

Certified Professional for Requirements Engineering *Foundation Level*

TRAINING COURSE OUTLINE



Program Overview

6 out of 10 failed development projects, be it software or otherwise, have bad requirements management as a root cause (Source: Software Engineering Institute; Carnegie Mellon University,). Understanding, analyzing and documenting client requirements is critical to success - irrespective of technology, development approach (agile, waterfall etc.) and complexity. IREB outlines the only body of knowledge (BoK) in this field - providing professionals with the best benchmark.

In this 3-day course, you will learn how to lay the foundation for a successful project by dealing with requirements systematically. Learn best practices from the only International body of knowledge on managing requirements. Gain practical insights for successful application of RM practices in projects of varying capacity. Different types of requests are explained, and you will learn how requirements documents are structured and formulated. Methods are presented through which to ensure traceability of requirements with one another, as well as to other artefacts of the development process.

Duration

3 – Day Program

Learning Objectives

At the end of the training, participants are expected to:

- Gain the necessary practical knowledge and learn the basic concepts in requirements management;
- Have a thorough understanding on the core principles of requirements engineering;
- Acquire the techniques, methods and tools to elicit, document, validate and manage requirements efficiently; and
- Master and use the models to document requirements.

Benefits

- Understand basic motivation for requirements engineering and its role in the overall context of a project
- Be familiar with the main methods for each of these activities and with criteria for selecting the best approach for any given project

- Get unique International recognition in the Requirements Engineering field as a CPRE
- Validate your current practices and gain confidence
- Show commitment to company and to clients
- Reduce costs related to poor requirements significantly

Target Audience

- Requirements Engineer
- Software Engineers/ Manager
- Software Process Engineering Members
- Business Analyst
- Software, Business and Systems Developer/ Analyst
- Team Leaders
- Project Managers
- QA/Testing Professional

Program Structure and Outline

Day 1

- Introduction and foundations
 - Motivation for RE
 - Big picture of RE (4 major activities)
 - Definitions of requirement, stakeholder, RE
 - Skills of requirements engineer
 - Communication in RE
 - Skills of Requirements Engineer
 - 3 kinds of requirements
 - Training Questions Section 1
 - Types of Exam Questions
- System and system Context

- System Context Analysis
- Context Documentation
- Introduction to group exercises (Get Your Bike Web shop case study)
- Group Exercise: System Context
- Training Questions Section 2
- Four Dimensions of an Effective Analytics Culture
- Building & Sustaining an Analysis Culture
- Requirement elicitation
 - Sources of requirements
 - Stakeholder management
 - Group Exercise: Stakeholder List
 - Training Questions Section 3 (stakeholder management)
 - Kano Model
 - Influences on elicitation techniques
 - Elicitation techniques
 - Elicitation techniques and Kano model
 - Training Questions Section 3 (elicitation techniques)

Day 2

- Requirements documentation
 - Reasons for documenting requirements
 - Three perspectives of functional requirements
 - Types of requirements documents and document structures
 - Quality criteria for requirements and requirements documents
 - Glossary
 - Training Questions Section 4
- Natural language documentation
 - Reasons for documenting in natural language
 - Transformational processes using natural language

- Requirements template for documenting requirements
- Group Exercise: Document requirements with requirements template
- Training Questions Section 5
- Model-based documentation
 - Model definition
 - Proper ties of a model
 - Goal models
 - UML Use Case Diagrams
 - Use Case Specifications
 - Group Exercise: Use Case Specification
 - Models of the Functional Perspective
 - UML Activity Diagrams
 - Group Exercise: Activity Diagram
 - Data Flow Diagrams

Day 3

- Requirements validation and negotiation
 - Risks of non-validated requirements
 - Three quality aspects of requirements
 - Principles of requirements validation
 - Requirements validation techniques
 - Review Techniques
 - Perspective-based reading
 - Prototypes for validation
 - Use of checklists
 - Group Exercise: Validation of use case specification
 - Requirements negotiation
 - Training Questions Section 7
- Requirements management

- Assigning attributes to requirements
- Views on requirements
- Prioritization of requirements
- Prioritization techniques
- Traceability of requirements
- Versioning of requirements
- Change Management
- Training Questions Section 8
- Tool support
 - Categories of tools
 - Basic features of requirements management tools
 - Aspects to consider when introducing a RM-tool
 - Seven views on evaluation criteria for a RM-tool
 - Training Questions Section 9

About IREB



IREB, the International Requirements Engineering Board, a non-profit organization, is the provider of the CPRE (Certified Professional for Requirements Engineering) certification scheme. The board consists of leading RE representatives, who come from science, research, industry and consulting.

IREB was created in 2006. The board members joined forces with the vision to create an internationally accepted and professional basis for RE, in order to give this discipline the importance and the orientation that corresponds to its added value for the industry. In the meantime IREB has become a worldwide renowned body of experts for the individual certification of professionals in Requirements Engineering.

Since 2007, more than 24,000 professionals in 61 countries have passed the CPRE Foundation Level examination.

<https://www.ireb.org/en>