Infection Control; Code: PM E09

A- Basic Information

Programme(s) on which the course is given:	Bachelor of Pharmacy (Pharm D)
Department responsible for offering the course:	Microbiology and Immunology
Department responsible for teaching the course:	Microbiology and Immunology
Academic year:	Level four- spring semester (2023-2024)
Course title and code:	Infection Control, PM E09
Prerequisite:	Registration
Credit hours:	Lectures: 2, Practical: 0, Total: 2
Course Coordinator:	Dr. Ahmed Abu Zaid

B- Professional Information

1 - Overall Aim of the Course

This course aims to equip, and update allied healthcare professionals on infection control principles and practices to enable them to function effectively as healthcare professionals in their respective clinical areas. The course will include basic microbiology & immunology, overview and principles of epidemiology, evidence-based infection control principles and practices, emerging and re- emerging infections, prevention & control of common healthcare associated infections, components of an effective infection control program, role of infection control committee, professionals, and link officers, multi drug resistant organism, sterilization, and disinfection.

2- Course learning outcomes:

Domain 1: Fundamental knowledge

The students should be able to:

Program key elements	Course learning outcomes
1.1.1.1. Demonstrate understanding of micro-organisms, biological data & sterilization.	**1.1.1.1.** Demonstrate proper understanding of cleaning, sterilization, disinfection and asepsis.
1.1.2.1. Make use of genetic, microbiological & epidemiological terms in pharmacy practice.	**1.1.2.1.** Utilize the proper epidemiological medical terms and abbreviations.
1.1.4.1. Explain the mechanism of drugs, antibiotics & toxins action.	**1.1.4.1.** Explain the mechanism of action of different antimicrobial agents.
1.1.4.2. Articulate information from fundamental sciences to evaluate the appropriateness, and effectiveness of drugs and natural products in populations.	**1.1.4.2.** Evaluate the appropriateness of antimicrobial agents, their effectiveness and their safety in treatment of infectious diseases.
1.1.6.1. Collect & utilize scientific information to enhance professional decision to save	**1.1.6.1.** Collect and analyse scientific information to design a surveillance program, translate surveillance data into statistical measures and write a detailed

patient life and to prevent the spreading of infectious diseases.	report explaining the outcomes of the surveillance program.
1.1.7.2. Recognize emerging issues in patient health care.	**1.1.7.2.** Recognize newly emerging infectious diseases influencing public health.

Domain 2: Professional and ethical practice

The students should be able to:

Program key elements	Course learning outcomes
2.1.1. Implement responsibilities, authorities in compliance with pharmaceutical legislations, and the role of all members of the health care professional team based on the professional structure.	**2.1.1.** Implement responsibilities, authorities and the roles of all members of the health care professional team to achieve accreditation.
2.1.2. Follow ethical standards of health care and pharmacy profession.	**2.1.2.** Follow ethical standards of health care and pharmacy profession.
2.3.1.1. Handle & dispose natural/synthetic biologic materials, biotechnology-based & radio-labeled products.	**2.3.1.1.** Handle, identify, and dispose infectious materials/products used in pharmaceutical field.
2.3.2. Follow ethical & legal guidelines for handling and disposal of biological and pharmaceutical materials safely.	**2.3.2.** Follow ethical, legal, and safety guidelines for handling and disposal of infectious materials/products.

Domain 3: Pharmaceutical care

The students should be able to:

Program key elements	Course learning outcomes
3.1.2. Adopt public health of pharmaceutical microbiology basics to choose the required methods for infection control.	**3.1.2.** Apply the principles of public health and disease microbiology to select and assess proper methods of infection control.
3.1.3. Recognize and control microbial growth & conduct lab tests needed for infectious diseases identification.	**3.1.3.** Monitor and control microbial growth and carry out laboratory tests for identification of infectious diseases.
3.1.4.1. Relate the cause, spreading, pathological data and lab diagnosis of infections to pharmacotherapeutic approaches.	**3.1.4.1.** Relate etiology, epidemiology and clinical features of infectious diseases and their pharmacotherapeutic approaches.

Domain 4: Personal practice

The students should be able to:

Program key elements	Course learning outcomes
4.1.1. Reveal healthcare team performance responsibility and evaluate team members showing time management skills.	**4.1.1.** Audit health care team performance and evaluate the managerial skills of its members.
4.1.2. Analyse data, solve problems, and work efficiently in a team.	**4.1.2.** Analyse data and work effectively as a team to translate epidemiologic surveillance data into meaningful reports.
4.2.1. Communicate orally and in-writing with healthcare team, patients, and communities.	**4.2.1.** Communicate orally and in writing with healthcare team, patients and communities.

3- Course Contents

Week	Lectures Topics	Credit hours
1	Introduction About Infection Control	2
2	World Health Organization (WHO)	2
3	Healthcare-Associated Infections (HAIs)	2
4	Management of Multi-Drug Resistant Organisms (MDROs) in healthcare settings	2
5	The Chain of Infection	2
6	Midterm	
7	Interruption of the chain of infection	2
8	Biofilms in healthcare settings	2
9	off (Eid Vacation)	
10	The role of community pharmacist in epidemics (part 1)	2
11	The role of community pharmacist in epidemics (part 2)	2
12	The role of Ministry of Health in controlling the communicable and non-communicable diseases in Egyptian community	2
13	Formative assessment	2
14	---	
15	**Written exam**	
Total hours	**22**	

4- Teaching and Learning Methods:

4.1- Lectures (tools: board, projector, online classrooms).
4.2- Written essays (library, internet).
4.3- Team working

5- Student Assessment Methods:

Written midterm exam	To assess	The ability of students to follow-up the course subjects.
Written final exam	To assess	The overall course learning outcomes.

Assessment Schedule

Assessment 1	Periodic exams	Week 6
Assessment 2	Final written exam	Week 15

Weighting of Assessments

Periodical examination	15
Final-term Examination	85
Other types of assessment	---
Total	**100**

6- List of References

6.1. Course Notes

Lecture notes of infection control

6.2. Essential Books

A Guide to Infection Control in the Hospital, 5th Edition, 2014
Case Studies in Infection Control, 1st Edition, 2017
Manual of Infection Prevention and Control, 4th Edition, 2019

7- Facilities Required for Teaching and Learning

Modern libraries, audio-visual tools, study halls, overhead projector, books, & Internet

Course Members:

Prof. Dr. Mahmoud Yassien
Dr. Ahmed Abu Zaid
Dr. Amr Shaker

Course Coordinator: Dr. Ahmed Abu Zaid *Ahmed Abouzeid*

Head of Department: Assoc. Prof. Dr. Sarra Ebrahim Saleh *Sarra Saleh*

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Course Plan and Matrix

Week	Course Content	Program Key Elements	Course learning outcomes	Teaching and Learning Methods	Student Assessment Methods
1	Introduction About Infection Control	**1.1.1.1** **1.1.2.1**	**1.1.1.1** **1.1.2.1**	Lecture Open Discussion	Periodic exam Written exam
2	World Health Organization (WHO)	**1.1.2.1** **1.1.6.1**	**1.1.2.1** **1.1.6.1**	Lecture Open Discussion	Periodic exam Written exam
3	Healthcare-Associated Infections (HAIs)	**1.1.7.2** **3.1.3** **4.1.1**	**1.1.7.2** **3.1.3** **4.1.1**	Lecture Open Discussion	Periodic exam Written exam
4	Management of Multi-Drug Resistant Organisms (MDROs) in healthcare settings	**1.1.1.1** **1.1.4.1** **1.1.4.2** **2.3.1.1** **2.3.2** **3.1.2** **4.1.2**	**1.1.1.1** **1.1.4.1** **1.1.4.2** **2.3.1.1** **2.3.2** **3.1.2** **4.1.2**	Lecture Open Discussion Assignments	Periodic exam Written exam
5	The Chain of Infection	**1.1.7.2** **3.1.4.1**	**1.1.7.2** **3.1.4.1**	Lecture Open Discussion	Written exam
6	Midterm				
7	Interruption of the chain of infection	**1.1.4.1** **1.1.4.2** **2.3.1.1** **2.3.2** **3.1.2** **4.1.2**	**1.1.4.1** **1.1.4.2** **2.3.1.1** **2.3.2** **3.1.2** **4.1.2**	Lecture Open Discussion	Written exam
8	Biofilms in healthcare settings	**2.3.1.1** **2.3.2**	**2.3.1.1** **2.3.2**	Lecture Open Discussion Assignments	Written exam
9	off (Eid Vacation)				
10	The role of community pharmacist in epidemics (part 1)	**1.1.6.1** **2.1.1** **2.1.2** **2.3.2** **4.1.2** **4.2.1**	**1.1.6.1** **2.1.1** **2.1.2** **2.3.2** **4.1.2** **4.2.1**	Lecture Open Discussion Assignments	Written exam
11	The role of community pharmacist in epidemics (part 2)	**1.1.6.1** **2.1.1** **2.1.2** **2.3.2** **4.1.2** **4.2.1**	**1.1.6.1** **2.1.1** **2.1.2** **2.3.2** **4.1.2** **4.2.1**	Online lecture	Written exam
12	The role of Ministry of Health in controlling the communicable and non-communicable diseases in Egyptian community	**1.1.6.1** **1.1.7.2** **2.1.1** **3.1.2** **4.1.1**	**1.1.6.1** **1.1.7.2** **2.1.1** **3.1.2** **4.1.1**	Lecture Open Discussion	Written exam
13	Formative assessment				
14	---				
15	Written exam				

In case of pandemic spreading, the study will be suspended, and the lectures will be converted to recorded and interactive lectures.

تم الاعتماد فى (محضر مجلس قسم الميكربيولوجيا والمناعة)
جلسة رقم (6) بتاريخ 14 /٢/2024