Publication date : 03/06/2024

Course : Requirements management in software development

Practical course - 2d - 14h00 - Ref. EXI
Price : 1310 € E.T.

The aim of requirements management is to optimize customer satisfaction. Often underestimated, this discipline is nevertheless fundamental to all software development project management. In this training course, you will learn how to formulate your specifications to include requirements. You'll learn how to identify them, formalize them, test them, validate them and set up a follow-up strategy.

Teaching objectives

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

- Understand the different types of requirements in software development
- Extracting requirements from a specification
- Master the rules of writing a requirement
- Enumerate tests and estimate workload based on requirements
- Validate and monitor requirements

Intended audience

Project owners, analysts, development teams, test teams.

Prerequisites

Basic computer skills.

Course schedule

PARTICIPANTS

Project owners, analysts, development teams, test teams.

PREREQUISITES

Basic computer skills.

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.

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.

1 Fundamentals

- Definition of requirements.
- The importance of requirements in a development project.
- The risks of non-quality requirements.
- Impact of requirements.
- Requirements engineering (IEEE610).

Group discussion

Collective reflection on a few examples of requirements.

2 Requirements engineering in software development projects

- Reminder of development cycle models: traditional and agile approaches.
- Positioning requirements in each development cycle model and specificities.
- Project phases and deliverables impacted by requirements engineering.
- The requirements management plan and its content.
- The players involved in requirements: business analyst, requirements engineer, designer, configuration manager, etc.
- Requirements as essential elements of the contract.
- Analyze the context: system scope, constraints and assumptions.
- Stakeholder identification.

Hands-on work

Requirements management process questionnaire. Identify and describe the deliverables related to requirements management in your context. From a topic, create a context diagram and identify stakeholders.

3 Requirements identification/elicitation

- Purpose and process of requirements identification.
- Functional requirements, definition and examples.
- Non-functional requirements, NFR model, ISO 25010, examples.
- Techniques for identifying requirements: interviewing, self-recording, brainstorming, prototyping...

Hands-on work

Identify and classify elements that correspond to requirements. Reformulate a requirement. Describe acceptance criteria. Prepare questions to be used to establish requirements.

4 Analysis and documentation

- How to document a requirement: diagram, text, prototyping, etc.
- Hierarchy of requirements (SYSML standard).
- Techniques for writing requirements.
- Quality criteria for an ISO 25 010 requirement.
- Requirement document, IEEE830.
- Criticality and priority of requirements, MOSCOW method.

Hands-on work

À partir d'un cas, identifier différents besoins et les décliner en exigences fonctionnelles et non fonctionnelles. Identifier des exigences de conception, déploiement, de performance, de sécurité.

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.

5 Documentation of requirements through modeling

- Requirements modeling with UML.
- SysML: the requirement diagram.
- Static system description, context diagram (reminder).
- Static description, class/object diagram.
- Functional description, use case diagram: relationships between actors and the system.
- Dynamic description: activity diagram and sequence diagram.
- Agile requirements modeling with user stories.

Hands-on work
À partir de l'étude de cas, utiliser des diagrammes pour représenter un diagramme de cas d'utilisation, et un diagramme d'activité. Représenter des user stories et des EPICs.

6 Requirements testing

- Test objectives.
- The role of testing in a project.
- Test organization.
- Cost estimation: Delphi method. Agile methods, planning poker, story points.

Hands-on work
Use an estimation method to measure effort, based on the proposed statement.

7 Validation

- Factors influencing the quality of requirements.
- Validation and verification of requirements.
- Different types of review (inspections, audits, walkthroughs)
- Involvement of testers in reviews.

Hands-on work
Utiliser les principales métriques de mesure de la qualité des exigences pour produire une check-list à utiliser en revue des exigences.

8 Requirements management

- Objectives of requirements management.
- Requirement acceptance criteria, agile methods.
- Quality metrics associated with requirements: number of requirements, test coverage, defects, etc.
- Horizontal and vertical traceability of requirements.
- Requirement life cycle and tracking.
- Overview of the functionalities of the main requirements management tools.

Hands-on work
Based on the case studied, propose suitable acceptance criteria for a few metrics.

Dates and locations

REMOTE CLASS **PARIS LA DÉFENSE**

2026 : 16 Mar., 24 Mar., 7 May, 21 May, 8 Sep., 1 Oct., 3 Nov.

2026 : 16 Mar., 21 May, 1 Oct.