Publication date : 06/06/2024

Course : State of the art in software testing

Synthesis course - 2d - 14h00 - Ref. ETL
Price : 2020 CHF E.T.

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The learner will be able to analyze the appropriateness of a software testing project and draw up a comparison of test management solutions to support decision-making.

Teaching objectives

At the end of the training, the participant will be able to:

- Identify the technical and economic challenges of an IT development project
- Understand the Quality/Cost/Delivery triptych and project cost and profitability indicators
- Understanding the different types and levels of testing
- Understand the different phases of a functional validation process
- Understand today's test repositories and maturity models
- Identify the advantages and disadvantages of test management solutions
- Understand the regulatory framework, particularly in relation to the RGPD.

Intended audience

IS directors, project managers, developers, project managers, anyone wishing to understand software testing or move into software testing-related professions.

Prerequisites

Basic knowledge of IT project lifecycles and issues.

Course schedule

1 The context of the IT development project

- The project life cycle: classic and agile modes.
- The different processes.
- Deliverables (specifications, acceptance plan, tests, etc.).
- Requirements (typology, quality criteria).
- The cost of non-quality.

PARTICIPANTS

IS directors, project managers, developers, project managers, anyone wishing to understand software testing or move into software testing-related professions.

PREREQUISITES

Basic knowledge of IT project lifecycles and issues.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

2 Testing in software development projects

- The BOEHM model.
- Project roles (MOA, MOE, acceptance team, users). Different processes.
- The Independent V&V. Reviews, inspections
- Test families: unit, functional, base consistency, integration, load. Non-regression testing.
- Deliverables (specifications).

3 Key elements of functional validation

- The five foundations. The recipe process...
- The recipe plan.
- Organization and follow-up. Dataset management.
- Test campaigns.
- Recording of results and anomalies.
- The packaging and delivery process.
- Revenue clauses.

4 Regulatory framework (CNIL)

- Is the use of production data prohibited?
- Documentation of personal data in all test environments.
- Identification of sensitive data.
- Test data management: profiling, "on-the-fly" masking of production data,
- Provisioning and archiving data in test environments.
- Authorization and alerts for data exports.
- Block access to personal data from unauthorized access points.
- Purge data sources once testing is complete.

5 Test project costs and profitability

- Validation team, resource requirements.
- Professionalization of the testing profession. Certifications (ISTQB...). -
- Estimating test costs by test family. Costs and benefits.
- Costs and benefits of non-regression.
- Estimate the cost of test maintenance.
- TRA for test maintenance. Offshore models.
- Test profitability.

6 Overview of test management solutions

- Requirements and traceability managers.
- Anomaly managers.
- Test automation.
- Implementation of continuous integration.
- Cost of getting to grips with the various tools.
- Quantitative and qualitative gains.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

7 Maturity practices and models

- Today's testing approaches: the risk-based approach.
- Contributions of Agile approaches (Scrum, XP, etc.). TDD.
- Process maturity (TMMI, Test Process Improvement, ISO/SPICE).
- Continuous improvement: DMAIC, PDCA, FMECA.
- Measuring return on investment.
- Indicators to be implemented: coverage rate, number of vulnerabilities, etc.

8 Key points, summary

- Success/failure factors.
- Review of best practices.
- Limits and points of attention.

Group discussion
Exchange of views between participants.

Dates and locations

REMOTE CLASS
2026 : 11 June, 24 Sep., 17 Nov.