

## (Module Name) Course Catalogue

### 2022-2023

Institute	Erbil medical technical institute	
Department	Optometry	
Module Name	Medical Microbiology	
Module Code	MEM 209	
Semester	2	
Credit	6.8 ECTS	
Module type	Core	
Weekly hours	4 hrs	
Weekly hours (Theory)	( 2 ) hr Class	( 4 )hr Workload
Weekly hours (Practical)	( 3 ) hr Class	( 6 ) hr Workload
Lecturer (Theory)	Dr. Beriwan ali	
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Assistant lecturer (Practical)	Lana Abdulbasit Mohammad Amin	
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## Course Book

- **Course overview:**

In this course the student will have the basic information about common genes of bacteria which cause common eye diseases, and how to recognize it in the laboratory. At the end of the course the students know all Instruments and methods used for sterilization. Laboratory exercises develop fundamental skills in aseptic technique, microscopy, pure culture study, and the isolation and identification of pathogenic microorganisms. Students working "hands-on" in the labs develop an understanding of the microbiological elements necessary for the diagnosis of infectious diseases. The students participate in an active, small-group learning experience, recalling concepts and information. Addressing questions related to disease, epidemiology, pathogenesis, and prevention.

- **Course objective:**

On completion of this course the student will be able to:  
Identify all important pathogenic bacteria, determine the relationship between them and the manner during working inside laboratory.  
Determine bacterial characteristics determine infection and how it's done, distinguish important bacteria which causes keratitis and conjunctivitis  
Determine the differences between the bacteria and fungi, what are important equipment, sterilization methods and stains available in laboratory.

- **Student's obligation**

The students should be attendance and participate in class activity. The lectures have showed by them through presentations and practical activity and required to do the all exams and quizzes. The ideas that develop the course are the students make circle in class to discuss the subjects of the day and use materials for practical skills as listening the CD's of the source.

- **Forms of teaching**

lecture halls with data show equipment for lecture presentations, white board, overhead projector, posters

<ul style="list-style-type: none"> <li>- <b>Assessment scheme</b></li> <li>10% Mid. Theory exam</li> <li>5% Mid. practical exam</li> <li>5% Quiz</li> <li>40% Activity (Participation and homework)</li> <li>15% final practical</li> <li>25% final theory</li> </ul>		
<ul style="list-style-type: none"> <li>- <b>Specific learning outcome: learning to differentiate between the types of microorganisms throughout the lecture notes and during the laboratory part. They could able to recognize the rout of transmission of a specific infectious disease. the way that an antibiotic works with prevention and control of the infectious diseases.</b></li> </ul>		
<ul style="list-style-type: none"> <li>- <b>Course Reading List and References:</b></li> <li>- <b>Reading Text: Jawetz, Melnick, &amp; Adelberg's Medical Microbiology, 28<sup>th</sup> Edition</b></li> <li>- <b>Recommended Reading:</b></li> <li>- <b>Neal R. Chamberlain. MEDICAL MICROBIOLOGY, 2009, The McGraw-Hill Companies</b></li> <li>- <b>Stephen H. Gillespie, Peter M. Hawkey, Principles and Practice of Clinical Bacteriology, 2nd Edition, 2006, John Wiley &amp; Sons Ltd, England</b></li> <li>- <b>PubMed review</b></li> </ul>		
<ul style="list-style-type: none"> <li>- <b>Course topics (Theory and practice)</b></li> </ul>	<p style="text-align: center;"><b>Week</b></p>	<p style="text-align: center;"><b>Learning Outcome</b></p>
Introduction to microbiology with brief history of development	15/2/2023	The science of life
Features and characteristics of bacterial cell structures (Bacterial cell component. Microscopy	22/2/2023	Student's Activity
Bacterial nutrition, growth and the living nature. Collection of samples and culture media preparation.	1/3/2023	Growth of microorganisms
Sterilization methods with differences some bacteria which are responsible to surgical theatres contamination	8/3/2023	Disease control

Infection and separation methods and NCL (Nosocomial Infection) and SSI (Surgical site infection). Staining	15/03/2023	Types of infection
Antibiotics. Sensitivity test	22/03/2023	Student's Activity
Pathogenesis and Epidemiology. Bacterial Growth conditions	29/03/2023	Controlling the growth of microorganisms.
Genus Staphylococcus and Streptococcus	6/04/2023	Normal flora and health problem
Mid-term exam	15/03/2023	Mandatory
Family Enterobacteraceae Genus Shigella and vibrio	22/03/2023	Knowing the causes of diarrhoea
Genus Escherichia	30/03/2023	Student's Activity
Genus Salmonella, Pseudomonas	7/04/2023	Types of typhoid and preventions with treatments.
Genus Clostridium	14/04/2023	Student's Activity
Pathogenic Fungi and laboratory diagnosis	21/04/2023	Disease contribution
Introduction of Viruses	28/04/2023	Talking about symptoms, and preventions.
Immunology	5/05/2023	Immune system function
Final Exam of SS2	1/06/2023	

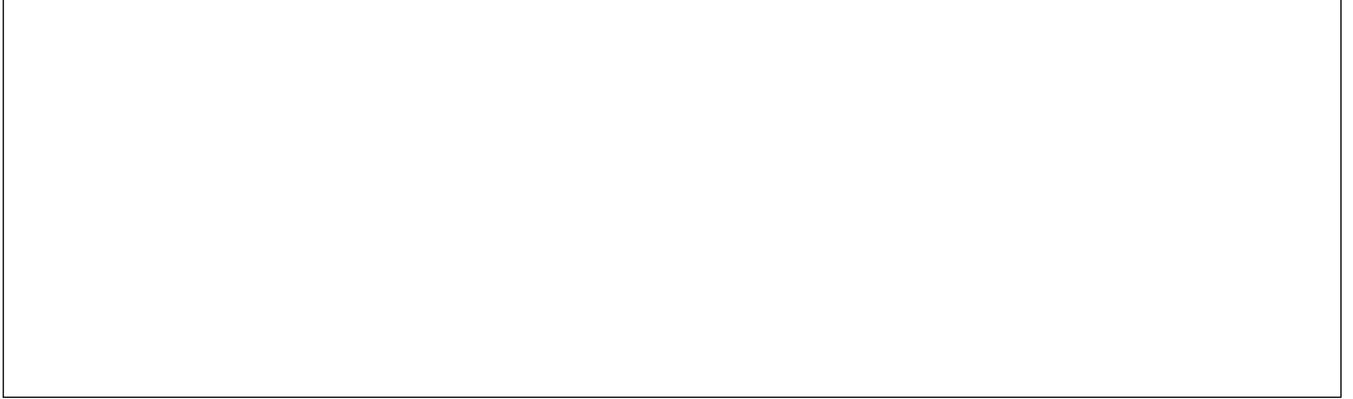
### Theoretical Exams

Theoretical exams use:

- written tests that include Definition, multiple choice, Filling blanks, true and false questions and Enumerating
- quizzes –short, unannounced tests
- assignments

The duration and number of questions of the tests depend on the type of the test (quiz, mid-semester, final) and complexity of the topic under evaluation. Exam papers are marked by lecturers/assistant lecturers and clinical instructors who deliver the teaching and is done by using previously agreed evaluation key.





**Lana abdulbaset m.Amin**

**Assistant Lecturer**