Infection Control; Code: PM E09C

A- Basic Information

Programme(s) on which the course is given:	Bachelor of Pharmacy (Pharm D clinical)
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 E09C
Prerequisite:	Registration
Credit hours:	Lectures: 2, Practical: 0, Total: 2
Course Coordinator:	Dr. Amr Shaker

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. Explain the basic knowledge of micro-organisms, infectious/non-infectious diseases, bioinformatics, biotechnology, and epigenetics.	**1.1.1.1.** Demonstrate proper understanding of cleaning, sterilization, disinfection and asepsis.
1.1.2.1. Utilize genetic, microbial, and 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 action and side effects of drugs and toxins.	**1.1.4.1.** Explain the mechanism of action of different antimicrobial agents.
1.1.4.2. Illustrate the appropriateness, and effectiveness of drugs and natural products using information from fundamental sciences.	**1.1.4.2.** Evaluate the appropriateness of antimicrobial agents, their effectiveness and their safety in treatment of infectious diseases.

1.1.6.2. Collect and interpret data to enhance professional decision to save patient life and to prevent the spreading of infectious diseases.	**1.1.6.2.** Collect and analyse scientific information to design a surveillance program, translate surveillance data into statistical measures and write a detailed report explaining the outcomes of the surveillance program.
1.1.7.2. Critically analyze issues influencing 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 the role of all members of the health care professional team based on the professional structure regarding their legal responsibilities & authorities in compliance with pharmaceutical legislations.	**2.1.1.** Implement responsibilities, authorities and the roles of all members of the health care professional team to achieve accreditation.
2.1.2. Apply the standards of ethics of pharmacy profession & health care in dealing with patients.	**2.1.2.** Follow ethical standards of health care and pharmacy profession.
2.3.1.1. Handle & dispose biologicals, synthetic/natural materials, radio-labeled and biotechnology-based products.	**2.3.1.1.** Handle, identify, and dispose infectious materials/products used in pharmaceutical field.
2.3.2. Adopt ethical and legal guidelines for safe handling and disposal of biologicals and pharmaceutical materials/products.	**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
3.1.2.1. Follow the fundamentals of public health to select the proper method for infection control.	**3.1.2.1.** Apply the principles of public health and disease microbiology to select and assess proper methods of infection control.
3.1.3. Detect and control microbial growth & perform lab tests to identify infections.	**3.1.3.** Monitor and control microbial growth and carry out laboratory tests for identification of infectious diseases.
3.1.4.1. Correlate the etiological, epidemiological, pathophysiological, clinical data and lab diagnosis of infections	**3.1.4.1.** Relate etiology, epidemiology and clinical features of infectious diseases and their pharmacotherapeutic approaches.

with pharmacotherapeutic approaches.	

Domain 4: Personal practice

The students should be able to:

Program key elements	Course learning outcomes
4.1.1. Demonstrate the responsibilities of team members and evaluate their performance considering time management skills.	**4.1.1.** Audit health care team performance and evaluate the managerial skills of its members.
4.1.2. Reclaim and critically analyze 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 efficiently with healthcare team, patients, and communities both verbally and in-writing.	**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	CDC and prevention	2
4	Healthcare-Associated Infections (HAIs)	2
5	Management of Multi-Drug Resistant Organisms (MDROs) in healthcare settings	2
6	**Midterm exam**	
7	Biofilms in healthcare settings	2
8	The role of community pharmacist in epidemics	2
9	Eid Al-Fitr vacation (off)	--
10	The chain of infection	2
11	Vaccine preventable diseases	2
12	Formative assessment	2
	Total hours	**20**

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. Amr Shaker *Amr Shaker*

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

Course name	Infection Control
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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** **1.1.6.2**	**1.1.2.1** **1.1.6.2**	Lecture Open Discussion	Periodic exam Written exam
3	CDC and prevention	**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	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
5	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** **3.1.2.1** **4.1.2**	**1.1.1.1** **1.1.4.1** **1.1.4.2** **2.3.1.1** **2.3.2** **3.1.2.1** **4.1.2**	Lecture Open Discussion Assignments	Periodic exam Written exam
6	Midterm				
7	Biofilms in healthcare settings	**1.1.7.2** **3.1.4.1**	**1.1.7.2** **3.1.4.1**	Lecture Open Discussion	Written exam
8	The role of community pharmacist in epidemics	**1.1.4.1** **1.1.4.2** **2.3.1.1** **2.3.2** **3.1.2.1** **4.1.2**	**1.1.4.1** **1.1.4.2** **2.3.1.1** **2.3.2** **3.1.2.1** **4.1.2**	Lecture Open Discussion	Written exam
9	**Eid Al-Fitr Vacation (off)**				
10	The Chain of Infection	**2.3.1.1** **2.3.2**	**2.3.1.1** **2.3.2**	Lecture Open Discussion Assignments	Written exam
11	Vaccine preventable diseases	**1.1.6.2** **2.1.1** **2.1.2** **2.3.2** **4.1.2** **4.2.1**	**1.1.6.2** **2.1.1** **2.1.2** **2.3.2** **4.1.2** **4.2.1**	Lecture Open Discussion Assignments	Written exam
12	Formative assessment				
15	Final Written exam				

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

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جلسة رقم (٦) بتاريخ ٢٠٢٤/٢/١٤