

# **ISO/IEC 42001:2023 Lead Auditor & Lead Implementer Training - Course Content**

## **1. Introduction to Artificial Intelligence Governance**

- Evolution of Artificial Intelligence
- AI opportunities and risks
- Need for AI governance and regulation
- Global AI regulatory landscape
  - EU AI Act
  - OECD AI Principles
  - UNESCO AI recommendations
- Introduction to AI risk management

## **2. Overview of ISO/IEC 42001:2023**

- Background and development of ISO 42001
- Relationship with other standards:
  - ISO/IEC 27001
  - ISO/IEC 27701
  - ISO/IEC 23894
- Structure of ISO management system standards
- Key concepts of **AI Management System (AIMS)**

## **3. Key Definitions and Concepts in AI**

- Artificial Intelligence
- Machine learning
- Training data vs operational data
- AI lifecycle
- Bias and fairness
- Explainability and transparency
- AI accountability

## **4. ISO 42001 Clause-by-Clause Discussion**

### **Clause 4 – Context of the Organization**

- Understanding organizational context
- Interested parties

- AI system scope
- Defining AIMS scope

#### **Clause 5 – Leadership**

- AI governance responsibilities
- AI policy
- Roles and responsibilities
- AI ethics oversight

#### **Clause 6 – Planning**

- AI risk identification
- AI impact assessment
- Objectives and planning

#### **Clause 7 – Support**

- AI competence and awareness
- Documentation requirements
- Communication
- Data governance

#### **Clause 8 – Operation**

- AI lifecycle management
- AI development and deployment controls
- Monitoring and control of AI systems

#### **Clause 9 – Performance Evaluation**

- Monitoring AI performance
- Internal audit
- Management review

#### **Clause 10 – Improvement**

- Incident management
- Corrective actions
- Continual improvement

### **5. Annex A Controls Deep Dive**

Key AI controls in ISO 42001:

#### **AI Governance Controls**

- AI policies and governance structure
- AI accountability framework

#### **AI Risk Management**

- AI risk identification and mitigation
- Bias risk management

#### **Data Management**

- Training data governance
- Data quality management

#### **AI Lifecycle Controls**

- Design and development controls
- Testing and validation
- Monitoring and retraining

#### **Transparency and Explainability**

- Model explainability
- User transparency

#### **Human Oversight**

- Human-in-the-loop mechanisms
- AI decision review processes

### **6. AI Risk and Impact Assessment**

- AI risk assessment methodology
- Algorithmic Assessment
- Data Protection Impact Assessment
- Human Right Impact Assessment
- AI Conformity Assessment

### **7. AI Lifecycle Governance**

- AI system lifecycle stages
  - Design
  - Development
  - Validation
  - Deployment
  - Monitoring

- Retirement

## **8. AI Documentation and Records**

Key documents required:

- AI Policy
- AI risk register
- AI impact assessment
- Model documentation
- Data governance records
- Monitoring reports
- Incident reports

## **9. Integration with Existing Management Systems**

Integrating ISO 42001 with:

- ISO/IEC 27001
- ISO/IEC 27701
- ISO 31000
- Data governance frameworks

## **10. AI Internal Audit and Compliance**

- Internal audit process
- AI audit checklist
- Evidence collection
- Non-conformity management
- Audit reporting

## **11. Audit Fundamentals**

- Principles of auditing (based on ISO 19011)
- Types of audits: Internal, External, Certification
- Auditor roles and responsibilities
- Competence requirements for AI auditors

## **12. Audit Planning for ISO 42001**

- Establishing audit objectives, scope, and criteria

- Risk-based audit planning
- Preparing audit checklists
- Document review: AI policy, Risk Assessment, Statement of Accountability

### **13. Conducting the Audit**

- Opening meeting
- Collecting audit evidence: Interviews, Observation and Sampling
- Auditing AI-specific areas: Data pipelines, Model validation processes, Bias testing, Human oversight mechanisms
- Identifying nonconformities

### **14. Audit Reporting and Follow-up**

- Writing audit findings: Nonconformity, Observations, Opportunities for improvement
- Audit report structure
- Root cause analysis
- Corrective action verification
- Audit closure