Infectious Diseases; Code: PHM 701

A-Basic Information

Programme(s) on which the course is given:	Master's degree of pharmaceutical sciences (Microbiology and Immunology)
Department responsible for offering the course:	Department of Microbiology and Immunology
Department responsible for teaching the course:	Department of Microbiology and Immunology
Academic year:	Pre-Master Courses-2023/2024-First semester
Course title and code:	Infectious Diseases, PHM 701
Contact hours (credit hours):	Lecture: 3 (3), Total: 3 (3)
Course Coordinator:	Dr. Ann Elshamy

B- Professional Information

The course aim and intended learning outcomes are based on that mentioned in the programme specifications, with more course-related specific details.

1 - Overall Aims of Course

Upon successful completion of this course, the student should be completely familiar with the molecular basis of diagnosis of different microbial infections including bacterial and viral infections regarding signs and symptoms, and specimen collection with subsequent molecular and physiological examinations.

2 - Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

By the end of the course the student should be able to:

a1. Explain the basic theories and principles of medical microbiology, enumerate all types of urinary tract infections focusing on their diagnosis regarding specimen collection, transport, and microbiological analysis.

a2. Explain the legal and ethical principles for practicing research in microbiology

a3. Define microscopical, biochemical, microbial cultural including blood culture and its use, serological and molecular methods implemented in the diagnosis of different microbial infections.

a4. Define the causative microbes infecting different biological systems in human including genitourinary tract, GIT, skin, respiratory tract as well as anaerobic infections and how these infections be diagnosed both clinically and laboratory

b. Intellectual skills

The students should be able to:

b1. Estimate and differentiate between the different diagnostic techniques used for the diagnosis of microbial infections.

b2. Integrate the methods used for the collection, transport and microbiological analysis of different clinical specimens according to clinical pictures of the microbial disease.

b3. Interpret the clinical data and various laboratory findings to be able to differentiate types of bacterial and viral diseases.

b4. Integrate different aspects of microbial pathogenesis.

b5. Differentiate types of bacterial and viral diseases

b6. Predict the diagnosis of different microbial infections.

b7. Take a professional decision regarding medical care and infectious diseases

C. General and Transferable Skills

The students should be able to:

c1. Work and learn independently

c2. Able to retrieve data from different sources and presented it in Lab discussion

c3. Construct and design an assignment.

3 -Course Contents

Topics	No. of hours	No. of Lectures
Overview on molecular diagnostic techniques.	3	1
Gram positive cocci, Gram negative cocci, Gram positive bacilli, Gram negative bacilli and mycobacteria.	3	1
Study of urinary tract infections including their signs and symptoms, specimen collection and causative microorganisms regarding their microscopical examination, culture Characteristics and biochemical and serological reactions.	6	2
Recent techniques used for diagnosis of respiratory tract infections with special regard to atypical pneumonia	6	2
Skin infections	6	2
Study of bacteria and viruses affecting the central nervous system and the microbiological diagnosis of the infected cases.	6	2
Sexually transmitted diseases, skin and soft tissue infections and gastro-intestinal tract infections	6	2
Gastrointestinal tract infections	6	2
Anaerobic infections	3	1
Total	45	15

4-Teaching and Learning Methods

1- Lectures
2- Discussion sessions
3- Student activities

5- Student Assessment Methods

- **Activities**
- **Final written exam** to assess the ability of student to remember and retrieve information as well as understanding of the scientific background.
- **Oral Exam** to assess skills of analysis, scientific thinking as well as scientific discussion

Assessment Schedule

Assessment 1	Activities	Week 10
Assessment 2	Final written exam	Week 16
Assessment 3	Oral exam	Week 16

Weighting of Assessments

Activities	10%
Final-written exam	80%
Oral exam	10%
Total	**100%**

6- List of References

A. Recommended textbooks

- Lippincott's in Microbiology, 2013
- Medical Microbiology, 8th edition, 2015
- Emergency management of infectious diseases, 2008
- Topley & Wilson Textbook of Microbiology, 12th edition, 2012

B. Websites

- www.ncbi.nlm.nih.gov
- www.sciencedirect.com
- www.springerlink.com

7- Facilities Required for Teaching and Learning

- Study halls
- Data show
- Internet

Course Coordinator: **Dr. Ann Elshamy**

Ann Elshamy

Acting Head of Department: **Assoc. prof. Dr. Sarra Ebrahim Saleh**

Sarra Saleh

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Course matrix

Contents	ILOs													
	a1	a2	a3	a4	b1	b2	b3	b4	b5	b6	b7	c1	c2	c3
Overview on molecular diagnostic techniques.														
Gram positive cocci, Gram negative cocci, Gram positive bacilli, Gram negative bacilli and mycobacteria.														
Study of urinary tract infections including their signs and symptoms, specimen collection and causative microorganisms regarding their microscopical examination, culture Characteristics and biochemical and serological reactions.														
Recent techniques used for diagnosis of respiratory tract infections with special regard to atypical pneumonia														
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Sexually transmitted diseases, skin and soft tissue infections and gastro-intestinal tract infections														
Gastrointestinal tract infections														
Anaerobic infections														

تم الاعتماد فى محضر مجلس قسم الميكروبيولوجيا والمناعة
جلسة رقم (11) بتاريخ 2023/8/31