

Course 343: Managing Agile Software Development (4 days)

Course Description...

When new software development has to be created and operational in days rather than months, the old linear waterfall processes become bottlenecks. The new Agile Development approaches are the antidote. These approaches produce high-quality, low-defect applications that are implemented in minimum timeframes. Emphasizing user involvement and lightweight process, the agile approaches offer an alternative method to development of software.

Learning Objectives...

- Introduce the concept of development agility and the Agile Manifesto
- Review each of the major agile development methods underscoring their strengths and weaknesses
- Understand how to manage an agile environment even within a structured organizational approach

Who should attend...

Managers, programmers, developers, executives, and anyone interested in learning the benefits of agile development.

Prerequisites...

Knowledge of current development processes, such as structured top-down development and the waterfall method.

See next page for a detailed course outline...



Course Outline...

Unit 1: Introduction

- The Software Development Process
 - Mandatory elements
 - Transitions
 - Traditional Life Cycle Models
- Software development best practices
- Process Oriented Development
- Principles of Agile Methods

Unit 2: The Agile Approach

- The rise of agile methods
- The agile manifesto
- The people factor
- Refactoring
- Testing
- Documentation
- Management

Unit 3: The System Architecture

- The Problem Definition
- Developing a system model
- The Vision
- The System Metaphor

Unit 4: Agile Product Definition

- Customer Roles and Interaction
- User stories
- The requirements backlog

Unit 5: Incremental Delivery

- Classic approaches to delivery
- Principles of Incremental Delivery
- Managing Incremental Delivery
- Agile Approach: Staged Evolutionary Delivery
 - Background
 - Principles
 - Structure
- Structuring the evolutionary project

Unit 6: Iterative Development

- Classic approaches to development
- What is iterative development
- Iterating development cycles
- Planning the Iterations
- Managing the Iterations
- Agile Approach: Phased Iterative Development
- Team approach
 - Team member roles



- Prototyping sessions
 - Structure
 - Method
 - Documentation
- Phases
- Managing Change

Unit 7: Agile Analysis and Design

- Classic approaches to analysis and design
- Agile Modeling concepts
- Refactoring design
- Agile method: Feature-Driven Development (FDD)
 - Background
 - Processes

Unit 8: Agile Programming

- Classic programming approaches
- Principles of agile programming
 - Refactoring
 - Complexity
 - Mutual ownership of code
- Agile Method: Extreme Programming
 - Twelve Practices
 - Documentation
 - Process
- Agile Testing
- Managing the Development Process

Unit 9: Agile Software Development Management

- Classic software development management
- Agile Self-managing teams
- Business Representation
- Agile Method: Scrum
 - Background
 - The “wrapper” approach
 - The Scrum pattern
 - Principles
- Agile Methods: Adaptive Software Development and Crystal
 - Background
 - Predictive vs. Adaptive
 - Basic characteristics
 - Speculate-collaborate-learn cycle
 - Principles
 - Adaptive culture
 - Adaptive framework
 - Adaptive collaboration
 - Adaptive scale



- Adaptive management
- Just in time methodology
- Applying Classic PMBOK Project Management to Agile
- The Declaration of Interdependence

Unit 10: The Bottom Line

- Agile Best Management Practices
- Where to go for more information

Please contact your ROI representative to discuss course tailoring!!!