

**Configuration Management comprehensive
SAE EIA-649 standard certificate**

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Introduction

Welcome to the course "Configuration Management: Comprehensive SAE EIA-649 Standard Certificate."

Configuration Management CM is a critical discipline that ensures consistency, traceability, and control across products, systems, and projects throughout their lifecycle. In complex engineering, aerospace, defense, IT, and industrial environments, effective configuration management is essential for maintaining quality, compliance, and operational integrity.

This comprehensive program is aligned with the SAE EIA-649 Configuration Management Standard, providing participants with structured knowledge and practical tools to implement internationally recognized best practices.

Participants will gain a deep understanding of configuration identification, change control, status accounting, verification, and audit processes — enabling them to manage product baselines and organizational changes efficiently and systematically.

Course Objectives

By the end of this program, participants will be able to:

- Understand the principles and framework of the SAE EIA-649 Configuration Management Standard.
- Define and control configuration items and product baselines.
- Implement structured change management and configuration control processes.
- Establish configuration status accounting systems.
- Conduct configuration verification and audits effectively.
- Integrate configuration management within project and systems engineering environments.
- Ensure compliance with regulatory, quality, and contractual requirements.
- Strengthen governance, traceability, and lifecycle management practices.

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A graphic of a chessboard with several chess pieces (a king, a queen, a rook, and a pawn) positioned on it. The board is checkered in white and grey, and the pieces are gold and silver. The text 'UK Training PARTNER' is overlaid on the board.

Course Outlines

Day 1: Foundations of Configuration Management

- Introduction to Configuration Management concepts and terminology.
- Overview of SAE EIA-649 standard structure and principles.
- Configuration management lifecycle and governance.
- Roles and responsibilities in CM environments.
- Relationship between CM, quality management, and systems engineering.

Day 2: Configuration Identification and Baseline Management

- Identifying configuration items CIs.
- Establishing functional, allocated, and product baselines.
- Documentation control and configuration documentation structure.
- Product structure management and bill of materials BOM.
- Workshop: Defining configuration items and baselines.

Day 3: Change Management and Configuration Control

- Change control processes and approval workflows.
- Engineering Change Requests ECR and Engineering Change Orders ECO.
- Configuration Control Boards CCB.
- Impact analysis and risk assessment for changes.
- Managing revisions, versions, and release control.

Day 4: Configuration Status Accounting and Audits

- Configuration status accounting systems and reporting.
- Traceability and documentation integrity.
- Functional and physical configuration audits FCA/PCA.
- Compliance verification and regulatory alignment.
- Case study: Audit preparation and documentation review.

Day 5: Implementation Strategy and Integration

- Integrating CM within project management and systems engineering.
- CM tools and digital configuration systems.
- Aligning CM with ISO and quality management systems.
- Managing configuration in multi-site and multi-supplier environments.
- Final workshop: Building a comprehensive CM implementation plan.

A graphic of a chessboard with several chess pieces. A gold king piece is prominent in the foreground, with a silver pawn and a gold pawn behind it. The board is white and black squares, with a gold king piece in the foreground.

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Why Attend This Course? Practical Wins

- Gain in-depth knowledge of SAE EIA-649 configuration management standards.
- Improve control over product changes and lifecycle management.
- Reduce operational risks associated with uncontrolled modifications.
- Strengthen compliance with contractual and regulatory requirements.
- Enhance traceability and documentation integrity across projects.
- Develop the capability to implement structured CM systems in complex environments.
- Increase organizational efficiency and quality assurance performance.

Conclusion

Configuration Management is a foundational discipline for organizations operating in complex technical and regulated environments.

By mastering the SAE EIA-649 standard, professionals can ensure structured control of product configurations, minimize risk, and maintain consistency across the entire lifecycle.

This program provides both theoretical understanding and practical implementation tools, empowering participants to establish robust configuration management systems that support operational excellence, regulatory compliance, and long-term organizational success.

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A graphic illustration of a chessboard with several chess pieces. A large gold king piece is prominent in the foreground, with a silver pawn and a black pawn nearby. The board is checkered, and there are concentric circles in the background.