Advanced Engineering Document Control and Digital Archiving Training Course



16 - 20 Nov 2026

Cape town

4600 € (Per Person)

Ref: #CAD7722_271403

Course Introduction / Overview:

This comprehensive training course provides an in-depth exploration of the principles and practices of modern engineering document control and digital archiving. In today's fast-paced, highly regulated engineering environments, the ability to manage technical documentation effectively is not just an administrative task but a critical component of project success, risk management, and regulatory compliance. This program is designed to equip participants with the essential skills to establish and maintain robust document management systems that ensure accuracy, traceability, and security throughout the entire project lifecycle. Drawing on industry best practices and international standards, the course delves into the complete document lifecycle, from creation and revision control to secure digital preservation. As discussed by experts like Frank M. Cuno in his seminal work "Controlling Engineering Documentation," a systematic approach is paramount. BIG BEN Training Center has developed this curriculum to bridge the gap between traditional paper-based methods and the demands of digital transformation, focusing on practical strategies for implementing workflow automation, metadata management, and secure digital archiving solutions that safeguard intellectual property and support seamless project execution.

Target Audience / This training course is suitable for:

- Document Controllers and Managers.
- Project Engineers and Project Managers.
- Quality Assurance and Quality Control Professionals.
- Engineering Department Heads and Team Leaders.
- IT Specialists supporting Engineering Document Management Systems (EDMS).
- Records Managers and Information Management Specialists.
- Technical Assistants and Project Administrators.
- Compliance Officers and Auditors.

Target Sectors and Industries:

- Construction and Civil Engineering.
- Oil and Gas Exploration and Production.
- Manufacturing and Industrial Engineering.
- Aerospace and Defense.
- Power Generation and Utilities.
- Pharmaceuticals and Biotechnology.
- Telecommunications and Technology.
- Governmental bodies and Public Works agencies.

Target Organizations Departments:

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

Course Offerings:

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

- Master the core principles and functions of engineering document control.
- Develop and implement effective document numbering and identification systems.
- Manage the entire document lifecycle from creation to archiving and disposal.
- Apply best practices for version control to prevent the use of outdated information.
- Establish robust digital archiving strategies for long-term preservation and retrieval.
- Implement security protocols and access controls for sensitive engineering data.
- Ensure compliance with industry standards such as ISO 9001 and other regulatory requirements.
- Streamline document review, approval, and distribution workflows.
- Conduct effective audits of the document management system.
- Manage vendor and subcontractor documentation efficiently.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and participant-centered, ensuring a deep and lasting understanding of engineering document control and digital archiving. We move beyond theoretical lectures to immerse participants in a dynamic learning environment. The course heavily utilizes real-world case studies from various engineering sectors to illustrate common challenges and successful solutions. Participants will engage in hands-on exercises, such as developing a document control procedure, creating a master document register, and designing a workflow for engineering change notices. Group discussions and collaborative workshops encourage the sharing of experiences and peer-to-peer learning, allowing attendees to analyze problems from multiple perspectives. Our expert instructors facilitate interactive sessions, providing personalized feedback and guiding participants through complex topics. The program integrates practical demonstrations of key concepts, ensuring that the knowledge gained is directly applicable to the participant's work environment. This blended approach of expert instruction, practical application, and collaborative problem-solving guarantees a comprehensive and engaging learning experience.

Course Agenda (Course Units):

Unit One: Fundamentals of Engineering Document Control

- The strategic importance of document control in engineering projects.
- Key terminology, concepts, and definitions.
- Roles and responsibilities of a Document Controller.
- The document lifecycle from creation to obsolescence.
- Understanding the difference between documents and records.
- Introduction to international standards (ISO 9001).
- Establishing a robust document control procedure.

Unit Two: Core Practices in Document Management

- Developing effective document numbering and coding systems.
- Mastering version and revision control techniques.
- Managing document distribution and transmittals.
- The role of the Master Document Register (MDR).
- Controlling engineering drawings, specifications, and technical reports.
- Handling as-built documentation and project close-out.
- Best practices for review and approval workflows.

Unit Three: Principles of Digital Archiving and Records Management

- Introduction to digital preservation and long-term archiving.
- Selecting appropriate file formats for archiving (e.g., PDF/A).
- Developing and applying metadata strategies for easy retrieval.
- Digital storage solutions: on-premise vs. cloud-based systems.
- Establishing records retention and disposition schedules.
- Ensuring data integrity and authenticity in digital archives.
- Migrating legacy data to new systems.

Unit Four: Technology, Systems, and Security

- Overview of Engineering Document Management Systems (EDMS).
- Automating workflows for efficiency and accuracy.
- Implementing role-based access control (RBAC) and security permissions.
- Protecting sensitive information and intellectual property.
- Disaster recovery and business continuity planning for documents.
- The role of digital signatures and electronic approvals.
- Integrating document control with other project management software.

Unit Five: Compliance, Audits, and Advanced Topics

- Preparing for and conducting internal and external audits.
- Managing non-conformances and implementing corrective actions.
- Ensuring regulatory and legal compliance.
- Effectively managing supplier and contractor documentation.
- Change management and the Engineering Change Notice (ECN) process.
- Future trends in document control, including BIM and AI integration.
- Developing key performance indicators (KPIs) for document control.

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:

As engineering projects become increasingly global and collaborative, how can document control systems evolve to manage the complexities of cross-cultural communication and varying regulatory landscapes without compromising data integrity?

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

This course distinguishes itself by offering a holistic and integrated perspective that seamlessly connects the foundational discipline of document control with the forward-looking strategies of digital archiving. Unlike programs that focus narrowly on software operation or basic administrative tasks, this training provides a deep strategic understanding of how robust information governance drives project success, mitigates risk, and ensures long-term compliance. Our curriculum is built on a foundation of practical application, moving beyond theory to equip participants with the skills to design, implement, and audit a complete document management system. We emphasize the critical thinking required to navigate complex regulatory environments and manage the nuances of vendor documentation and cross-departmental workflows. The course content is meticulously structured to address the entire information lifecycle, from the initial creation of an engineering drawing to its secure, long-term digital preservation. By focusing on principles, best practices, and real-world problem-solving rather than specific software, we ensure the skills learned are transferable and enduring, empowering participants to build resilient and efficient systems within their own organizations.