

## **Infectious Diseases 1 Course Syllabus**

### **General Information**

Credit hours: 4 CH

Duration: 4 weeks

### **Course Overview**

The aim of this course is to provide the graduate with the knowledge and skills that make him capable of providing safe healthcare to patients who suffer from common infectious diseases at the primary healthcare level as well as applying preventive services to others in the community.

### **Course Rationale**

The rationale behind this course is to prepare the graduate to deal with infectious diseases presenting in all parts of healthcare. The knowledge provided will orient the students with the pathogenesis and immune responses to infection. The course will enlighten the problem of resistance to antimicrobial drugs and how to manage alternatives to different antimicrobial agents. Finally, prevention of infectious diseases transmission is the cornerstone for their eradication, hence, the course will strengthen the knowledge on different methods of breaking the cycle of infection.

### **Course objectives**

By the end of this course, students will be able to:

1. Identify various microbiologic and parasitological causes of infectious diseases.
2. Explain the ways in which infectious agents operate on the body (Pathogenesis).

3. Describe altered structure and function of the body major organ systems in various infectious diseases.
4. Demonstrate knowledge of antimicrobial drugs' actions: therapeutics and pharmacokinetics.
5. Apply knowledge of biomedical sciences relevant to the clinical problem at hand.
6. Demonstrate basic sciences specific practical skills and procedures relevant to medical practice.
7. Explain the epidemiological triad, risk factors and the changing concepts of disease causation.
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9. Apply principles of descriptive and analytic epidemiology to study distribution and determinants of their community health problems and plan appropriate prevention and control measures.
10. Identify the role of health promotion in enabling people to increase control over their own health.

### **Required Text**

Notes on Module Infectious Diseases 1. Alexandria University of Medicine.

### **Recommended Engagement**

<http://www.med.alexu.edu.eg/me>

### **Etiquette during Tutorial sessions**

1. Communicate and share ideas with other partners and staff members.
2. Respect the rules and disciplines for the course attendance.
3. React properly with staff members, assistant staff, and colleagues.
4. Accept valuable criticism.

Tasks

		Topic	Uploaded Lectures	Practical
Week 1	Monday 27/9	Microbiology	<ul style="list-style-type: none"> <li>Lectures 1,2,3</li> </ul> Microbial world and Bacterial cell structure Bacterial growth & requirements & Bacterial spores Pathogenesis of bacterial infection lecture	Group discussion for lectures
		Parasitology	<ul style="list-style-type: none"> <li>Lecture 1</li> </ul> General Introduction to Medical Parasitology	General introduction to Medical Parasitology:  Group discussion & Formative assessment
	Tuesday 28/9	Microbiology	Re-visit your lectures	Sampling for microbiological diagnosis

		Parasitology	<ul style="list-style-type: none"> <li>Lecture 2,3</li> </ul> Introduction to trematodes Introduction to cestodes	Introduction to trematodes and cestodes:  Group discussion & Formative assessment.
		Clinical training		Abdominal examination
	Wed. 29/9	Microbiology	<ul style="list-style-type: none"> <li>Lectures 4,5,6</li> </ul> General features & classification of viruses Viral replication and bacteriophage Bacterial Genetics	Group discussion for lectures
		Pharmacology	<ul style="list-style-type: none"> <li>Lectures 1,2,3,4</li> </ul> Principles of antimicrobial use Cell wall synthesis inhibitors I Cell wall synthesis inhibitors II Cell wall synthesis inhibitors III + pretutorial lecture	Prescribing for infectious diseases 1
	Clinical training		Abdominal examination	

		Community Medicine	Terminology relevant to infectious diseases	
Thurs. 30/9		Microbiology	Re-visit your lectures	Lab diagnosis of Bacterial infections
		Parasitology	<ul style="list-style-type: none"> <li>Lecture 4 Introduction to nematodes</li> </ul>	<p>Introduction to Nematodes:</p> <p>Group discussion &amp; Formative assessment.</p> <p>Practical: General morphology of helminths</p>
		Clinical training		Abdominal examination

Week 2	Tuesday 5/10	Microbiology	<ul style="list-style-type: none"> <li>Lectures 7,8,11</li> </ul> Mechanisms of Action of Antibacterial Agents Bacterial resistance to chemotherapeutic agents Gram negative bacteria	Group discussion for Lectures
		Pharmacology	<ul style="list-style-type: none"> <li>Lectures 5,6,7</li> </ul> Protein synthesis inhibitors I Protein synthesis inhibitors II Nucleic acid synthesis and function inhibitor + urinary antiseptic + cell membrane synthesis inhibitors	Prescribing for infectious diseases 2
		Clinical training		Abdominal examination
	Wed. 6/10	Microbiology	<ul style="list-style-type: none"> <li>Lectures 9,10</li> </ul> Staphylococci Streptococci	Lab diagnosis of staphylococcal and streptococcal infections
		Microbiology	Re-visit your lectures	Decontamination

		Clinical training		Abdominal examination
		Community Medicine	Cycle of infection	
Week 3	Tuesday 12/10	Microbiology	<ul style="list-style-type: none"> <li>Lectures 12, 13, 14,16</li> </ul> Antigens and antibodies Complement and MHC Innate immunity Immune response to infectious agents: Adaptive immunity	Group discussion for lectures

		Parasitology	<ul style="list-style-type: none"> <li>Lecture 5 Introduction to protozoa</li> </ul>	<p>Introduction to Protozoa:</p> <p>Group discussion &amp; Formative assessment.</p> <p>Practical: General morphology of protozoa</p>
		Clinical training		Abdominal examination
	Wed. 13/10	Microbiology	Re-visit your lectures	Serological tests



		Parasitology	<ul style="list-style-type: none"> <li>Lectures 6, 7</li> </ul> Introduction to Medical Entomology Toxaemia and allergy caused by arthropods	Introduction to medical entomology  Toxaemia and allergy caused by arthropods  Group discussion & Formative assessment
	Thurs. 14/10	Microbiology	Re-visit your lectures	Lab diagnosis of viral infection
		Pharmacology	<ul style="list-style-type: none"> <li>Lectures 8, 10</li> </ul> Antifungal drugs Anthelmintic drugs	Prescribing for infectious diseases 3

		Community Medicine	Principles of prevention and control of communicable diseases	
Week 4	Tuesday 19/10	Microbiology	<ul style="list-style-type: none"> <li>Lectures 15, 17, 18</li> </ul> Cytokines and Interferon Vaccines Herpes family	Group discussion for lectures
		Parasitology	Lecture 8 Myiasis	Myiasis: Group discussion & Formative assessment. Practical: General morphology of arthropods
	Wed. 20/10	Microbiology	<ul style="list-style-type: none"> <li>Lecture 19</li> </ul> Introduction to medical mycology	Group discussion for lectures Lab. Diagnosis of fungal infections

		Parasitology	<ul style="list-style-type: none"> <li>Lecture 9</li> </ul> Laboratory diagnosis of parasitic infections	Lab diagnosis of parasitic infections Group discussion & Formative assessment. Practical slides
		Pharmacology	<ul style="list-style-type: none"> <li>Lecture 9</li> </ul> Antiherpetic drugs	