



Quality Management & Operational Excellence

Quality Control for the Laboratory

Course Introduction

The **Quality Control for the Laboratory** course is designed to provide laboratory professionals with the knowledge and skills needed to establish and maintain effective quality control systems in laboratory settings. Delivered by BOOST, this course covers essential aspects of laboratory quality management, including quality control standards, regulatory compliance, calibration, validation, and proficiency testing. Participants will gain a thorough understanding of how to monitor, assess, and improve the accuracy and reliability of laboratory results.

This course will also address the implementation of internal and external quality assurance programs, data integrity practices, and the role of laboratory personnel in ensuring consistent and high-quality outcomes. By the end of the course, participants will be able to design and execute quality control systems to optimize laboratory operations and improve testing accuracy.

Target Audience

- Laboratory managers and supervisors
- Quality control professionals working in laboratories
- Laboratory technicians and analysts
- Compliance officers in laboratory settings
- Anyone involved in the implementation or management of quality control systems in laboratories

Learning Objectives

1. Understand the fundamentals of quality control in laboratory environments.

2. Implement quality control systems and procedures to ensure reliable and accurate laboratory results.
3. Apply best practices for calibration, validation, and proficiency testing in laboratory settings.
4. Understand and comply with regulatory requirements, such as ISO 17025 and other international standards.
5. Develop and monitor performance metrics to assess the effectiveness of quality control systems.
6. Promote data integrity and ensure the proper documentation of laboratory activities.

Course Outline

• 01 DAY ONE

Introduction to Laboratory Quality Control

- Overview of quality control in laboratory settings
- Importance of quality control in ensuring accurate and reliable results
- Key principles of laboratory quality management systems (QMS)
- Introduction to laboratory accreditation and international standards (ISO 17025)
- The role of laboratory personnel in quality assurance

• 02 DAY TWO

Calibration and Validation in Laboratories

- Understanding calibration and its importance in laboratory testing
- Calibration procedures and frequency for laboratory instruments
- Introduction to validation of laboratory methods and equipment
- Best practices for equipment maintenance and calibration tracking

Overview of validation and verification protocols

• 03 DAY THREE

Proficiency Testing and External Quality Assurance

- The role of proficiency testing in ensuring quality control

- Understanding external quality assurance (EQA) programs
- Implementing proficiency testing in different laboratory disciplines
- Interpreting proficiency testing results and addressing discrepancies

• 04 DAY FOUR

Data Integrity and Documentation Practices

- The importance of data integrity in laboratory quality control
- Best practices for maintaining accurate and reliable data records
- Managing data integrity in electronic laboratory systems (ELNs)
- Regulatory compliance and documentation requirements
- Developing procedures for record retention and data audits

• 05 DAY FIVE

Monitoring, Reporting, and Continuous Improvement

- Key performance indicators (KPIs) for monitoring laboratory quality
- Techniques for assessing and improving quality control systems
- The role of internal audits and quality control reviews
- Reporting quality control results to management and stakeholders
- Continuous improvement in laboratory operations: Root cause analysis and corrective actions

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
May 4, 2025	May 8, 2025	5 days	4250.00 \$	KSA - Riyadh
Aug. 18, 2025	Aug. 22, 2025	5 days	4950.00 \$	Norway - Oslo
Nov. 17, 2025	Nov. 21, 2025	5 days	4250.00 \$	UAE - Dubai