



## Course Syllabus of Filed Training in Microbiology

Faculty: Medicine and Health sciences

Department: Health sciences

Program: Bachelor in Laboratory medicine

### I. General information about the course instructor :

Name	Dr.Rua'a Assayaghi	Office Hours(3 Hours Weekly )					
Location & phone No.	777259096	Sat	Sun	Mon	Tue	Wed	Thu
Email	Rowamohammed2010@yahoo.com				√		

### II. General information about the course:

1. Course Title :	Filed Training in Microbiology					
2. Course Code and No.	BML481					
3. Credit Hours :	Theoretical	Seminar/Tutorial	Practical	Training	Total	
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4. Study Level and Semester:	4 <sup>th</sup> year/ 2 <sup>nd</sup> 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

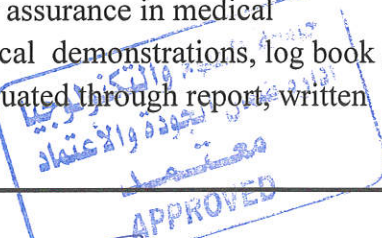
This course provides undergraduate medical laboratory students with the field training required for the performance of different diagnostic procedures of microbiological infections for clinical and epidemiological purposes. It equips the students with the essential knowledge and practical skills required for the proper collection, preservation, examination and reporting of different clinical specimens for microbiology. It provides the students with the essential knowledge and practice of quality control within the context of total patient care and quality assurance in medical laboratory technology. 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.

عميد الكلية:  
د. عبد الله المخلافي

رئيس القسم: ١٢ / ٨  
د. عبد الحليم ردمان

المراجع:  
د. ابراهيم السبلح  
د. محمد الشميري

الموصف:  
د. رؤى السياغي



#### IV. Course Aims:

- 1- Enable the students to understand the principle and technique steps of all equipment of microbiology lab.
- 2- Learn the student to read and write a microbiological report.
- 3- Enable the student to practice in sample collection.
- 4- Provide the student the skills in managements and solving problems during practical training.
- 5- Engage the theoretical part with clinical and practical part in routine work.

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

1. Outline the approaches for the collection, preservation and transport of clinical specimens for microbiology .
2. Describe the principles of culturing , staining and biochemical tests used to identify isolated pathogen.
3. Create a diagram to distinguish between different types of microbial pathogens.
4. Integrate the microbiology lab result with the clinical and other lab results.
5. Use safety precautions, quality control and quality assurance in diagnostic microbiology laboratory and during field surveys.
6. Practice specimens culturing , staining and antimicrobial sensitivity testing.
7. Use equipment and instruments for identification of bacteria.
8. Write reports for isolated bacteria.
9. Work independently or as a team member and 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.	Sampling and Specimen collection:	<ul style="list-style-type: none"><li>- Blood, Urine, Pus, Sputum,</li><li>- Stool and biological fluid</li><li>- Techniques</li><li>- Precautions</li><li>- Container</li></ul>	1 <sup>st</sup> , 2 <sup>nd</sup>	8
2.	Media preparation	<ul style="list-style-type: none"><li>- Neutrient</li><li>- Blood</li><li>- Chocolate</li><li>- MacConkey</li><li>- Manittol- salt</li><li>- Eosin Methylene Blue</li></ul>	3 <sup>rd</sup> , 4 <sup>th</sup>	8
3.	Staining procedures:	<ul style="list-style-type: none"><li>- Gram stain</li><li>- Ziehl-Neelsen stain</li></ul>		4

4.	Transportation and Processing of Specimens:	<ul style="list-style-type: none"> <li>- Blood, Urine, Pus, Sputum</li> <li>- Stool and biological fluid</li> </ul>	6 <sup>th</sup>	4
5.	culture of different specimens	<ul style="list-style-type: none"> <li>- Blood</li> <li>- CSF</li> <li>- Wound</li> <li>- Urine</li> <li>- Sputum</li> <li>- Stool</li> <li>- Biological fluid</li> </ul>	7 <sup>th</sup>	4
6.	Isolation and identification of aerobic organisms		8 <sup>th</sup>	4
7.	Culture of anaerobes	<ul style="list-style-type: none"> <li>- Techniques</li> <li>- Precautions</li> <li>- Containers</li> </ul>	9 <sup>th</sup>	4
8.	Tuberculosis:	<ul style="list-style-type: none"> <li>- Direct smear microscopy</li> <li>- Z-N preparation</li> <li>- Interpretation</li> <li>- Drug susceptibility</li> </ul>	10 <sup>th</sup>	4
9.	Automation in Microbiology Bactic blood culture system		11 <sup>th</sup>	4
10.	Antibiogram		12 <sup>th</sup>	4
11.	Mycology	<ul style="list-style-type: none"> <li>- Staining</li> <li>- Culture</li> </ul>	13 <sup>th</sup>	4
12.	Reporting and interpretation of test results		14 <sup>th</sup>	4
13.	<b>Final exam</b>		15 <sup>th</sup>	4
<b>Total number of weeks and hours</b>			15	60

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المراجع :  
د. ابراهيم السبل  
د. محمد الشميري

الموصف :  
د. رؤى السياغي