



**Jordan University of Science and Technology**  
**Faculty of Applied Medical Sciences**  
**Allied Medical Sciences Department**

LM771 Advanced Diagnostic Laboratory Training - JNQF Level: 6

Second Semester 2023-2024

**Course Catalog**

3 Credit Hours. Students will practice conducting laboratory tests at various clinical sites, gain experience in applying quality control rules, use automated systems, correlation of laboratory results from all disciplines with clinical history, and addressing administrative issues of specimen acceptability, work flow, method assessment, and appropriate use of interpretive guidelines. Students will get in-depth understanding of medical laboratory services, policies and procedures, how to work safely with medical instruments.

**Teaching Method:** On Campus

**Text Book**

<b>Title</b>	Any clinical laboratory Text book or Laboratory manuals
<b>Author(s)</b>	NA
<b>Edition</b>	10th Edition
<b>Short Name</b>	Any clinical laboratory Text book or Laboratory manuals
<b>Other Information</b>	

**Instructor**

<b>Name</b>	<b>Dr. Muhamad Ali Shakhatreh</b>
<b>Office Location</b>	-
<b>Office Hours</b>	Sun : 14:30 - 14:30 Mon : 12:00 - 14:00 Wed : 12:00 - 14:00 Thu : 13:00 - 15:00
<b>Email</b>	mkshakhatreh@just.edu.jo

**Class Schedule & Room**

Section 1:

Lecture Time: Sun, Tue, Thu : 08:30 - 10:30

Room: HOSPITAL

**Tentative List of Topics Covered**

Weeks	Topic	References
Week 1	Specimen collection and inspection	
Week 2	Sample preparation	
Week 3	Instruments calibration and standardization	
Week 4	Automated analysis of chemistry tests	
Week 5	Automated hematology and coagulation	
Week 6	Immunological and serological tests	
Week 7	Blood banking	
Week 8	Molecular diagnostic techniques (PCR)	
Week 9	Automation in diagnostic microbiology	
Week 10	Laboratory information systems	
Week 11	Quality control and quality assurance	
Week 12	Laboratory organization and safety and Disposal of Laboratory wastes	
Week 13	Laboratory organization and safety and Disposal of Laboratory wastes	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Understand and practice laboratory tests in each laboratory disciplines. [1MSLO1] [1L6C2]	20%	
Practice successful implementation and application of automation tests in clinical chemistry, hematology, blood bank, microbiology, serology, and molecular biology. [1MSLO2] [1L6K2, 1L6C3]	15%	
Perform specific tests accurately, precisely, and interpret and express results in proper unites and formats [1MSLO6] [1L6S3, 1L6C3]	15%	
Application of safe work flow in clinical laboratory and implementation of quality control programs [1SLO3, 1SLO5] [1L6S1]	5%	
Understand and practice of Laboratory test using automated technology [1MSLO5] [1L6K1]	10%	
Understand principles of tests, clinical correlation, and results interpretation [1MSLO2] [1L6C4]	10%	

Expression of results in proper format and use of laboratory information systems [1SLO3, 1SLO4] [1L6C3]	10%	
Organization of work flow and quality control and quality assurance in clinical setting [1MSLO2] [1L6S2, 1L6C2]	5%	
Develop practical technical skills in handling instruments, reagents, and specimens [1MSLO1, 1MSLO6] [1L6S2, 1L6C3]	10%	

Relationship to Program Student Outcomes (Out of 100%)											
SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	MSLO1	MSLO2	MSLO3	MSLO4	MSLO5	MSLO6
		7.5	5	2.5		25	30			10	20

Relationship to NQF Outcomes (Out of 100%)							
L6K1	L6K2	L6S1	L6S2	L6S3	L6C2	L6C3	L6C4
10	7.5	5	7.5	7.5	22.5	30	10

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