



Course Syllabus of Filed Training in Immunology and Serology

Faculty: Medicine and Health sciences

Department: Health sciences

Program: Bachelor in Laboratory medicine

I. General information about the course instructor :									
Name	Dr. Arwa Mohammed Othman			Office Hours(3 Hours Weekly)					
Location & phone No.	Sana'a-774486417			Sat	Sun	Mon	Tue	Wed	Thu
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II. General information about the course:						
1.	Course Title :	Filed Training in Immunology and Serology				
2.	Course Code and No.	BML486				
3.	Credit Hours :	Theoretical	Seminar/Tutorial	Practical	Training	Total
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4.	Study Level and Semester:	4 th year/ 2 nd semesters				
5.	Pre-requisites :	None				
6.	Co-requisites :	None				
7.	Program in which the course is offered:	Bachelor in Laboratory medicine				
8.	Teaching Language:	English				
9.	Instruction location:	University of Science and Technology, Sana'a ,Yemen				

III. Course Description	
<p>Field training in immunology and serology course provides students with field training required for performance of different immunological and serological tests used for diagnosis of human diseases or for epidemiological purposes. It equips the students with the essential knowledge and practical skills required for the proper collection, storage, examination and reporting of different clinical specimens for microbial and immunological diseases. It provides students with essential knowledge and practice of quality control within the context of total patient care and quality assurance in medical laboratory technology. Basic immunology, basic bacteriology, medical bacteriology I and II, virology, mycology, clinical immunology are pre-requisites. . The teaching strategies will include practical demonstrations, log book , small group discussion and assignment. The students will be evaluated through report, written exam and practical exam.</p>	

عميد الكلية:
د. عبد الله المخلافي

رئيس القسم:
د. عبد الحبيب ردمان

المراجع:
د. مجاهد نصار

الموصف:
د. أروى عثمان

IV. Course Aims: this course aimed to:

1. Learn students the medical ethics they should follow during data and specimens' collection from patients .
2. Enable students to collect, label and transport patients' samples properly.
3. Provide students with knowledge about the principles of different immunological and serological tests.
4. Enable students to perform different serological and immunological laboratory tests.
5. Engage the theoretical part with clinical and practical part in routine work.
6. Learn students how to write serological and immunological reports.

V. Course Intended Learning Outcomes (CILOs) : After completing this course, students would be able to

- a1. Describe the principles for different serological and immunological tests.
- a2. State cases in which the test may give false positive or false negative results.
- b1. Interpret the results of the serology and immunology tests.
- b2. Correlate the lab results with the patient disease and other clinical and lab results.
- c1. Apply medical ethics during data and sample collection from patients.
- c2. Perform routine serological tests .
- c3. Practice principles of quality control and quality assurance in all stages of the laboratory tests.
- c4. Write a report for serology and immunology tests in a correct manner.
- d1. Effectively communicate with the teaching staff and colleagues to identify, analyze and understand emerging issues.

VI. Course Contents

Training Aspect:

No.	Course Units	Sub-topics	Week due	Contact Hours
1.	Data collection in the field of serology	<ul style="list-style-type: none">- Ethics during data and sample collection from the patient- Data collection tools/ instruments- Types of collected data- Filling forms with patient's data	1 st	4
2.	Quality assurance in immunology and serology	<ul style="list-style-type: none">• Training on the concepts of quality control (pre-analysis; analysis; post-analysis).• Writing and following SOPs of different serological procedures• Proper waste management	2 nd	4
3.	Collection and storage of blood samples	<ul style="list-style-type: none">• Collection, labeling, storage, and transportation of blood specimens	3 rd	4

APPROVED

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4.	Agglutination tests	<ul style="list-style-type: none"> - Principle of the technique - Source of errors - Tests: CRP, RF, ASO, pregnancy, widal, brucella, RPR - Reading and interpretation of test results 	4 th ,5 th ,6 th	12
5.	Immunochromatographic assays	<ul style="list-style-type: none"> - Principle of the technique - Source of errors Tests: HBV, HCV, HIV, Pregnancy - Reading and interpretation of test results 	7 th	4
6.	Turbidometry assays	<ul style="list-style-type: none"> - Principle of the technique - Source of errors - Tests: ASO, RF - Reading and interpretation of test results 	8 th	4
7.	ELISA assays	<ul style="list-style-type: none"> - Principle of the technique - Calibration - Source of errors - Tests: HIV, HBV, HCV test, total and specific IgE antibodies, MPO IgG, ANA, ENA test, cardiolipin (IgG and IgM), tTG, anti-CCP - Reading and interpretation of test results 	9 th ,10 th ,11 th	12
8.	Immunoflorescent assays	<ul style="list-style-type: none"> - Principle of the technique - Source of errors - Tests: HEP-2 ANA, ASMA, LKM, AMA, ANCA, anti-endomysial autoantibodies - Reading and interpretation of test results 	12 th ,13 th ,14 th	12
9.	Final exam		15 th	4
Total number of weeks and hours			15	60

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