

**University of Baghdad
College of Nursing
basic science Department
Undergraduate Curriculum**

*Course syllabus
Microbiology for Nurses II*

**2022/2023
2nd Semester**

**This syllabus is subject to change. Changes will be announced to students.
It is the responsibility of the student to comply with any changes.**

**Created: November 10, 2019 by ©Dr. Salwa Gahzi Turki, Dr. Bushra Ali Kadhim, Wasnaa Jumaa Mohammed
Revised: February 26, 2023**

General Information & Policies

Course Title: Microbiology for Nurses II

Course Number: MBN2 224

Number of Credit Hours: 3 credit hours

Theory (2) credits.

Practical (1) credits.

Times & Places: Tuesday @ 8:30 AM- 2:30, Hall number 2 (beside the library)

Prerequisites: None

Course Description:

Microbiology II course provides nursing students with the skills and knowledge about the principles of microorganism's reproduction, morphology, method of transmissions, diagnosis, prevention, control and treatment. Students also learn the most important fungal, parasitical and viral infections types. in order to manage and prevent infectious diseases.

Teaching Methods: lecture, discussions and google classroom online discussion (class cod: jvdezir)

Evaluation Methods: Unit exam(s) and short quizzes every week.

Faculty, Contact Information, & Office Hours:

Dr Dr. Salwa Gahzi Turki , Dr. Bushra Ali Kadhim, Dr. Wasnaa Juma Mohmmmed in basic science
Department- College of Nursing- University of Baghdad

dr.salwagh@conursing.uobaghdad.edu.iq

bushraa@conursing.uobaghdad.edu.iq

Office hours ► See weekly schedule!

Required Textbook(s) and Other Materials

- 1- Patrick R. Murray, Ken S. Rosenthal and Michael A. Pfaller. Medical microbiology six edition. Elsevier Inc.
- 2- Louise Hawley, Richard J. Ziegler& Benjamin L. Clarke (2014): Microbiology and immunology, 6th edition. Lippincott Williams & Wilkins co. USA.
- 3- Patrick R. Murray (2018): Basic Medical Microbiology, Elsevier.
- 4- Essential of medical microbiology, Apurbs et al., second edition (2019)

Academic Dishonesty:

Academic honesty is required in all aspects of a student's relationship with the university. **Students are advised that cheating and plagiarism are not tolerated.** If that happens, the student shall earn zero and be under the legal circumstances

Course Objectives

a- Cognitive objective

- 1- The student's knowledge of the different types of microorganisms and their scientific classification
- 2- understanding the physiological and nutritional requirements of these microorganisms in addition to the different environments in which these microorganisms may live
- 3- State the sources and modes of transmission of pathogenic and opportunistic organisms including vectors and their role in transmission of diseases.
- 4- Learn about the life cycle, types of reproduction and transmission of microorganisms (parasites and viruses) and the optimal conditions for their living
- 5- The student's knowledge of the infections and diseases that can be caused by these microorganisms (parasites and viruses) and thus identifying how to prevent or reduce the occurrence of these diseases
- 6- Identify the different microorganisms that cause hospital acquired infections and how to control them and limit their spread

b- Skills objective

- 1- The student will be able to use the microscope to view and diagnose microorganisms
- 2- The student can diagnose pathogenic microorganisms
- 3- The student will be able to differentiate between the different microscopic types through his knowledge of the phenotypic characteristics and their internal structures, as he will be able to diagnose them and determine their scientific name.
- 4- Knowing how to diagnose the microorganisms that cause various diseases and how to avoid infection with these pathogens by knowing the ways of transmitting them
- 5- Avoid infection by knowing the ways of transmission of microorganisms
- 6- Mastering the basics of the APA style

Course Requirements

- 1- Earn a grade of **50% or higher**. The aforementioned grade in NURS courses **is the minimum passing score at the second level undergraduate**
- 2- Attend classes! Based on *The Student Guideline*, the student shall be marked "failure" if (s)he absents 15% of the total hours.

Evaluation & Grading

No.	Task	score
1.	Seasonal theoretical exam (three trials)	25
2.	Seasonal and short practical exam	12
3.	Extracurricular activity	2
4.	Laboratory notebook	1
5.	The total of 40% before the final exam. (Theoretical 25 and practical 15)	
6.	Final theoretical exam	40
7.	Final practical exam	20
	Total	100

Course Schedule and activities

1-Theoretical Microbiology for Nurses II

Weeks	Topics
1.	<p>*Introduction to Parasitology</p> <p>*Some terms of parasitology, types of parasites, Routes and modes of infections, types of hosts, relationships between parasite and host, some epidemiological terms,</p> <p>*Classification of Protozoa</p> <p>*General characters of protozoa</p>
2.	<p>*<i>Entamoeba histolytica</i>, <i>Entamoeba coli</i> (Life cycle. Symptom, pathology, diagnosis prevention and control, and treatment)</p> <p>*<i>Balantidium coli</i> (Life cycle and stages. Symptom, diagnosis prevention and control, and treatment).</p> <p>* Intestinal Flagellates/ <i>Giardia lamblia</i> (Life cycle. Symptom, pathology, methods of diagnosis, prevention and control, and treatment)</p> <p>*Luminal and Atrial flagellates <i>Trichomonas spp (T. hominis, T. tenax)</i> <i>Trichomonas vaginalis</i> (life cycle. Symptom, pathology, diagnosis, and treatment).</p>
3.	<p>*Blood and Tissue flagellates (<i>Leishmania spp. and Trepanosoma spp.</i>)</p> <p>1- Tissue flagellate (<i>Leishmania donovani and Leishmania tropica</i>) (Life cycle and stages. Symptoms, pathology, diagnosis, and treatment) function and types of macrophages.</p> <p>2- Blood flagellates</p> <ul style="list-style-type: none"> - African trypanosomiasis - American trypanosomiasis <p>(Stages, life cycle, symptoms, diagnosis, Method of transmission)</p>

4.	<p>*Apicomplexa general characters</p> <p>1-<i>Plasmodium</i> four species and diseases caused by each one (Life cycle and stages. Symptom, pathology, diagnosis, global malaria prevention and control and treatment)</p> <p>2-<i>Toxoplasmas gondii</i> (Life cycle and stages. Symptom, diagnosis, control and treatment)</p>
5.	<p>*Helminthes (metazoan) general structure</p> <p>Classification of helminths</p> <p>a. Phylum: Platyhelminthes (flatworms)</p> <p>Class I: Cestoda (Tapeworms). general structure (<i>Taenia saginata</i>, <i>Taenia solium</i>, <i>Hymenoleps nana</i> and <i>Echinococcus granulosus</i>) (Symptom, diagnosis, control and treatment)</p>
6	<p>Class II: Trematoda (Flukes). general structure</p> <p><i>Fasciola hepatica</i> (Life cycle and stages. Symptom, diagnosis, control and treatment)</p> <p><i>Schistosoma haematobium</i>, <i>Schistosoma mansoni</i>, <i>Schistosoma japonicum</i> Life cycle and stages. Symptom, diagnosis, control and treatment)</p>
7	<p>b. Phylum: Aschelminthes or Nematelminthes general structure</p> <p><i>Ascaris lumbricoid</i>, <i>Anchylostoma duodenale</i>, <i>Enerobius vermicularis</i>, <i>Trichuris trichiura</i> Life cycle and stages. Symptom, diagnosis, control and treatment</p>
8	<p>* Virology</p> <ul style="list-style-type: none"> - General properties of viruses (virus componants) - A virus like particles (VLPs) and Subviral particles (viroid and prions) - Classification types - Viral replication - Viruses effects on cells - Persistent viral infections - Common routes of viral infection in human
9	<p>*Measles, AIDS, Influenza virus (general structure of virus, symptoms, method of transmissions and prevention)</p>
10	<p>* Hepatitis A, B, C, D, E (general structure of virus, method of transmissions and prevention)</p> <p>* Corona virus</p> <ul style="list-style-type: none"> - General structure - Three types of human coronavirus cause severe symptoms - Coronavirus disease 2019 (COVID-19) - Prevention and control - How does it spread - Diagnosis and tretment
11	<p>* Mumps (general structure of virus, symptoms, method of transmissions and prevention)</p> <p>* Rubella (general structure of virus, symptoms, method of transmissions and prevention).</p>

12	* Rota (general structure of virus, symptoms, method of transmissions and prevention). * polio virus (general structure of virus, symptoms, method of transmissions and prevention).
13	* Herpes virus and CMV * general structure of virus, symptoms, method of transmissions and prevention).
14	* comprehensive review for curriculum
15	* exam

2-Practical Microbiology for Nurses (II)

week	Topics
1-	Introduction to Parasitology Protozoa and flagellates
2-	Classification of human parasites Protozoa Phylum: sarcomastigophora Subphylum: sarcodina <i>Entamoeba histolytica</i> Subphylum: mastigophora <i>Giardia lamblia</i> Phylum: Ciliophora/ <i>Balantidium coli</i> Phylum: Apicomplexa
3-	<i>Entamoeba histolytica</i> <i>Entamoeba coli</i> Small amoebiasis <i>Endolimax nana</i> <i>Entamoeba gingivalis</i> <i>Iodamoeba butschlii</i>
4-	Phylum: Mastigophora 1- Atrial and intestinal flagellates <i>Trichomonas vaginalis</i> and <i>Trichomonas spp</i> <i>Giardia lamblia</i>
5-	2- Blood and tissue flagellates <i>Leishmania spp.</i> and <i>Trepanosoma spp.</i>
6-	Apicomplexa: include 1- <i>Plasmodium Spps</i> 2- <i>Toxoplasma gondii</i>
7-	Helminthes Phylum: platyhelminthes Class: Cestode Class: Trematoda Phylum: Nematelminthes Class: Nematoda Cestoda <i>Taenia solium</i> ,
8-	<i>T. Saginata</i> Cestoda <i>Echinococcus granulosus</i> <i>Hymenoleps nana</i>
9-	2-Trematoda <i>Fasciola hepatica</i>

	<i>Schistosoma haematobium</i> <i>Schistosoma mansoni</i> <i>Shistosoma japonicum</i>
10-	Nematoda -2 Ascaris lumbricoid, Anchylostoma duodenale, Enerobius vermicularis, Trichuris trichiura
11-	* comprehensive review for curriculum
12-	* exam

Distribution of Points in the practicum:

Requirements	Possible Points
Quizzes	1
Home works	1
Discussion of the procedures outcomes	1
Practical exam	12
The total of 15% before the final exam.	
The Final exam	20%
Total	35%