ISO/LEC 17025:2017: Laboratory Management Systems

31 October – 11 November 2027
Muscat (Oman)



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MERCURY

ISO/LEC 17025:2017: Laboratory Management Systems

Ref: 15951_1067509 **Date:** 31 October – 11 November 2027 **Location:** Muscat (Oman) **Fees:** 9900 Euro

Introduction to ISO/IEC 17025:2017 Training:

The ISO/LEC 17025:2017 Laboratory Management Systems training course explores laboratory management systems. It is for senior laboratory technicians who want to enhance their expertise in quality management in laboratory settings. Globally recognized standards outline essential requirements to ensure competence and consistency in testing and calibration laboratories.

This ISO/LEC 17025:2017 Laboratory Management Systems course focuses on empowering participants with the knowledge to achieve accurate and reliable test results while implementing robust laboratory management practices that comply with international standards such as ISO 17025 2017.

Incorporating LEC meaning into laboratory training can be crucial for understanding laboratory environmental conditions. The ISO/LEC 17025:2017 Laboratory Management Systems training is essential for maintaining laboratory standards, ensuring safety, and compliance with international norms like ISO 17025.

Targeted Groups: Elevating Laboratory Professionals:

This ISO/LEC 17025:2017 Laboratory Management Systems course is ideal for:

- Senior Laboratory Technicians.
- Laboratory Managers and Supervisors.
- Quality Assurance Personnel.
- Laboratory Auditors.
- Laboratory Process Improvement Specialists.
- Compliance Officers in Laboratory Settings.
- Technical Experts in Testing and Calibration Laboratories.
- Professionals seeking ISO 17025 Certification and Accreditation.

Targeted Competencies for Laboratory Excellence:

Participants in this ISO/LEC 17025:2017 Laboratory Management Systems training will gain competencies in:

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- Thorough understanding of ISO 17025:2017 requirements.
- Implementing an efficient laboratory management system LMS.
- Executing internal audits for ISO 17025 accreditation compliance.
- Managing comprehensive laboratory documentation and records securely.
- Ensuring testing and calibration accuracy under iso 17025 2017 standard.
- Applying advanced risk management practices within laboratories.
- Enhancing ongoing improvement processes in laboratory setups.
- Reinforcing competency among laboratory staff.
- Supervising laboratory equipment and its necessary maintenance.
- Aligning with accreditation and certification benchmarks.

Course Objectives: Mastering ISO 17025 2017 Standards:

By the end of this ISO/LEC 17025:2017 Laboratory Management Systems course, attendees will have developed the ability to:

- Comprehend the fundamental principles of the ISO 17025 2017 standard for laboratory management systems.
- Implement effective quality management systems tailored for laboratory environments.
- Skillfully conduct internal audits and assessments to ensure compliance with ISO laboratory management system standards.
- Master the documentation and record-keeping protocols required by ISO 17025 laboratory management system standards.
- Ensure the precision and trustworthiness of calibration and testing processes.
- Manage laboratory equipment and maintenance, aligning with ISO 17025 standards.
- Apply comprehensive risk management strategies within laboratory operations.
- Foster continuous improvement strategies within laboratory practices.
- Achieve and sustain compliance with ISO 17025 2017 training and accreditation prerequisites.
- Support the competency development and training of laboratory personnel.

Importance of Laboratory Management Systems:

Understanding a laboratory management system LMS can significantly enhance laboratory operations. A well-implemented LMS, the backbone of meeting the ISO 17025 2017 standard, ensures effective management of laboratory processes, resources, and staff, leading to reliable results and increased client satisfaction.

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Course Content:

Unit 1: Introduction to ISO/IEC 17025:2017 Standards:

- Overview of ISO/IEC 17025:2017.
- Importance of the standard for laboratory operations.
- Key differences between ISO/IEC 17025:2005 and ISO/IEC 17025:2017.
- Scope and applicability of the standard in laboratories.
- Overview of key terms and definitions used in the standard.
- Importance of maintaining international recognition and accreditation.

Unit 2: Laboratory Management System Requirements:

- Introduction to laboratory management systems LMS.
- Documentation requirements and management.
- Establishing roles and responsibilities within the laboratory.
- Procedures for managing laboratory resources and infrastructure.
- Risk-based thinking and its impact on management systems.
- Continual improvement principles in laboratory environments.

Unit 3: Competence of Personnel:

- Defining competencies required for laboratory personnel.
- Training and development plans for laboratory staff.
- Evaluating competency through performance assessments.
- Ensuring the availability of competent technical staff.
- Documenting qualifications and certifications of personnel.
- Addressing personnel shortages and skill gaps.

Unit 4: Equipment and Calibration Management:

- Overview of equipment management and maintenance.
- Ensuring the calibration and verification of equipment.
- Procedures for handling, storing, and maintaining equipment.
- Selecting and managing external calibration services.
- Ensuring the traceability of calibration standards.
- Establishing calibration schedules and records.

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Unit 5: Testing and Calibration Methods:

- Selection of appropriate testing and calibration methods.
- Documenting and validating methods and procedures.
- Ensuring the accuracy and precision of test results.
- Implementing control and reference materials.
- Method verification and validation processes.
- Dealing with non-conforming results and corrective actions.

Unit 6: Laboratory Environment and Safety:

- Maintaining appropriate laboratory conditions.
- Ensuring environmental control and monitoring.
- Implementing health and safety protocols.
- Managing potential risks in laboratory operations.
- Providing personal protective equipment PPE for staff.
- Emergency preparedness and response plans.

Unit 7: Quality Control and Assurance:

- Establishing quality control procedures for testing and calibration.
- Performing proficiency testing and inter-laboratory comparisons.
- Documenting quality assurance processes and outcomes.
- Implementing corrective actions for non-conformities.
- Internal audits and external reviews for quality assurance.
- Creating and maintaining a quality manual.

Unit 8: Document Control and Records Management:

- Procedures for document control and versioning.
- Ensuring traceability of laboratory records.
- Establishing secure storage systems for laboratory documents.
- Creating audit trails for laboratory processes.
- Managing electronic records and data security.
- Reviewing and revising documentation periodically.

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Unit 9: Risk Management in Laboratories:

- Identifying and assessing risks in laboratory operations.
- Developing risk mitigation strategies and plans.
- Managing risk during laboratory testing and calibration.
- Risk-based decision-making for laboratory operations.
- Integrating risk management into the laboratory quality system.
- Ensuring the safety of laboratory personnel and data integrity.

Unit 10: Achieving and Maintaining Accreditation:

- Understanding the accreditation process for ISO/IEC 17025:2017.
- Steps to prepare for laboratory accreditation.
- Engaging with accreditation bodies and external auditors.
- Addressing findings from accreditation audits.
- Maintaining ongoing compliance with ISO/IEC 17025:2017 standards.
- Creating a sustainable approach to accreditation renewal.