Engineering Drawing and Document Control Management Training Course



19 - 23 Oct 2026

Boston

7500 € (Per Person)

Ref: #CAD8584_84118

Course Introduction / Overview:

Effective management of engineering drawings and technical documentation is the bedrock of successful project execution, ensuring accuracy, safety, and compliance across all operational phases. This comprehensive course addresses the critical need for structured document control systems in today's complex engineering environments. It moves beyond basic filing to instill a deep understanding of the entire document lifecycle, from creation and revision to archival and retrieval. Drawing upon foundational principles outlined in texts like "Engineering Drawing and Design" by David A. Madsen, the curriculum emphasizes the importance of standardization and precision. Participants will explore best practices for version control, change management, and implementing robust workflows that prevent costly errors and delays. At BIG BEN Training Center, we have designed this program to provide a holistic view, integrating process management with technological solutions. This course will empower professionals to establish and maintain a state of data integrity and control, ensuring that all stakeholders are working with the most current and accurate information, thereby safeguarding project timelines, budgets, and quality standards.

Target Audience / This training course is suitable for:

- Engineers from all disciplines (Mechanical, Civil, Electrical, etc.).
- CAD Drafters and Designers.
- Document Control Specialists and Managers.
- Project Managers and Project Engineers.
- Quality Assurance and Quality Control Personnel.
- Technical Librarians and Archivists.
- Manufacturing and Production Planners.
- Procurement and Supply Chain Professionals involved with technical specifications.

Target Sectors and Industries:

- Manufacturing and Industrial Production.
- Construction and Infrastructure Development.
- Aerospace and Defense.
- Oil, Gas, and Petrochemical Industries.
- Automotive and Transportation.
- Energy, Power Generation, and Utilities.
- Pharmaceutical and Medical Device Manufacturing.
- Governmental agencies and public works departments.

Target Organizations Departments:

- Engineering and Design.
- Project Management Office (PMO).
- Quality Assurance and Control (QA/QC).
- Operations and Maintenance.
- Research and Development (R&D).
- Procurement and Contracts.
- Regulatory Compliance and Auditing.
- Information Technology (IT) supporting engineering systems.

Course Offerings:

By the end of this course, the participants will have able to:

- Develop and implement a structured document control system from the ground up.
- Apply industry standards (e.g., ISO, ASME) to engineering drawings and documentation.
- Master the engineering change notice (ECN) and change order (ECO) processes.
- Establish robust version control protocols to prevent the use of outdated information.
- Create and manage standardized document numbering and naming conventions.
- Conduct effective audits of the document management system for compliance.
- Evaluate and select appropriate Electronic Document Management System (EDMS) software.
- Manage the flow of technical documentation with external vendors and contractors.
- Ensure the security and long-term archival of critical engineering data.
- Integrate document control with broader project management and quality systems.

Course Methodology:

This training course at BIG BEN Training Center employs a dynamic and interactive learning methodology designed for maximum knowledge retention and practical application. We believe that mastering document control requires more than theoretical knowledge; it demands hands-on experience. The training is built around a blend of expert-led instruction, real-world case study analysis, and collaborative group workshops. Participants will engage in practical exercises, such as designing a document workflow, drafting a change management procedure, and simulating a document audit. Interactive sessions encourage open discussion and peer-to-peer learning, allowing attendees to share challenges and solutions specific to their industries. Our approach emphasizes problem-solving, where participants will tackle common document control issues and develop strategic solutions. The facilitator will provide continuous feedback and guidance, ensuring that the concepts are not only understood but can be confidently applied back in the workplace. This immersive methodology ensures a comprehensive learning experience that bridges the gap between theory and real-world implementation.

Course Agenda (Course Units):

Unit One: Fundamentals of Engineering Document Control

- The strategic importance of document control in engineering projects.
- Key terminology, concepts, and principles.
- Understanding the complete document lifecycle from creation to obsolescence.
- Roles and responsibilities within a document control system.
- Introduction to relevant industry standards (ISO 9001, ASME Y14).
- Differentiating between drawings, specifications, and other technical documents.
- The high cost of poor document management.

Unit Two: Creating and Managing Technical Documents

- Best practices for creating clear and unambiguous engineering drawings.
- Standard elements of a drawing: title blocks, revision history, and notes.
- Developing and implementing effective document numbering and identification systems.
- Managing Bill of Materials (BOM) and their link to drawings.
- Controlling templates and forms for consistency.
- Introduction to CAD standards and layer management.
- Review and approval workflows for new documents.

Unit Three: Version Control and Change Management

- The critical nature of version and revision control.
- Mastering the Engineering Change Request (ECR) and Change Notice (ECN) process.
- Techniques for tracking and documenting all changes effectively.
- Conducting impact analysis for proposed engineering changes.
- Managing "as-built" drawings and redline markups.
- Communicating changes to all relevant stakeholders.
- Strategies for preventing the use of superseded documents.

Unit Four: Document Management Systems and Technology

- Distinguishing between manual, hybrid, and electronic systems (EDMS).
- Core functionalities of an EDMS: search, workflow, and access control.
- Criteria for selecting and implementing the right EDMS for your organization.
- Best practices for digital file organization and metadata tagging.
- Ensuring data security, access permissions, and confidentiality.
- Strategies for data migration from legacy systems.
- Digital archiving, retention policies, and secure disposal.

Unit Five: Audits, Compliance, and Advanced Practices

- Planning and conducting internal audits of the document control system.
- Preparing for and managing external and regulatory audits.
- Best practices for managing vendor and subcontractor documentation.
- Integrating document control with Quality Management Systems (QMS).
- Metrics and KPIs for measuring the effectiveness of document control.
- Strategies for continuous improvement of documentation processes.
- Future trends: Integration with BIM, PLM, and AI in document management.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

How might the integration of AI and machine learning transform the traditional processes of engineering document review and approval in the next decade?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a holistic, process-centric approach rather than focusing narrowly on software tools. While technology is a key component, our curriculum emphasizes that an Electronic Document Management System is only as effective as the underlying strategies and human processes that govern it. We delve deep into the "why" behind the "how," exploring the principles of configuration management, risk mitigation, and data integrity that are crucial for success in high-stakes industries. The program is built on a foundation of industry-standard practices and regulatory compliance, preparing participants not just to manage documents, but to build a resilient and auditable system that supports the entire project lifecycle. Unlike other courses that may provide a superficial overview, this training provides actionable frameworks for developing numbering systems, implementing robust change control workflows, and managing the complex interface with vendors and contractors. The focus on practical case studies and problem-solving workshops ensures that participants leave with the strategic insight and confidence to implement immediate and impactful improvements within their organizations.