

## NTHRYS WORKSHOPS.

# Automated Analyzer Modules and Clinical Workflow Workshop

### **Workshop Index** Duration: 2 DAYS

Use the index to navigate the workshop sections and open quick reference modals for scope, audience, outcomes, delivery, policies, and FAQs.

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### **Quick Summary**

**Clinical Chemistry** System Training Workflow Focused

## Automated Analyzer Functional Modules and Laboratory Workflow Basics

Understand the architecture of automated analyzers, including sample input, reagent handling, reaction systems, and result output.

**System Architecture** Analyzer Basics

Review the role of modules such as sample probes, mixers, incubators, photometric units, ISE blocks, and wash stations.

**Functional Modules** System Components

Learn how automated workflow supports sample tracking, reaction timing, calibration, quality control, and data reporting.

**Workflow Logic** Data Reporting

Examine pre-analytical, analytical, and post-analytical checkpoints that affect analyzer performance and result accuracy.

**Process Control****Result Accuracy**

Connect automated operation to routine troubleshooting, maintenance awareness, and laboratory quality practices.

**Troubleshooting****Quality Practice**

### **Overview**

**Laboratory Systems****Interactive Learning****Applied Outcomes**

## Workshop Scope, Audience Profile, and Learning Outcomes

This workshop introduces automated analyzer operation as an integrated system of functional modules and controlled laboratory workflow.

**Integrated Systems****Workflow Control**

Participants explore sample movement, reagent dispensing, reaction management, sensor functions, and reporting pathways.

**Sample Movement****Reporting Pathways**

The session suits students, laboratory technicians, analysts, and staff who use or support automated chemistry analyzers.

**Students****Laboratory Staff**

By the end of the workshop, attendees can explain module functions, workflow sequence, and routine operational checkpoints.

**Module Functions****Operational Checkpoints**

Attendees also learn to interpret error conditions, recognize common instrument issues, and support systematic troubleshooting.

**Error Conditions****System Troubleshooting**

Outcome discussions strengthen confidence in analyzer handling, QC review, and routine workflow optimization.

**QC Review Workflow Optimization**

## **Agenda**

**System Operations Hands On Practice Ready**

### Agenda Flow and Hands-on Demonstrations

Modules cover analyzer layout, sample loading logic, reagent management, reaction sequence, and result generation flow.

**Analyzer Layout Result Flow**

Participants review calibration setup, QC placement, maintenance checkpoints, alarms, and operational documentation.

**Calibration Setup Operational Documentation**

Hands-on discussions demonstrate module interaction, sample routing, probe behavior, wash cycles, and incubation timing.

**Sample Routing Wash Cycles**

Exercises include identifying carryover, clots, reagent issues, sensor flags, barcode mismatches, and abnormal QC patterns.

**Error Detection QC Patterns**

Case-based practice links module-level events to workflow disruption, corrective action, and reporting review.

**Case Practice Corrective Action**

The session concludes with maintenance awareness, safe operation habits, and workflow efficiency improvement points.

**Safe Operation Efficiency Improvement**

## **Deliverables**

## **Reference Support Workshop Output Learner Ready** Deliverables, Support Material, and Frequently Asked Questions

Participants receive structured notes on analyzer modules, workflow stages, calibration logic, and common operational issues.

### **Study Notes Operations Review**

Reference sheets summarize module functions, QC checkpoints, maintenance awareness, and troubleshooting pathways.

### **Reference Sheets Troubleshooting Pathways**

FAQ coverage explains whether prior analyzer experience is needed and how beginners can follow the workflow sessions.

### **Beginner Friendly Entry Level**

Additional FAQs address sample handling, alarm interpretation, calibration needs, QC review, and routine care points.

### **Alarm Review Routine Care**

The workshop helps learners build stronger technical language for analyzer operation and laboratory communication.

### **Technical Language Lab Communication**

Participants leave with a clearer framework for automated analyzer workflow, functional review, and operational confidence.

### **Operational Confidence Workflow Mastery**

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