



Philadelphia University

Faculty of Pharmacy-

Department of Clinical Sciences

First Semester, 2017/2018

Course Syllabus

Course Title: Microbiology & immunology Practica	Course code: 0520314
Course Level: 3 rd Year	Course corequisite (s): 0520313
Lecture Time:1-3	Credit hours: 1

Academic Staff

Specifics

Name	Rank	Office Number and Location	Office Hours	E-mail Address
Dr. Nabil Al-Nimr	Assistant professor	P513	M&W 12-1	N-NIMER@philadelphia.edu.jo
Mona Jallad	Teaching assistant	P405	Th 9-11	m-jallad@philadelphia.edu.jo

Course module description:

The course is intended to give student a chance to observe and study microorganisms. Students will learn the factors that influence microbial growth, control of microbial growth by physical and chemical means and identification of microorganisms using various techniques.

Course module objectives:

Students will learn the use and importance of aseptic technique, handling of microbial cultures, sterilization procedures and preparation of sterile products. Students will also learn evaluation of antiseptics, disinfectants and chemotherapeutic agents.

Course/ module components

1. Examination of various microorganisms in stained preparations.
2. Use of various culture media for isolation of bacteria and fungi.
3. Evaluation of chemicals used to control microbial growth
4. Learn sterilization techniques and sterility assurance
5. Preparation of sterile products
6. Preparation of vaccines

- **Books (title , author (s), publisher, year of publication)**

1. Microbiology: A laboratory manual, James G. Cappucino and Natalie Sherman

Publisher: Benjamin Cuning ISBN 0805376461 2004

2. Fundamentals of Microbiology, Alcamo, Saunders, 2005

- **Support material (s) (vcs, acs, etc).**
- **Study guide (s) (if applicable)**
- **Homework and laboratory guide (s) if (applicable).**

Teaching methods:

Lectures, discussion groups, tutorials, problem solving, debates, etc.

Tutorials ,experimets,Make observations,Record data and analyze results

Learning outcomes:

- Knowledge and understanding

Student become aware of importance of contamination of pharmaceutical products.

Learn aseptic techniques, handling of microbial cultures and identification of microorganisms

- Cognitive skills (thinking and analysis).

Students develop the ability to make observations, record data and analyze results

- Communication skills (personal and academic).

students will develop the ability for group discussions and critical thinking

- Practical and subject specific skills (Transferable Skills).

They will learn the production of sterile pharmaceutical products and prevent microbial spoilage

Assessment instruments

- Short reports .
- Quizzes.
- Home works
- Final examination: 40 marks

Allocation of Marks	
Assessment Instruments	Mark
Reports & Evaluation	30
Quizzes	20
Practical exam	10
Final exam	40
Total	100

Documentation and academic honesty

- Documentation style (with illustrative examples)
- Protection by copyright
- Avoiding plagiarism.

Course/module academic calendar

week	Basic and support material to be covered	Homework/reports and their due dates
(1)	Introduction, Microscopy and examination of prepared bacterial smears	
(2)	Microbial culture transfer technique, preparation of microbial slides	

(3)	Staining technique, Gram, spore and capsule	
(4)	Growth of microorganisms, preparation of cultures and culture media	
(5)	Bacterial count, physical requirement for growth	
(6)	Biochemical activities of bacteria	
(7)	Control of microbial growth by physical methods	
(8)	Control of microbial growth by chemical methods, disinfectants and antiseptics	
(9)	Anti-microbial chemotherapeutics and antibiotics, sensitivity testing	
(10)	Sources of microbial contamination &Sterility testing	
(11)	Serological test	
(12)	Final Examination	
Final Examination		

Expected workload:

On average students need to spend 2 hours of study and preparation for each 50-minute lecture/tutorial.

Attendance policy:

Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.

Module references

Books

- 1. Microbiology: A laboratory Manual, cited previously**
- 2. Hugo and Russel's Pharmaceutical Microbiology**

Journals

American Journal of Microbiology

Websites

Med line

