

DAMA-Based Enterprise Data Management and Governance

Course Overview

This course provides a comprehensive understanding of data management principles, governance frameworks, and best practices based on the DAMA-DMBOK (Data Management Body of Knowledge) framework. Participants will learn how to manage data as a strategic enterprise asset, covering the entire data lifecycle—from architecture and modeling to storage, security, quality, and analytics. It also explores ethical considerations, metadata management, and emerging trends in big data, data science, and AI.

By the end of this course, learners will be able to:

- Understand key concepts and frameworks in data management as defined by DAMA-DMBOK.
- Establish and implement effective data governance practices.
- Design data architecture and data models aligned to organizational needs.
- Apply principles of data security, data quality, and metadata management.
- Integrate, analyze, and manage structured and unstructured data at scale.
- Leverage best practices for managing data in AI and big data environments.

Prerequisites

- Basic understanding of IT systems and databases
- Familiarity with organizational data usage and reporting concepts
- (Optional) Prior experience in data analysis, IT administration, or business intelligence roles

Course Modules

Module 1: Data Management

- Introduction to data management
- Data as an asset and its strategic value
- Overview of industry frameworks (DAMA-DMBOK)

Module 2: Data Handling Ethics

- Introduction to data ethics
- Essential ethical concepts in data

- Principles of privacy, transparency, and responsible data usage

Module 3: Data Governance

- Definition, roles, policies, standards, and data stewardship
- Tools for governance implementation
- Activities according to DAMA
- Governance techniques and implementation guidelines

Module 4: Data Architecture

- Overview of enterprise architecture
- Data architecture layers and tools
- Best practices and implementation guidelines

Module 5: Data Modelling and Design

- Conceptual, logical, and physical data models
- Normalization, ER diagrams
- Activities and best practices by DAMA

Module 6: Data Storage and Operations

- Introduction to data storage concepts
- DBA roles and responsibilities
- Database architectures and processing types
- Storage activities, tools, and implementation guidelines

Module 7: Data Security

- Principles and security controls
- Data masking, encryption, and compliance frameworks
- Techniques and implementation guidelines

Module 8: Data Integration and Interoperability

- ETL vs ELT
- Data mapping, APIs, SOA, and EAI
- Activities according to DAMA to ensure interoperability

Module 9: Document and Content Management

- Managing structured and unstructured content
- Document lifecycle and enterprise content management tools
- Activities for document and content management

Module 10: Reference and Master Data

- Introduction to master and reference data
- Reference vs master data
- Governance, tools for MDM/RDM, hierarchy management, and organizational impact

Module 11: Data Warehousing and Business Intelligence (DWBI)

- Introduction to DWBI
- Approaches to data warehousing
- Activities according to DAMA
- Tools, techniques, and implementation guidelines

Module 12: Metadata Management

- Definition and types of metadata
- Metadata lineage and repositories
- Tools and implementation guidelines

Module 13: Data Quality

- Introduction to data quality
- Dimensions (accuracy, completeness, etc.), metrics, tools, cleansing, and DQ frameworks
- Activities for improving data quality
- Implementation guidelines
- Viewing dashboards in Collate tool

Module 14: Big Data and Data Science

- Concepts and characteristics of big data
- Big data architecture
- Data science lifecycle
- Types of data analysis

- Overview of machine learning tools
- Understanding AI/LLM models
- Best practices and precautionary steps in managing data for AI