
CONTROL CHARTING - A TOOL FOR MONITORING TESTING PROCESS

16 - hour on-line course

Summary

Laboratory services market is very competitive. To compete successfully in this market, laboratories need to be able to demonstrate their competency and quality of their testing processes at any time. Control charts are easy to use statistical tool that allows laboratories to monitor and evaluate testing processes. This course was developed based on high level theoretical knowledge and on many years of practical experience of both instructors. Participants will learn how to implement and maintain control charts and receive practical guidance on how to use critical thinking skills to evaluate and improve testing processes.

Target audience:

Technicians, analysts, quality engineers, quality managers and laboratory managers in analytical laboratories of any industry.

Course Outline:

- *Lesson 1: Measurement Errors and Measurement Process Stability*
 - Sources of errors
 - Types of errors
 - Errors and test results
- *Lesson 2: Natural Variability and Special Cause Variability*
 - Types of most common testing data distributions
 - Data distribution and position of control limits
 - Frequency of false positive signals
- *Lesson 3: Shewhart Control Charts*
 - Brief history of control charting
 - ISO/IEC 17025 standard and control charting
 - Types of control charts
 - Estimating control chart parameters
- *Lesson 4: Phase 1 in Control Charting*
 - Planning
 - Selecting control sample
 - Collecting initial data
 - Evaluating and improving testing
 - Assigning initial control limits
- *Lesson 5: Phase 2 in Control Charting*
 - Monitoring testing process
 - Reacting to signals of process instability
 - Verifying process stability
 - Updating control chart parameters
- *Lesson 6: Case Study*
 - Example of Control charting application