

## Course Syllabus

1	Course title	Hospital Laboratory Training in Microbiology, Parasitology, and Immunology
2	Course number	0308484
3	Credit hours	3 hrs
	Contact hours (theory, practical)	
4	Prerequisites/co-requisites	0308355 + 0308354 + 0308353 + 0308352
5	Program title	B.Sc. of Clinical Laboratory Sciences
6	Program code	0308
7	Awarding institution	The University of Jordan
8	School	Science
9	Department	Clinical Laboratory Sciences
10	Course level	Fourth Year
11	Year of study and semester (s)	Second Semester 2023/2024
12	Other department (s) involved in teaching the course	--
13	Main teaching language	English
14	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online
15	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....
16	Date of production/revision	22 <sup>nd</sup> Feb 2024

### 17. Course Coordinator:

**Name:** Dr. Suzan Matar

**Contact hours:** Sun 11:30-12:30: Mon 12:30-1:30: Tue 10:30-11:30

**Office number:** Biology Building 104

**Phone number:** 22238

**Email:** s.mattar@ju.edu.jo

### 18. Other instructors:

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### **19. Course Description:**

Advanced clinical practice in a hospital or reference microbiology laboratory used to apply and build on the knowledge and skills by using clinical microbiology procedures and techniques for isolation and identification of pathological bacteria as well as various fungal, viral, protozoan and parasite identification. Quality control, precision and accuracy of testing and providing competent interpretation of clinical data is imperative.

Advanced clinical practice in Immunology and serology laboratory including performance of regulatory required quality control and patient testing, accurate evaluation and interpretation of test results, and component preparation and selection.

Comprehensive knowledge, use of all standard operating procedures and reference materials, evaluation of clinical data, and an understanding of additional tests that may be necessary to evaluate complex patient conditions is essential.

## 20. Course aims and outcomes:

### A- Aims:

This training program aims at linking the theoretical knowledge achieved at the university seats with practical training at hospitals or referral labs. In addition, it aims at providing the society with highly qualified graduates knowledgeable and skilled in utilizing modern laboratory techniques and equipment and using them for diagnostic purposes, in accordance with the plans of the Ministry of Health in Jordan.

**B- Program Intended Learning Outcomes (PILOs):** Upon successful completion of this course students will be able to:

**SLO(1).** Understand and apply the theoretical foundations of medical laboratory sciences to accurately calibrate and operate advanced laboratory equipment.

**SLO(2).** Demonstrate knowledge of safety protocols, Ministry of Health regulations, and environmental preservation practices when handling samples of pathogens and chemical/biological risks.

**SLO(3).** Acquire in-depth technical knowledge to stay abreast of scientific advancements and actively participate in local and global applied research in the field.

**SLO(4).** Perform diverse analyses and effectively interpret results for various clinical samples across laboratory disciplines such as hematology, clinical chemistry, microbiology, urine analysis, body fluids, molecular diagnostics, and immunology.

**SLO(5).** Apply practical training to solve complex problems, troubleshoot issues, and interpret results, ensuring a connection between data and specific medical conditions for precise diagnosis.

**SLO(6).** Show effective communication skills to convey information accurately and appropriately in a laboratory setting.

**SLO(7).** Demonstrate a commitment to lifelong learning and innovation by applying modern techniques, critically analyzing information, and contributing to the creation and application of new knowledge in medical laboratory sciences which fulfil the requirements of national and international CBD.

**SLO(8).** Uphold professional behavior, ensuring the confidentiality of client information, and respecting client privacy throughout all aspects of laboratory work.

**SLO(9).** Apply managerial skills that align with quality assurance, accreditation, quality improvement, laboratory education, and resource management, showcasing competence in the effective administration of laboratory practices.

Descriptors	ILO/ID	Program SLOs							
		Course SLOs	SLO (1)	SLO (2)	SLO (4)	SLO (5)	SLO (6)	SLO (8)	SLO (9)
Knowledge	A1	Identify normal, abnormal, and panic values for various tests, including how these values are reported or when a new specimen is warranted			X				
	B1	Select applicable isolation and identification protocol for each type of specimen/organism		X					
Skills	B2	Perform automated and manual procedures for the detection, isolation, identification and antimicrobial susceptibility testing of common and selected unusual microbial isolates	X						
	B3	Perform, within acceptable limits of accuracy, routine and complex analytical procedures in Microbiology, Immunology and Serology				X			
Competence	C1	Follow laboratory protocols for safety and specimen processing and handling						X	
	C2	Operate, maintain, calibrate and conduct routine performance checks with clinical laboratory instrumentation, including appropriate quality control testing and documentation							X
	C3	Exhibit proper professional conduct and interpersonal communication skills with patients, laboratory personnel and other health care professionals					X		

## 21. Topic Outline and Schedule:

1. Refer to the intern booklet, logbook, hospital request forms and case study presentations.

## 22. Evaluation Methods

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
Assignments	10	All lab experiments		16	
Quizzes					
Evaluation	10	Hospital evaluation, attendance, participation			
First Exam					
Oral exam	20	Microbiology, Parasitology, and Immunology topics		16	In campus
Final Exam	60	Microbiology, Parasitology, and Immunology topics		16	In campus

## 23. Course Requirements:

The clinical preceptor in each clinical experience will provide feedback about each student to the CLS supervisor at the University. Students will undergo knowledge and performance assessments. Assessment forms will be used to evaluate student performance, knowledge, behavioral and professional skills during the clinical experience. The clinical preceptor may use the assessment forms to provide individual counseling and employment recommendations for the success of the student. Students must successfully complete a final assessment for each clinical rotation to demonstrate competency in that particular MLS discipline. Satisfactory performance for each clinical experience will be indicated by a numerical grade; all students must obtain an 50% or greater in all areas to satisfactorily complete the clinical rotation. A grade below 50% will require remediation or potentially repeating the clinical practicum course/clinical experience. A course syllabus for each clinical rotation will have details about its specific topic area.

## 24. Course Policies:

**A- Attendance policies:** 8 hours per day from Sunday to Thursday. Following the rotation schedule assigned by the hospital for trainee.

A weekly meeting at the university for one hour for case study presentations and discussions

**B- Absences only permitted after writing a leave of absence request. You need to show evidence of a valid reason (e.g. Medical report)**

**C- Health and safety procedures:** All students should comply with the Hospital health and safety procedures

**D- Honesty policy regarding cheating, plagiarism, misbehaviour:** All students should comply with the university Honesty policy regarding cheating, plagiarism, misbehaviour

#### E- Grading policy:

Hospital evaluation and attendance	5%
Presentation (case study)	5%
Logbook	10%
Oral Examination	20%
Comprehensive Examination	60%
Fail: 0-49	
Pass : 50-100	

#### 25. References:

1. Joel D. Hubbard. A Concise Review of Clinical Laboratory Science 2<sup>nd</sup> Edition.  
<https://drive.google.com/file/d/0Bz-EopyaEMqCS2x5dEI5eFVhaTg/view?resourcekey=0-4D0mbppjEIYad9wA9oWeQ>
2. L Michael Snyder. Wallach's Interpretation of Diagnostic Tests 10<sup>th</sup> Edition.  
<https://drive.google.com/file/d/0Bz-EopyaEMqCMjFqek5FamFMVDg/view?resourcekey=0--wvww2X0l-iYudhDCast5Q>

#### 26. Additional information:

Any additional information will be posted on teams and discussed on a weekly bases in classroom or during supervisor's visits to the clinical departments .

Name of Course Coordinator: **Dr. Suzan Matar**

Signature: *Suzan Matar* Date: 2-2024

Head of Curriculum Committee/Department: **Dr. Suzan Matar**

Signature: *Suzan Matar*

Head of Department: **Dr. Ahmed Abu siniyeh**

Signature: *Ahmed Abu siniyeh*

Head of Curriculum Committee/Faculty: **Dr. Muayyad Al Hseinat**

Signature: *Muayyad Al Hseinat*

Dean: **Prof. Mahmoud Jaghoub**

Signature: *Mahmoud Jaghoub*