CMPIC’s CM Training & Certification Courses

www.CMPIC.com

CMPIC® Courses
Why Choose CMPIC?

Why choose CMPIC for your CM Training?

CMPIC provides high quality, cost-effective, and the most up-to-date Configuration Management (CM) training & certification. Our goal is to assure that CM and related professionals attain a complete understanding of the CM landscape; from principles and processes to effective and efficient implementation techniques. CMPIC training examines all perspectives of CM rather than focusing on a single ideology. CMPIC will give you implementation options that meet industry requirements and are considered best industry practice.

What is CMPIC’s view on Industry Standards?

CMPIC believes that industry standards for Configuration Management (ANSI/EIA-649, ISO 10007, etc.), Quality (i.e. ISO 9001), CMMI, ITIL and others form a solid foundation for configuration management process implementation. These are all very well written standards developed by experts who care about configuration management and continuous improvement. This is why we will discuss industry requirements in our courses.

Class approach: (1) know the requirements of the standards; (2) identify additional requirements that may be necessary but are not in the standards (such as automation, etc.); (3) learn the various implementation options and how to make them happen.

How competitive is CMPIC’s pricing?

CMPIC courses are designed to be thorough yet concise, reducing time away from work. Public classes are held in many smaller to mid-size cities, typically resulting in lower accommodations expenditure. On-site classes, offered at a discounted rate, are available for groups as small as five students. Finally, a quick search of the Internet will show you that our courses are competitively priced and our CM Principles & Implementation Certification (Courses 1-4) is completed in just eight days, meaning less travel, and less time away from work.

Student Testimonials:

“I’ve seen a few different CM presentations, all mostly consistent with each other. This course had more information, perspective, and insight than any other.” Course 1 - CM Foundations

“The detail of change management really helped me understand what is lacking in my work environment.” Course 3 - Configuration Change Management

“The CMPIC approach is very intuitive and geared towards both new CMers and even the most seasoned guru. The disciplines of CM are explained in a way that makes it easier to bring about CM process improvements in the work place.” Course 4 - CM Implementations

“I have been to a few software classes in my career, but this one really provides down to earth, day to day CM for software and how to relate with hardware.” Course 8 - SCM: Strategies, Techniques, & Tools

“This course will be helpful in developing our new enterprise CM plan for our organization.” Course 6 - EIA-649

“I always knew we could do a better job but now I am more excited about the possibilities after discussions and lessons. So many opportunities... where to begin?” Course 2 - CM Identification
Configuration Management Certifications & Courses

All courses are designed and taught by CMPIC LLC

CMPIC’s Classes, Certifications, & Programs

Courses 1 - 4: “CM Principles and Implementation” certification series - 8 days total, 6.4 CEUs
Course 1: CM Foundations, Course 2: CM Identification, Course 3: Configuration Change Management, and Course 4: CM Implementation. The four courses that make up the CMPIC certification program have been developed to provide a solid foundation in CM. Completion of this certification signifies that you understand current CM requirements per industry CM standards and guidelines, understand the various elements/functions of CM, and have been exposed to modern day approaches to achieve successful CM process implementation.

Course 6: “SAE EIA-649B Principles & Applications” certification - 3 days, 2.4 CEUs
Students will receive a licensed, full PDF copy of the entire EIA-649B standard.

Course 7: “Configuration Management Assessor” certification - 3 days, 2.4 CEUs.

Course 8: “Software Configuration Management: Strategies, Techniques, & Tools” certification - 4 days, 3.2 CEUs

Course 9: “CM Standards & Practices Update” refresher course - 3 days, 2.4 CEUs

Course 10: “SAE EIA-649-1 CM Requirements for Defense Contracts” certification - 3 days, 2.4 CEUs
Students will receive a licensed, full PDF copy of the entire EIA-649-1 standard.

Course 12: “CM for Engineers, Project Managers and Quality Assurance Professionals” course 2 days, on-site only
NOTE: This course is only offered to be taught on-site at your facility.

Course 15: “Security-Focused CM of Information Systems” certification - 3 days

Master’s Certification Program: CMPIC Master’s Certification in Enterprise Configuration Management
Successful completion of the certification program requirements signifies that you have been taught and exposed to the various CM standards, principles and techniques required to implement CM in various functional areas as well as a wide variety of environments.

CMSME Program: Configuration Management Subject Matter Expert program
Becoming an active member in this program demonstrates your commitment to remaining current in all aspects of Configuration Management, an advanced achievement in continuous CM education, and signifies that you have learned the many CM principles & techniques required to implement CM in various functional areas within an organization.
Course 1
CM Foundations

Description
This two-day Course provides a detailed overview of CM Planning, Identification, Audit, Change Control, and Status Accounting; and the role of configuration management in the organization. This is course one of a four course certification series.

Objectives
To learn the basic tenants of, and latest approaches to, configuration management including who is involved with and responsible for CM; how CM has evolved to its current state; and how CM can reduce corrective action and assure consistent conformance.

Outline: Course 1 Chapters
1 CM Overview
2 Who Needs CM?
3 CM History & Requirements
   Workshop
4 CM & Quality
5 Elements of CM
6 Terminology Issues
   Workshop
7 Life Cycle Concepts
8 Document, Data, & Management
9 CM & Information Quality
   Workshop
10 What Does CM Cost?
11 CM is Misunderstood
12 So You Don't Want CM?
   Workshop

Course 2
CM Identification

Description
This two-day Course provides details and “how-to” approaches for baselining, structure, naming, numbering and more. This is course two of a four course certification series.

Objectives
To understand techniques for preparing and maintaining properly structured information and baselines. This will assure we know what we build, operate, and/or maintain throughout all phases of the life cycle.

Outline: Course 2 Chapters
1 Identification Overview
2 Identifiers, Numbering, & Naming
3 Product Structure Part 1
   Workshop
4 Product Structure Part 2
5 Baselines
6 Identification & Change Management
   Workshop
7 CM Database
8 Identification Approaches
9 Interface Management
   Workshop
10 Re-Identification
11 Traceability
12 Status Accounting & Identification
   Certification Exam: 1 of 2

Continued on next page
CM Principles & Implementation Certification

Course 3
Configuration Change Management

Description
This two-day Course is based on best industry practice and provides an in-depth look into full life cycle change management principles coupled with successful implementation approaches. This is course three of a four course certification series.

Objectives
To understand change management logic, workflows, responsibilities, boards, forms, metrics, effectivities and best practices in order to implement an effective and efficient change process from change initiation to successful implementation. Understand how to handle non-conformances and how to eliminate common bottlenecks in the change process.

Outline: Course 3 Chapters
1 Change Management
2 Change Proposal & Analysis
3 Change Disposition (+ Workshop)
4 Change Boards
5 Change Implementation
6 Change and Effectivity (+ Workshop)
7 Priorities & Classifications
8 Change Management Issues
9 Eliminating Bottlenecks (+ Workshop)
10 Deviations, Waivers and Variances
11 Status Accounting and Change
12 Change Process Metrics (+ Workshop)

Course 4
CM Implementation

Description
This two-day Course teaches the student how to implement the previously learned CM processes and methodologies into their organization. This is course four of a four course certification series.

Objectives
To understand the various methods associated with successful implementation of configuration management process improvements. Understand CM Plans and CM Planning and learn how to do a CM assessment. Learn how to apply CM in unique environments and life cycle phases. Attendees will also understand how to choose and implement CM related automated tools.

Outline: Course 4 Chapters
1 CM Plans and Planning
2 Verification and Audit
3 CM Professionals (+ Workshop)
4 Customers & Suppliers
5 CM & COTS
6 CM and Lean (+ Workshop)
7 Assessing CM Processes
8 CM Tools - What they Can Do For Us
9 CM Tools - Requirements for Success (+ Workshop)
10 CM Process Improvement
11 CM Success
12 Review & Close (+ Exam)

8 days, 6.0 CEUs
Course 6
CM Industry Standard SAE EIA-649B Principles & Applications

Description
SAE EIA-649, Standard for Configuration Management, is perhaps the most widely accepted Configuration Management (CM) standard in use today. This three-day course will explain the logic and meaning behind the various EIA-649 principles, and offer options for implementation approaches and how best to apply the standard in various environments. This course is especially valuable to those who have EIA-649 called out as a guidance document in their contracts.

Objectives
To understand the principles of this industry standard. This standard offers valuable advice on requirements for achieving successful CM implementations. SAE EIA-649B applies to commercial as well as government organizations.

Outline

Day 1
649 Contents Overview
Foreword & Section 1.0 intro
2.0 Scope, 3.0 References, & 4.0 Terminology
5.0 CM Functions and Principles
5.1 CM Planning and Management
Workshop

Day 2
5.2 Configuration Identification 1
5.2 Configuration Identification 2
5.2 Configuration Identification 3
5.2 Configuration Identification 4
Workshop
5.3 Config. Change Management 1

Day 3
5.3 Config. Change Management 2 Workshop
5.4 Configuration Status Accounting
5.5 Configuration Verification & Audit
Applicaion Notes & Annex A
Exam

Students will receive a licensed, PDF copy of the entire SAE EIA-649B standard upon successful completion of this class.
Course 7
Configuration Management Assessor

Description
This 3-day course is designed for CM professionals who are responsible for CM process improvement in their organization. The course will cover assessment techniques used to identify areas of improvement, and uncover deficiencies, in existing processes.

The assessment criteria covers assessment of all the major elements of CM as defined by major industry standards and quality initiatives such as ANSI/EIA-649A, CMMI, ITIL, MIL-HDBK-61 and more.

Students completing this certification will be well prepared to produce assessment reports and plans for improvement that will enable them to move forward with CM process improvements.

Prerequisites
Attendees should be familiar with Configuration Management practices as this course is not intended to teach basic CM principles and implementation practices.

Attendees must have at least 2 years experience in Configuration Management, Quality Assurance or Project Management and/or have a certification in CM prior to taking this course.

Intended Audience
- Individuals who are responsible for CM continuous improvement in their organization.
- Individuals who want to move their organization toward best CM practice.
- Individuals who need to assure their current CM processes meet related industry standards.

Outline

Day 1
1 Introduction
2 Requirements for CM
3 The CM Elements
4 Workshop
5 CM Elements Detailed View
6 Terminology
7 Assessment Preparation
8 Workshop

Day 2
1 Sample Assessment Proposal
2 Assessing through Survey
3 Workshop
4 Assessments-Lite
5 Assessment Questions “CM Planning”
6 Assessment Questions “Identification”

Day 3
1 Assessment Q’s “Change Management”
2 Assessment Q’s “Status Accounting”
3 Assessment Q’s “Verification & Audits”
4 Workshop
5 FISCAM CM Audit Questions
6 The CMPIC Approach
7 CMPIC Interview Questions
8 Assessing CM Tools
9 The Assessment Report
10 Exam
Course 8
Software Configuration Management: Strategies, Techniques, and Tools

Description
This 4-day introductory-level course provides a broad overview of the principles and techniques of Software Configuration Management (SCM) as it applies to the entire software lifecycle. It addresses the application of SCM in a wide variety of approaches to software development and maintenance, from traditional to agile. The course illustrates the SCM strategies, techniques, and required tool capabilities that support each of the activities in the software development life cycle. The student will also gain a value-based understanding of which SCM techniques are most useful for the development approach and tool capabilities that currently exist in their company. The course concludes by providing an SCM implementation framework for planning and selecting the optimal SCM strategy and tool capabilities for both the project and organizational levels.

Prerequisites
Successful completion of CMPIC Courses 1 - 4, or CM job experience, is recommended prior to attending this class. Students should be familiar with common CM terms and software development practices prior to taking this course.

Outline

Day 1
1 Defining Our Terms
2 Development Approaches
3 Evolution of SCM
4 Demo & Discuss: 3G/4G Capabilities
5 Core SCM Functions
6 SCM Infrastructure
7 SCM Workflow

Day 2
1 Identity & Structure
2 Streams & Branches
3 Branching Strategy
4 Demo & Discuss: Branching Strategies
5 Requirements
6 Documentation
7 Reporting

Day 3
1 Version Control
2 Change Control
3 Build Management
4 Demo & Discuss: Build Strategies
5 Test Management
6 Release Management
7 Dependency Management

Day 4
1 Standards & Frameworks
2 SCM Planning
3 Infrastructure Evaluation
4 Demo & Discuss: SCM Strategies
5 Technology & Tool Evaluation
6 SCM Implementation
7 Summary & Feedback
8 Exam
Course 9
CM Standards and Practices Update

Description
This three-day course will provide an update and overview of current Industry CM standards, industry practices, CM Tools, and overall trends. The purpose of this course is to assist in keeping your CM skills and education up to date. This course will be updated regularly to reflect current standards, methodologies, and other advances in the profession.

Prerequisites
Attendees should be familiar with Configuration Management practices as this course is not intended to teach basic CM principles and implementation practices.

Attendees must have at least 2 years experience in Configuration Management, Quality Assurance or Project Management and/or have a certification in CM prior to taking this course.

Intended Audience
This course is intended for experienced CM & related professionals with a recognized CM certification who periodically need to get updated on current trends, standards, automation, and best practices in CM.

Outline

Day 1
1. CM Overview
2. CM History & Requirements
3. Quality Assurance and CM Workshop
4. Elements of CM
5. Configuration Identification
6. Product Structure Workshop

Day 2
1. Baselines
2. Change Management Preparation & Disposition
3. Change Management Implementation Workshop
4. Eliminating Bottlenecks
5. Deviations, Waivers, and Variances
6. Change Management Metrics Workshop

Day 3
1. Status Accounting
2. Verification & Audit
3. CM Plans & Planning
4. CM: New Development and Operation & Maintenance
5. CM Tools Exam
Course 10
EIA-649-1 Configuration Management Requirements for Defense Contracts

Description
The course content will address the full standard including associated DID’s and DD Forms. Each student will receive a licensed PDF copy of the latest version of “SAE EIA-649-1 Configuration Management Requirements for Defense Contracts” after successful completion of this course.

SAE EIA-649-1, Configuration Management Requirements for Defense Contracts, defines requirements for a Defense enterprise implementation of SAE EIA-649 in an acquirer/supplier contractual relationship. These requirements are intended to be tailored by the acquirer and cited in contracts, or similar agreements, with Suppliers to establish requirements for Configuration Management tasks consistent with SAE EIA-649 and each of its functions and principles. This standard applies to commercial as well as government organizations. It offers valuable advice on requirements for achieving successful CM implementations. Its authors come from various commercial and government backgrounds and are experts in the field of CM.

This course will explain the logic and meaning behind the various EIA-649-1 principles, and offer options for implementation approaches and how best to tailor and apply the standard in various environments.

Outline

Day 1
1. SAE/EIA-649-1 Rationale, Foreword, Contents Overview
2. Introduction & Section 1.0 Scope
3. 2.0 References
4. 3.0 CM Requirements & 3.1 Planning Management & Workshop

Day 2
5. 3.2 Configuration Identification 1 of 2
6. 3.2 Configuration Identification 2 of 2 & Workshop
7. Configuration Change Management 1 of 2
8. Configuration Change Management 2 of 2 & Workshop

Day 3
9. 3.4 Configuration Status Accounting & Workshop
10. Configuration Verification and Audit & Workshop
11. Table 1 Cross Reference for Principles from ANSI/EIA-649
12. Table 2 & 3 DIDs and DD Forms and 4.0 Notes
Annex A Tailoring Worksheet (annotated)
Exam

Students will receive a licensed, PDF copy of the entire SAE EIA-649-1 standard upon successful completion of this class.
Course 12
CM for Engineers, Project Managers and QA

Description
Configuration Management (CM) is an integral part of Engineering, Project Management and Quality Assurance. Many engineers, project managers and QA professionals know about the “CM department” but few know of the enormous benefits CM can bring when properly integrated with engineering / project management.

This 2-day course will provide a high level overview of the role of configuration management as it relates to overall efficiency and effectiveness. It will address the benefits of integrating CM with QA/engineering / project management, responsibilities associated with CM, and the various elements of CM such as: planning, identification, change management, status accounting, verification, and audit. Attendees will be exposed to the complete landscape of CM activities and will learn how to make CM processes work for them.

Prerequisites
There are no prerequisites for this course.

Intended Audience
This class is intended for engineers, project managers, quality assurance professionals and anyone else interested in the relationship between configuration management and engineering, project management & quality control.

Outline

Day 1
1. CM: A High Level View
2. CM History, Benefits, Requirements
3. CM and the Product Life Cycle
   Workshop 1
4. Elements of CM - Brief Overview
5. Configuration Identification
6. Change Management - Preparation & Disposition
   Workshop 2

Day 2
7. Change Management - Implementation
8. Deviations, Waivers and Variances
9. Configuration Status Accounting
   Workshop 3
10. Configuration Verification and Audit
11. CM Plans and Planning
12. CM and New Development
13. Appendix A- “So You Don't Want CM?”
Course 15
Security-Focused Configuration Management of Information Systems

Description

This 3-day class will address the role of configuration management in protecting information systems. Students who complete this course will understand the CM requirements as prescribed in NIST special publication 800-128. Course materials will come from the NIST publication and will be supplemented with application examples provided by CMPIC. The CM requirements, principles and application examples taught in this class are directly applicable to government and commercial IT systems/environments. Course consists of lecture and workshops.

Why Consider This Course?

“Organizations apply configuration management (CM) for establishing baselines and for tracking, controlling, and managing many aspects of business development and operation (e.g., products, services, manufacturing, business processes, and information technology). Organizations with a robust and effective CM process need to consider information security implications with respect to the development and operation of information systems including hardware, software, applications, and documentation. Effective CM of information systems requires the integration of the management of secure configurations into the organizational CM process or processes. For this reason, this document [NIST SP 800-128] assumes that information security is an integral part of an organization's overall CM process; however, the focus of this document [NIST SP 800-128] is on implementation of the information system security aspects of CM, and as such the term security-focused configuration management (SecCM) is used to emphasize the concentration on information security. Though both IT business application functions and security-focused practices are expected to be integrated as a single process, SecCM in this context is defined as the management and control of configurations for information systems to enable security and facilitate the management of information security risk.” (Source NIST SP 800-128)
Master’s Certification Program in Enterprise Configuration Management

Awarded by CMPIC LLC to those completing one of the tracks shown below.

Being awarded this Master’s Certification in Enterprise CM signifies that you have the knowledge to explain and implement CM throughout the various functional areas within an organization.

**Complete ONE of the following tracks:**

**TRACK I - Master’s Certification in Enterprise Configuration Management**

<table>
<thead>
<tr>
<th>Courses 1-4</th>
<th>Course 6</th>
<th>PICK ONE:</th>
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<tbody>
<tr>
<td>Configuration Management Principles &amp; Implementation Certification</td>
<td>SAE EIA-649B Principles &amp; Applications Certification</td>
<td>Course 7</td>
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<tr>
<td>CM Foundations</td>
<td>CM Identification</td>
<td>Change Management</td>
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**OR**

**TRACK II - Master’s Certification in Enterprise Configuration Management**

**NOTE:** TRACK II is for Experienced CM Professionals with a prior, non-CMPC, CM Certification who wish to omit taking CMPIC Courses 1-4 but still receive their Master’s Certification in Enterprise Configuration Management.

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<tr>
<th>PRIOR CM CERTIFICATION</th>
<th>Course 9</th>
<th>Course 6</th>
<th>Course 7</th>
<th>PICK ONE:</th>
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<tr>
<td>56+ training hours or NDIA Certification</td>
<td>CM Standards &amp; Practices Update</td>
<td>SAE EIA-649B Principles &amp; Applications Certification</td>
<td>CM Assessor Certification</td>
<td>Course 8</td>
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<td>3 days, 2.4 CEUs</td>
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* Student must have an accepted CM Certification - NDIA: CDM Manager & CDM Specialist or prior CCM & CCS, OR CM Certification from another CM Certification/Training Provider including minimum of 56 hours of instructor led, in-class education/training which included exam(s) and a recognized professional Configuration Management designation. Students must provide evidence of prior recognized CM certification.

The CMPIC Master’s Certification in Enterprise Configuration Management, CMPIC™, signifies that the student has successfully passed a comprehensive set of coursework and has a thorough understanding of CM principles. It also signifies that the student understands various implementation techniques and options needed to deploy CM practices throughout an enterprise/organization.

Successful completion of either track will award the student their CMPIC Master’s Certification in Enterprise Configuration Management. Please note, this is NOT a Master’s degree but a certification program.

Courses may be taken in any order, at any location, and completed during any period of time. Student must successfully complete and pass all of the above courses to receive their CMPIC Master’s Certification in Enterprise Configuration Management.

For more information, please visit: [www.CMPIC.com/enterprise-configuration-management](http://www.CMPIC.com/enterprise-configuration-management)
SUCCESSFUL COMPLETION OF THE "CMSME" PROGRAM SIGNIFIES THAT YOU HAVE MET THE PROGRAM REQUIREMENTS OF LEARNING THE MANY CONFIGURATION MANAGEMENT (CM) PRINCIPLES AND TECHNIQUES REQUIRED TO IMPLEMENT CM IN VARIOUS FUNCTIONAL AREAS WITHIN AN ORGANIZATION. BEING AN ACTIVE MEMBER IN THIS PROGRAM DEMONSTRATES YOUR COMMITMENT TO REMAINING CURRENT IN ALL ASPECTS OF CONFIGURATION MANAGEMENT AND AN ADVANCED ACHIEVEMENT IN CONTINUOUS CM EDUCATION.

REQUIREMENTS - YOU MUST HAVE:

- Five years direct experience working with configuration management processes
- CMPIC Master’s Certification in Enterprise Configuration Management
- Completed one of the below maintenance requirements in the past 3 years:

  Maintenance Requirements:
  ◊ Attend a CM Trends event, or
  ◊ Attend Course 9, “Configuration Management Standards & Practices Update”, or
  ◊ Attend any CMPIC course not previously taken.

CMSME is an ongoing program for CM Professionals. To remain in this program you must continue to complete at least one of the above Maintenance Requirements every three years.

For more information, or to apply to this program, please visit: www.CMPIC.com/CMSME
CMPIC: The Configuration Management Process Improvement Center

Providing High Quality, Cost-Effective, and the Most Up-to-Date Configuration Management Training and Certification.

Contact Us

For more information about CMPIC, our courses, schedules or class locations, please contact us or visit our website, www.CMPIC.com.

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