



Faculty: Pharmacy

Department : Pharmaceutical Sciences

(Course Syllabus)

<i>Subject Name</i>	<i>Credit Hours</i>	<i>Course No.</i>	<i>Prerequisite</i>	<i>Concurrent course</i>
Special Topics	3	902514	0902219	Theory

<i>Coordinator Name</i>	<i>Lecturer</i>	<i>Room No.</i>	<i>E-mail</i>	<i>Office Hours</i>
	Dr. Haitham Tumah	116	haithamtumaha@yahoo.com	Schedule

Course Objectives:

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1. Develop a knowledge of microbial organisms and their relevance of infectious diseases.
2. Students should be familiar with Microbial diseases of the following systems:
 - the skin and eyes, nervous system, cardiovascular and lymphatic system respiratory system digestive system and reproductive and urinary system

Course Description:

- ✓ The aim of this course is to introduce basic principles and application relevance of infectouse diseases.
- ✓ It covers all biology of bacteria, viruses and other pathogens related with infectious diseases in humans.
- ✓ This course provides a comprehensive theoretical knowledge of microbiology including the spread of micro-organisms, disease causation, diagnosis and/or treatment of pathogens of major significance to public health.
- ✓ Study of infectious agents of human disease, with emphasis on host/parasite relationships and immunologic phenomena in immunity and disease, including identification of bacteria, fungi, animal parasites, and viruses, and principles of prevention, and treatment.

Learning outcomes.

1. General characteristics of viruses, how they are classified and cultured.
2. The meaning of chemotherapy and antibiotics. The meaning of selective toxicity, spectrum of activity in the context of antimicrobial agents.

3. Microbial mechanisms of pathogenicity. Different terminology used to describe the microbe-host relationships..
4. The difference between specific and non-specific defense. Non-specific defense mechanisms (physical barriers, cellular defenses, molecular defenses, inflammation and fever),
5. Infectious diseases of human organ system. Main signs and symptoms, the control of this infectious diseases

Course Contents :

<i>Week</i>	<i>Topics</i>	<i>Topic Details</i>	<i>(chapter)</i>
1.	Viruses, Viroids, and Prions	General Characteristics of Viruses, Host Range, Viral Size, Viral Structure, Nucleic Acid, Capsid and Envelope,	Ch. 13
2.	Viruses, Viroids, and Prions	Chemical and physical structure of both an enveloped and a nonenveloped virus. viral species family, genus,	Ch. 13
3.	Principles of Disease and Epidemiology	Pathology, Infection, and Disease Normal Microbiota Occurrence of a Disease • Severity or Duration of a Disease Extent of Host Involvement	Ch. 14
4.	Microbial Mechanisms of Pathogenicity	How Microorganisms Enter a Host How Bacterial Pathogens Penetrate Host Defenses Pathogenic Properties of Fungi, Protozoa, and Helminths.	Ch. 15
5.	Clinical uses of antimicrobial agents	Susceptibility, host factors, pharmacological factors Bacterial resistance	Ch. 15
6.	Medical Parasitology	parasitic protozoa, parasitic helminthes (worms), arthrbode→ that cause disease	Ch. 16
7.	Mycology	Fungi, Molds and yeasts. What diseases do yeasts and molds cause? Fungal infections and and treatment	Ch. 17
8.	Practical applications of immunity	Vaccination & immunization	Ch. 18
9.	Antimicrobial drugs	Introduction,types, mechanisms, target sies, sources..... Misuse and Abuse of antibiotics, Strategies to limit antibiotic Resistance	Ch. 20
10.	Microbial Diseases of the Skin and Eyes	Normal Microbiota of the Skin Microbial Diseases of the Skin Microbial Diseases of the Eye	Ch.21
11.	Microbial Diseases of the Nervous System	Structure and Function of the Nervous Syste	Ch.22
12.	Microbial Diseases of the Cardiovascular and Lymphatic Systems	Bacterial Diseases of the Cardiovascular and Lymphatic Systems Viral Diseases of the Cardiovascular and Lymphatic Systems Protozoan Diseases of the Cardiovascular and Lymphatic Systems Helminthic Diseases of the Cardiovascular and Lymphatic Systems	Ch.23
13.	Microbial Diseases of the Respiratory System	Normal Microbiota of the Respiratory System microbial diseases of the upper respiratory system microbial diseases of the lower respiratory system	Ch.24
14	Microbial Diseases of the Digestive System	Normal Microbiota of the Digestive System Bacterial Diseases of the Mouth Bacterial Diseases of the Lower Digestive System	Ch.25

Grade Distribution :

<i>Assessment</i>	<i>Grade</i>	<i>Date</i>
- First Exam	20	
- Second Exam	20	
- Assignments (reports, quizzes, homeworks, participation, conduct)	20	
- Final Examination (online)	40	

** Make-up exams will be offered for valid reasons. It will be different from regular exams in content and format.*

Main Reference: Tortora G.J, Funke B.R.,Case,C.L. (eleventh edition). Microbiology an Introduction

Other References: Pharmaceutical Microbiology 10th edition ; Hugo and Russel