jenkins and GitLab CI
- Pipeline monitoring and failure management
- Case Study: Successful CI/CD adoption in a global enterprise

Module 3: Test Automation in DevOps

- Introduction to automated testing frameworks
- Designing scalable test automation suites
- Integrating Selenium, JUnit, and TestNG
- Automation in microservices architecture
- Leveraging APIs for faster quality checks
- Case Study: Test automation reducing release time by 40%

Module 4: Containerization and Orchestration

- Introduction to Docker and Kubernetes
- Creating containerized test environments
- Orchestration strategies for quality assurance
- Deployment automation in container platforms
- Managing quality in multi-cloud environments
- Case Study: Kubernetes-based QA in large-scale applications

Module 5: Cloud-Native Quality Practices

- Overview of cloud-native development
- Implementing quality assurance in AWS, Azure, and GCP
- Auto-scaling test environments
- Cloud observability tools for QA
- Handling resilience and disaster recovery testing
- Case Study: Quality assurance in a cloud-first banking system

Module 6: Monitoring, Logging, and Observability

- Importance of monitoring for quality assurance
- Tools for monitoring and logging (ELK, Prometheus, Grafana)
- Establishing observability practices in DevOps
- Proactive quality issue detection
- Implementing feedback loops for continuous quality

- Case Study: Improving uptime through observability in e-commerce

Module 7: DevSecOps and Security Automation

- Integrating security into DevOps pipelines
- Automated vulnerability scanning tools
- Compliance and regulatory frameworks
- Threat modeling in DevOps
- Implementing secure coding practices
- Case Study: DevSecOps transformation in healthcare IT

Module 8: Quality Metrics and Continuous Improvement

- Defining key quality metrics in DevOps
- Using data analytics for decision-making
- Aligning metrics with business objectives
- Continuous improvement models
- Benchmarking quality performance
- Case Study: Data-driven quality optimization in telecom industry

Training Methodology

- Instructor-led interactive sessions
- Hands-on labs with real-time tools and frameworks
- Group discussions and collaborative activities
- Case study analysis for practical insights
- Assessments, quizzes, and feedback sessions

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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