



**University of Baghdad**  
**College of Nursing**  
**basic science Department**  
**Undergraduate Curriculum**  
**Microbiology for Nurses I**



- 
1. **Course Title: Microbiology for Nurses I**
  2. **Course Number: MBN2 204**
  3. **Credit Hours: Total of (3) credits :**  
    **Theory (2) credits.**  
    **Practical (1) credits.**
  4. **Course Calendar: Total (4) hours weekly of (12) weeks :**  
    **Theory: (2) hrs.**  
    **Practical in the lab: (2) hrs .**
  5. **Placement: Second years /first Semester**

**Course Description:**

Introduces the basic principles in microbiology, examining microorganisms and how they interact with humans and the environment. Information regarding classification of microorganisms, characteristics of different cell types and processes critical for cell survival is presented. Topics such as bacterial metabolism, microbial nutrition, genetics, anti-microbial approaches and interaction of pathogenic bacteria with humans are discussed. The course content provides the foundation of general microbiology necessary for students who are interested in applying to health profession programs.

**Course Goals:**

1. To be familiar with the type and structure of microorganisms.
2. Understand the physiological principles, anatomical structures, biochemistry and genetic characteristics of microorganisms.
3. Learn how to use the microscope and the processes of preparing microscopic slides to perform laboratory tests in addition to various diagnostic tests.
4. Principles and methods of sterilization and disinfection for nursing care procedures.

5. Learn about the different types of microorganisms and ways to differentiate them, as well as the diseases and injuries they cause to humans, and how to diagnose and treat them.
6. Collecting clinical samples and contaminated materials and identifying their types and disposal methods
7. Identifying the human immune system and its components and how it works in sick cases and what are the most important ailments and disorders that may affect it.

### Microbiology (1) syllabus

Week	Topics
1 <sup>st</sup>	Introduction and the historical background of microbiology.
2 <sup>nd</sup>	The classification of microorganisms Nutritional requirements of bacteria
3 <sup>rd</sup>	Microbial control Sterilization and Disinfection
4 <sup>th</sup>	Gram positive bacteria (cocci bacteria) Genus: Staphylococcus Genus: Streptococcus
5 <sup>th</sup>	Gram negative bacteria (cocci bacteria) Genus: <i>Nesseria meningitidis</i> Genus: <i>Nesseria gonorheae</i>
6 <sup>th</sup>	Gram positive bacteria (bacilli bacteria) Genus: Bacillus Genus: Clostridium
7 <sup>th</sup>	Mid-term Exam.
8 <sup>th</sup>	Irregular gram positive bacteria Genus: Corynebacterium Genus: Listeria Genus: Mycobacterium
9 <sup>th</sup>	Gram negative bacilli (Enterobacteriaceae)
10 <sup>th</sup>	Other gram negative bacteria
11 <sup>th</sup>	Immunity and immune system
12 <sup>th</sup>	Immune response Antigens and Antibodies
13 <sup>th</sup>	Hypersensitivity
14 <sup>th</sup>	Final exam.

## LEARNING ASSESSMENTS/ASSIGNMENTS

Quizzes

Laboratory sessions

Discussion

Exams

### Practical Microbiology for Nurses (I)

١٠. B. بنية المقرر العملي		
Lab number	Study unit title	Hours
١	Lab Safety	٢
٢	Sterilization and disinfectant	٢
٣	Types of culture media (According to the functions and Structure) and cultural characteristics of Bacteria	٢
٤	Isolation techniques	٢
٥	Staining technique (Simple Staining , Gram staining and Zeihl-Neelsen Technique	٢
٦	Antibiotic Sensitivity test	٢
٧	Staphylococcus spp. and nasal swab (Laboratory diagnosis )	٢
٨	Streptococcus spp (Laboratory diagnosis)	٢
٩	E .coli, Klebsiella and Proteus (Laboratory diagnosis)	٢
١٠	Pseudomonas and other non lactose fomenter bacteria (Laboratory diagnosis)	٢
١١	Neisseria spp. and Vibrio spp. (Laboratory diagnosis)	٢
١٢	Mycobacterium spp. and Corynebacterioum spp. (Laboratory diagnosis)	٢
١٣	Salmonella spp. and Shigella spp. (Laboratory diagnosis)	٢
١٤	Throat Swab and Culture	٢
١٥	Exam	