

Course ID

**SWCM**

Course Duration

**2 days**

Course Title

**Software Configuration Management**

**Related Courses**

- Principles of Software Engineering (SWENG1, 2 days)
- Software Engineering: An Advanced Tutorial (SWENG2, 3 days)
- Effective Software Testing (SWT, 2 days)
- Software Project Management (SWPM, 2 days)
- Software Project Estimation (SWPE, 2 days)

**Aimed At**

Information Technology (IT) practitioners including analysts, developers, testers, managers, and configuration management specialists who face current or near-future configuration management responsibilities

**Group Size**

5-25

**Prerequisites**

None

**Course in a Nutshell**

In the fast-paced world of Information Technology (IT), where new application software is written and modified daily, organizations that place a premium on quality recognize the need to control changes to the evolving software. This course addresses the discipline of software configuration management, an important mechanism for attaining and maintaining quality and delivery of work products.

**Customize It!**

- *Are you a member of an organization that outsources to others? We can create a version of the course that addresses configuration management from the perspective of an outsourcing organization.*
- *Similarly, if you are a member of a software contractor organization, we can orient the course toward the viewpoint of a developer organization.*
- *Does your organization use agile methods? If so, we can customize the course to address configuration management in agile development.*

**Learn How To**

- Apply the software configuration management (SCM) process, from change control to release management
- Assess various approaches to SCM
- Select appropriate SCM tools

## Course Outline

- Foundations of SCM
  - Definition of configuration management
  - SCM in CMMI, ISO, IEEE, and other standards
  - How different software development paradigms impact SCM planning and practice
  - Relationship of SCM to other project disciplines
  - Using SCM to maintain product integrity and quality
  - SCM planning
- Principles of Software Configuration Identification
  - CMMI guidelines for the identification function
  - Which work products to manage, and level of management
  - COTS, licenses, royalties, and data rights
  - Key role of requirements management in SCM
  - Project manager's role and responsibilities
  - Baselines
- Principles of Configuration and Change Management
  - CMMI guidelines for software change control/management
  - How change management relates to configuration identification
  - Versions, revisions, variants, and branches
  - How to control baselines
  - How to integrate subcontractors and vendors
  - Establishing a change control authority
  - Controlling changes to interfaces
- Principles of Configuration Status Accounting (CSA)
  - CMMI guidelines for software CSA
  - Using software CSA in baseline management
  - Handling releases
  - Relationship with subcontractor or vendor CSA
  - Creating release notes and version description documents
- Principles of Configuration Audits
  - CMMI guidelines for configuration audits
  - Methodologies and techniques
  - Differences between functional and physical configuration audit
  - Reporting results to stakeholders
  - Scheduled and unscheduled reviews and audits
  - Auditing subcontractors and vendors
  - Managing deviations and waivers
  - Creating SCM work products
- Course Summary
  - Lessons learned
  - Where to go from here

**How You Will  
Learn**

- A seasoned instructor and IT practitioner will present this course in interactive lecture format.
- Along with the lecture, we will use short exercises, longer workshops, and interesting group activities to enrich the instruction and drive home the essential points.
- You will receive a printed Participant Handbook to help you remember and retain what you learned in class and apply it on your job.

*Revised*

*May 3, 2008f*