

Course Plan for Bachelor Program - Study Plan Development and Updating Procedures/ Pharmacy Department	QF02/0408-4.0E
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Study Plan No.	2021/2022	University Specialization	Bachelor of Nursing
Course No.	0201263	Course Name	Microbiology for Nurses
Credit Hours	2	Prerequisite *Co-requisite	Biology
Course Type	<input type="checkbox"/> Mandatory University Requirement <input type="checkbox"/> University Elective Requirement	<input checked="" type="checkbox"/> Faculty Mandatory Requirement <input type="checkbox"/> Support course family requirements	<input type="checkbox"/> Mandatory Requirement <input type="checkbox"/> Elective Requirement
Teaching Style	<input type="checkbox"/> Full Online Learning	<input checked="" type="checkbox"/> Blended Learning	<input type="checkbox"/> Traditional Learning
Teaching Model	<input type="checkbox"/> 1 Synchronous: 1 Asynchronous	<input checked="" type="checkbox"/> 1 Face to Face: 1 Asynchronous	<input type="checkbox"/> 2 Traditional

Faculty Member and Study Divisions Information (to be filled in each semester by the subject instructor)

Faculty Member and Study Division Information (to be filled in each semester by the subject instructor)					
Name	Academic rank	Office No.	Phone No.	E-mail	
Office Hours (Days/Time)	Sunday, Tuesday, Thursday ()		Monday, Wednesday ()		
Division number	Time	Place	Number of Students	Teaching Style	Approved Model
				Blended Learning	1 Face to Face: 1 Asynchronous

Brief Description

Microbiology is a subject of great breadth and depth. It encompasses the study of microorganisms which cause infectious diseases. The ability to identify and understand these basic properties of specific microorganism is essential for everyone in the health profession, especially the nurses who play a vital role in patient care. Knowledge of the properties of certain important microorganisms has critical practical application in the field of nursing, as well. This course covers the basic information of microorganisms, their basic structure and mode of growth. Basic principles of immunity and immunization. Anti-microbial chemotherapy: mode of action and prudent use.

Learning Resources

Course Book Information (Title, author, date of issue, publisher ... etc)	1. Ichhpujani Bhatia -- Microbiology for Nurses (2004) Jaypee Brothers Medical Publishers LTD, New Delhi.
Supportive Learning Resources (Books, databases, periodicals, software, applications, others)	1. Rao,R.R. (2005): Textbook of Microbiology for Nursing Students, Jaypee Brothers Medical Publishers LTD, New Delhi 2. Jawetz, Melnick, and Adelbelg's Sherris (2001): Medical Microbiology, 22 nd ed. USA 3. Madigan, M.T., Mastinko, J.M., and Parker, J. (2003): Brock Biology of Microorganisms, 10 th ed. USA
Supporting Websites	
The Physical Environment for Teaching	<input checked="" type="checkbox"/> Classroom <input type="checkbox"/> Labs <input checked="" type="checkbox"/> Virtual Educational <input type="checkbox"/> Others

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	Platform
Necessary Equipment and Software	<input checked="" type="checkbox"/> Moodle <input checked="" type="checkbox"/> Computer connected to the internet and data show projector. <input checked="" type="checkbox"/> Whiteboard and associated equipment.
Supporting People with Special Needs	
For Technical Support	E-Learning & Open Educational Resources Center Email: ellearning@zu.edu.jo ; Phone: +962 6 429 1511 ext. 425/362

Course learning outcomes (K= Knowledge, S= Skills, C= Competencies)

No.	Course Learning Outcomes	The Associated Program Learning Output Code
Knowledge		
The student should be able to:		
K1	Identify the basic structure and mode of growth of microorganisms.	MK1
K2	Understand fundamentals of infectious diseases.	MK1
K3	Understand basics of immunology, host defenses and immunological disorders.	MK1
Skills		
The student should be able to:		
S1	Determine the structure and function of different components of bacteria, fungi, protozoa and virus.	MS1
S2	Identify the following terminology: contamination, infection, infectious disease, notifiable infectious diseases, nosocomial infections, non-infectious diseases, communicable and non-communicable infectious diseases, pathogens, pathogenicity and virulence.	MS1
S3	Differentiate between innate, acquired, active and passive immunity.	MS1
Competencies		
The student should be able to:		
C1	Develop his/her professional and personal performance by continuously following-up lectures, submitting tasks on time, and staying up to date with the latest nursing implications.	MC4

Mechanisms for Direct Evaluation of Learning Outcomes

Type of Assessment / Learning Style	Fully Electronic Learning	Blended Learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm Exam	30%	30%	30%	0%
Participation / Practical Applications	0%	0%	20%	50%
Asynchronous Interactive Activities	20%	20%	0%	0%
Final Exam	50%	50%	50%	50%

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Note 1: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, and work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Note 2: According to the Regulations of granting Master's degree at Al-Zaytoonah University of Jordan, 40% of final evaluation goes for the final exam, and 60% for the semester work (examinations, reports, research or any scientific activity assigned to the student).

Schedule of Simultaneous / Face-to-Face Encounters and their Topics

Week	Subject	Learning Style*	Reference **
1	- General microbiology - Pasteur and Koch's contributions	lecture	1-4
2	- General properties of bacteria	lecture	5-8
3	- The bacterial cell structure	lecture	5-8
4	- Nutrition of bacteria - Bacterial growth	lecture	9-12
5	- Disinfection and Sterilization	lecture	13-17
6	- Physical agents - Chemical agents	lecture	13-17
7	- Antimicrobial Therapy - Mechanism of action - Drug resistance	lecture	18-20
8	- Host-parasite relationship - Pathogenic properties of microbes	lecture	21-25
9	- Host resistance Midterm Exam	lecture	21-25
10	- Overview of Immunology - Specific and non-specific immune mechanisms - Overview of action of immune system	lecture	26-29
11	- Anatomy and Biology of Immune System - Biology of the Immune response - Immunosuppression	lecture	30-32
12	- Complement System - Activation of complement - Complement fixation test	lecture	36-38
13	- Pathogenic bacteria - Gram positive cocci and bacilli - Gram negative cocci and bacilli	lecture	49-87
14	- General properties of viruses - Replication of viruses - Cultivation of viruses	lecture	109-115
15	- Hospital Associated Infections - Source of infection - Common types of hospital infections	lecture	198-200

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16	Final Exam		
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* Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.

** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.

Schedule of Asynchronous Interactive Activities (in the case of e-learning and blended learning)

Week	Task / Activity	Reference	Expected Results
1	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
2	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
3	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
4	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
5	Self-study	A selected topic	Assignment
6	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
7	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
8	Self-study	A selected topic	Assignment
9	Midterm Exam	-	-
10	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
11	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
12	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
13	Self-study	A selected topic	Assignment
14	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
15	Watch a recorded lecture	Video on the E-learning platform	Answer questions embedded in the video / Assignment
16	Final Exam		



جامعة الزيتونة الأردنية
Al-Zaytoonah University of Jordan
كلية الصيدلة
Faculty of Pharmacy



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