



Laboratory Information Management Systems (LIMS) and Lab Informatics Training Course

28 March – 1 April 2027

Dammam - Eastern Province five-star



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Introduction:

Laboratory Information Management Systems LIMS and lab informatics training is a 5-day course for laboratory management, informatics and system administration teams in testing, quality control and hospital laboratories, ending with a LIMS Selection and Implementation Roadmap for a case laboratory. Laboratories lose turnaround time when samples are tracked on paper and spreadsheets, instruments are transcribed by hand and a new system is bought on a demonstration rather than on written requirements. Nominees already run laboratory sections or informatics projects and learn through case studies on requirement sets and vendor responses. CoreConcept Training Center delivers this LIMS and lab informatics course.

Course Objectives:

- Distinguish the roles of LIMS, LIS, ELN, CDS, SDMS and LES and map them onto the laboratory's sample-to-report process
- Write prioritised user and functional requirements and run a vendor selection with scripted demonstrations, scoring and total cost of ownership
- Configure sample registration, barcode labelling, storage tracking, test methods, specifications and worklists to match laboratory workflows
- Plan instrument, CDS, ELN, ERP and EHR interfaces and the cleansing and reconciliation of legacy data
- Verify configuration, audit trail settings and user roles before go-live and lead super-user led adoption
- Produce a LIMS Selection and Implementation Roadmap for a case laboratory

Target Audience:

- Laboratory management teams responsible for section workflows, turnaround and the budget for laboratory systems
 - Lab informatics teams responsible for specifying, configuring and supporting LIMS, ELN and CDS platforms
 - LIMS project teams responsible for vendor selection, implementation plans and go-live readiness
 - System administration teams responsible for user roles, interfaces, master data and upgrades
 - Quality teams responsible for approving system configuration and record controls in testing and clinical laboratories
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Course Outline:

Day 1: Lab Informatics Landscape and Current-State Assessment

- LIMS, LIS, ELN, CDS, SDMS and LES Roles Compared
- Batch-Oriented LIMS Versus Specimen-Centric LIS in Hospital Laboratories
- Laboratory Process Mapping From Sample Receipt to Report
- Paper, Spreadsheet and Legacy System Pain Point Inventory
- Informatics Maturity Baseline and Business Case Benefit Drivers

Day 2: Requirements, Deployment Architecture and Vendor Selection

- User Requirements Workshops With Bench Analysts and Section Supervisors
- Functional Requirements Checklist Prioritised by MoSCoW Ranking
- Thick-Client, Web-Based and SaaS Deployment Architecture Trade-Offs
- Request for Proposal, Scripted Vendor Demonstrations and Scoring Matrix
- Total Cost of Ownership and Support Agreement Terms

Day 3: Sample Lifecycle and Workflow Configuration

- Sample Registration, Accessioning and Barcode Label Design
- Storage Location Tracking and Freezer Inventory Configuration
- Test Method, Specification Limit and Analysis Template Set-Up
- Worklist, Batch and Analyst Workload Assignment Rules
- Result Entry, Review, Approval and Certificate of Analysis Generation

Day 4: Instrument Integration, Data Migration and Go-Live Risks

- Instrument Interface Options From File Parsing to Direct Connection
- CDS and ELN Data Exchange With LIMS Records
- ERP and EHR Interface Mapping for Orders and Results
- Legacy Data Migration Cleansing, Mapping and Reconciliation Checks
- Configuration Verification, Audit Trail Settings and User Role Profiles

Day 5: Case Study on a LIMS Selection and Implementation Roadmap

- Case Laboratory Brief With Sample Volumes and Workflows
 - Case Vendor Shortlist Scoring Against Weighted Requirements
 - Phased Rollout Plan With Super-Users and Cutover Rehearsal
 - Adoption Metrics for Turnaround, Rework and System Usage
 - LIMS Selection and Implementation Roadmap Completion and Peer Review
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Skills You Will Gain:

- Laboratory Process Mapping
- Informatics Requirements Prioritisation
- Vendor Demonstration Scoring
- Sample Workflow Configuration
- Instrument Interface Planning
- Legacy Data Reconciliation
- Go-Live Cutover Planning
- Super-User Adoption Coaching

Why Attend This Course:

- Deliver a LIMS Selection and Implementation Roadmap for a case laboratory to the laboratory director, IT service lead and quality manager
- Decide which vendor to shortlist, which deployment model fits and which interfaces belong in the first release
- Avoid costly re-configuration, failed data migration and stalled adoption caused by buying a system before requirements are agreed
- Coach bench analysts and super-users on requirement writing, workflow testing and new sample handling routines

Conclusion:

Back at work, the participant presents the LIMS Selection and Implementation Roadmap to the laboratory director, the IT service lead and the quality manager. They use it to approve the requirement set, shortlist vendors on weighted scores, fund the interface and data migration work and agree the phased rollout with named super-users. After the first release goes live, the laboratory should compare sample turnaround, transcription errors, rework and system usage with the baseline and revise the configuration backlog and training plan.

Frequently Asked Questions FAQ:

What should participants know before a Laboratory Information Management Systems LIMS and lab informatics course?

Participants should already work in or support a laboratory and understand how samples move from receipt to report. No programming is needed. Bringing an anonymised process map, requirement list or vendor proposal helps them apply the case study to their own laboratory.

How does a LIMS and lab informatics course differ from a computerised system validation course?

This course covers choosing, configuring, integrating and adopting laboratory informatics, with verification kept at go-live readiness level. Validation courses concentrate on software categorisation, risk-based test protocols and maintaining the validated state of regulated systems.

Should a laboratory choose a LIMS, an ELN or an LIS?

It depends on the work. A LIMS manages batches of samples and tests, an ELN records experiments and procedures, and an LIS handles patient specimens in clinical settings. Many laboratories combine them, so requirements should be written first and the toolset chosen to fit.

What do participants take back from the LIMS and lab informatics course?

Participants take back a LIMS Selection and Implementation Roadmap with a process map, prioritised requirements, a vendor scoring matrix, an interface and migration plan and a phased rollout with adoption metrics, ready to adapt to their own laboratory.