

## (Module Name) Course Catalogue

### 2023-2024

<b>Institute</b>	<b>Erbil medical technical institute</b>	
<b>Department</b>	<b>Optometry</b>	
<b>Module Name</b>	<b>Medical Microbiology</b>	
<b>Module Code</b>	<b>MEM 209</b>	
<b>Semester</b>	<b>2</b>	
<b>Credit</b>	<b>6.8 ECTS</b>	
<b>Module type</b>	<b>Core</b>	
<b>Weekly hours</b>	<b>4 hrs</b>	
<b>Weekly hours (Theory)</b>	<b>( 2 ) hr Class</b>	<b>( 4 )hr Workload</b>
<b>Weekly hours (Practical)</b>	<b>( 2 ) hr Class</b>	<b>( 4 ) hr Workload</b>
<b>Lecturer (Theory)</b>	<b>Dr. Beriwan Abdulqadir Ali</b>	
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<b>Assistant (Practical)</b>	<b>Mahabad Abdulla</b>	
<b>Email</b>		

## 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

- **Assessment scheme**

10% Mid. Theory exam

5% Mid. practical exam

<p>5% Quiz 40% Activity (Participation and homework) 15% final practical 25% final theory</p>		
<p>- <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></p>		
<p>- <b>Course Reading List and References:</b> - <b>Reading Text: Jawetz, Melnick, &amp; Adelberg's Medical Microbiology, 23rd Edition</b> - <b>Recommended Reading:</b> - <b>Neal R. Chamberlain. MEDICAL MICROBIOLOGY, 2009, The McGraw-Hill Companies</b> - <b>Stephen H. Gillespie, Peter M. Hawkey, Principles and Practice of Clinical Bacteriology, 2nd Edition, 2006, John Wiley &amp; Sons Ltd, England</b> - <b>PubMed review</b></p>		
<p>- <b>Course topics (Theory and practice)</b></p>	<p><b>Week</b></p>	<p><b>Learning Outcome</b></p>
<p>Introduction to microbiology with brief history of development</p>	<p>15/2/2024</p>	<p>The science of life</p>
<p>Features and characteristics of bacterial cell structures (Bacterial cell component. Microscopy</p>	<p>22/2/2024</p>	<p>Student's Activity</p>
<p>Bacterial nutrition, growth and the living nature. Collection of samples and culture media preparation.</p>	<p>1/3/2024</p>	<p>Growth of microorganisms</p>
<p>Sterilization methods with differences some bacteria which are responsible to surgical theatres contamination</p>	<p>8/3/2024</p>	<p>Disease control</p>
<p>Infection and separation methods and NCL (Nosocomial Infection) and SSI (Surgical site infection). Staining</p>	<p>15/03/2024</p>	<p>Types of infection</p>

Antibiotics. Sensitivity test	22/03/2024	Student's Activity
Pathogenesis and Epidemiology. Bacterial Growth conditions	29/03/2024	Controlling the growth of microorganisms.
Genus Staphylococcus and Streptococcus	6/04/2024	Normal flora and health problem
Mid-term exam	15/04/2024	Mandatory
Family Enterobacteriaceae Genus Shigella and vibrio	22/04/2024	Knowing the causes of diarrhoea
Genus Escherichia	30/03/2024	Student's Activity
Genus Salmonella, Pseudomonas	7/04/2022	Types of typhoid and preventions with treatments.
Genus Clostridium	14/04/2024	Student's Activity
Pathogenic Fungi and laboratory diagnosis	21/04/2024	Disease contribution
Introduction of Viruses	28/04/2024	Talking about symptoms, and preventions.
Immunology	5/05/2024	Immune system function
Final Exam of SS2	1/06/2021	

### **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.

### **Laboratory Practice Exams**



**Dr Rojhalat Xizir Jarjes**

**Lecturer**

**Dr. Beriwan Abdulqadir Ali**

**Lecturer**