

Laboratory Quality Systems
Unit I – Introduction to Quality Systems
Unit I Activities (Weeks 1 - 2)

Learning Objectives

Understand the underlying structure of ISO 17025 standard and its implementation in the laboratory;
Understand the process of achieving laboratory accreditation

Videos

- [Course Introduction and OTSC Lab tour \(Recorded in 2018\)](#) | [Video for Download](#)
- [What ISO Standards can do for you?](#) (From [ISO website](#))
- [Standard for the testing and calibration of labs under revision](#) (From [ISO website](#))

Presentations

- [ISO 17025:2017 – Resource Requirements \(24 min.\)](#) | [PDF](#) | [Video for Download](#)
- [ISO 17025:2017 – Processing Requirements \(31 min.\)](#) | [PDF](#) | [Video for Download](#)
- [ISO 17025:2017 – Management Requirements \(14 min.\)](#) | [PDF](#) | [Video for Download](#)
- [Writing Standard Operating Procedures \(SOPs\) \(10 min.\)](#) | [PDF](#) | [Video for Download](#)

You can download the videos by left-clicking on the video and select “Save Video as”

Readings

- [Setting up a Quality Laboratory System \(FAO\)](#) (pg. 5 -20) From Quality assurance for animal feed analysis laboratories – FAO Animal Health and Production Manual by Balthrop et al.
- ISO/IEC17025: 2017
- [Implementation of PDCA Cycle in Calibration and Testing Laboratory Based on ISO/IEC 17025:2017 \(Habibie & Kresianie 2019\)](#)
- [Risk management approach for testing and calibration laboratories \(Santana & Loureiro 2022\)](#)
- [Laboratory quality management system fundamentals](#)

Assignments

- Self-Introduction – Due on Friday, February 6, 2026
Submit in course Google Group under Self-Introduction Thread
Access google group @[Laboratory Quality Systems – Spring 2026 - Google Groups](#)
E-mail: lqs_2026_spring@lists.tamu.edu

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- Graded Discussion # 1 – Due by Midnight on Monday, February 9, 2026 (5 pts)
Submit in course Google Group under Graded Discussion #1 Thread;
Access google group @ [Laboratory Quality Systems – Spring 2026 - Google Groups](#)
E-mail: lqs_2026_spring@lists.tamu.edu
1. What is the purpose of a quality management system in a lab?
 2. How does the establishment of a quality management facilitate accreditation? Does accreditation guarantee accurate and defensible results?
 3. What factors could cause incorrect results within the ISO 17025 system? Explain.
- Homework # 1: [Identifying Documents and Records for ISO Accreditation/ Writing SOPs](#)**
Due by Midnight on Monday, February 16, 2026 (10 pts)
Submit via e-mail to outreach@otsc.tamu.edu

Related Documents

1. [SOP Template](#)
2. [Blank Table identifying records and documents required per ISO 17025:2017](#)
3. [General SOP Guidelines](#)

References

- [Office of the Texas State Chemist Laboratory Quality Manual](#)
- [Office of the Texas State Chemist List of Standard Operating Procedures \(SOPs\)](#)
- [Office of the Texas State Chemist Examples of Analytical Methods](#)

Writing Resources

- [Scientific Writing Booklet](#)
- [Writing and Speaking Guidelines for Engineering and Science](#)
- [The Science of Scientific Writing](#)