Republic of Yemen

Ministry of Higher Education & Scientific Research

Emirates International University

Faculty of Dentistry

Department of Basic Science

Doctor of Dental Surgery

Course Specification of Basic Pharmacology I

Course No. ( )

Review committee:

Head of the Department

Quality Assurance head

Dean of Faculty

I. Course Identification and General Information:

1	Course Title:	Basic Pharmacology I			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3	2	--	2
4	**Study Level/ Semester at which this Course is offered:**	2nd Level / 2nd Semester			
5	**Pre –Requisite (if any):**	General Chemistry & Physiology			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Doctor of Dental Surgery			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	Semester based System			
10	**Mode of Delivery:**	Full Time			
11	**Location of Teaching the Course:**	Faculty of Dentistry			
12	**Prepared by:**	Dr. Ali Alyahawi			

II. Course Description:

This course will cover the important concepts about the basis of drug action and the pharmacological basis of therapeutic. The first part of the course will deal with general principles of pharmacology, including pharmacodynamics, and pharmacokinetics. The second part will focus on pharmacology of chemotherapeutic agents (antibacterial, antifungal, and antiviral) and agents used in autonomic nervous system (ANS).

III. Course Intended Learning	Referenced PILOs

Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Learning out of program		
A. Knowledge and Understanding:		**I, A or E**		
a1	Discuss the major steps of pharmacokinetics and pharmacodynamics	**I**	**A1.**	Describe the scientific basis of dentistry and the relevant biomedical and behavioral sciences which form the basis for understanding human growth, development and health.
a2	Discuss the pharmacologic effects, adverse reactions, contraindications, and dental considerations of chemotherapeutic agents and agents used in ANS	**I**	**A1.**	Describe the scientific basis of dentistry and the relevant biomedical and behavioral sciences which form the basis for understanding human growth, development and health.
			A6	Explain the principles of evidence-based dentistry and its relation to scientific research
B. Intellectual Skills:				
b1	Explain the special concepts useful in the study of pharmacokinetics and pharmacodynamics.	**E**	**B1**	Incorporate theoretical basic biomedical, behavioral and dental sciences with the clinical signs and symptoms for appropriate understanding of disease and its management.
			B4.	Construct preventive strategies at different levels according to the targeted individual and community needs.
b2	Compare the specific pharmacology of the major classes of chemotherapeutics agents and ANS	**E**	**B2**	Apply critical thinking and evidence-based problem solving when providing patient's care.
			B3	Prioritize patient's treatment needs and formulate an appropriate treatment plan.
			B4	Construct preventive strategies at different levels according to the targeted individual and community needs.
C. Professional and Practical Skills:				

c1	Apply properly the drugs of chemotherapeutic agents and Autonomic Drugs especially those of dental importance based on drug benefits and the common serious side effects.	A	C7	Apply comprehensive clinical practices.
	D. Transferable Skills:			
d1	Share successfully therapeutic decisions based on updated professional medical information available.	A	D 1	Commit to continuous education, self-development and lifelong learning to remain updated with advances in dental practice.
			D 2	Use advanced information and communication technologies to enrich and diversify professional experience.
			D3	Demonstrate leadership and teamwork skills with colleagues and other oral health team for effective delivery of oral health care.
			D8	Analyze and resolve problems and deal with uncertainty

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes		Teaching strategies	Assessment Strategies
a1	Discuss the major steps of pharmacokinetics and pharmacodynamics	▪ Lectures ▪ Discussion	▪ Quizzes ▪ Midterm Exam ▪ Final Exam
a2	Discuss the pharmacologic effects, adverse reactions, contraindications, and dental considerations of chemotherapeutic agents and agents used in ANS	▪ Lectures ▪ Discussion	▪ Quizzes ▪ Midterm Exam ▪ Final Exam

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes		Teaching strategies	Assessment Strategies
b1	Explain the special concepts useful in the study of pharmacokinetics and pharmacodynamics.	▪ Lectures ▪ Discussion	▪ Quizzes ▪ Midterm Exam ▪ Final Exam

b2	Compare the specific pharmacology of the major classes of chemotherapeutics agents and ANS	▪ Lectures ▪ Discussion	▪ Quizzes ▪ Midterm Exam ▪ Final Exam

© Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes		Teaching strategies	Assessment Strategies
C1	Apply properly the drugs of chemotherapeutic agents and Autonomic Drugs especially those of dental importance based on drug benefits and the common serious side effects.	- Discussion - Self Learning - Presentation - Seminars	Research Homework Group work

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes		Teaching strategies	Assessment Strategies
d1	Share successfully therapeutic decisions based on updated professional medical information available.	- Discussion - Self Learning - Presentation - Seminars	Research Homework Group work

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction to pharmacology	- Definition and brief history	1	2	a 1, a 2
2	Pharmacokinetics	- The Dynamics of Drug Absorption, Distribution, Metabolism, and Elimination	2	4	a 1, b1
3	Pharmacodynamics	- Pharmacodynamics Concepts - Mechanisms of Drug Action	1	2	a 1, b1
4	ANS	- Cholinomimetics/cholinesterase antagonists - Anticholinergics - Adrenoreceptor agonists/sympathomimetics - Adrenoreceptor antagonists.	3	4	a 1, a2, b1, b2

5	**Midterm Exam**		1	2	a 1, a2, b1, b2
6	Chemotherapeutic drugs	- Chemotherapy of bacterial infections	4	8	a 1, a2, b1, b2,
		- Antifungal Agents	2	4	
		- Antiviral Agents	1	2	
7	**Final Exam**		1	2	a 1, a2, b1, b2,
Number of Weeks /and Units Per Semester			**16**	**32**	

V. Teaching Strategies of the Course:

- Lectures
- Discussion
- Seminars
- Presentation
- Self-Learning

VI. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Exam
- Research
- Homework
- Group work

VII. Assignments:

No	Assignments	Week Due	Mark	Aligned CILOs(symbols)
1	**Assignment 1:** List the different steps of Pharmacokinetics	3th	2.5	a 1, a2, b1, b2
2	**Assignment 2:** Compare between different classes of bacterial drugs	6th	2.5	a 1, a2, b1, b2, c1, d 1
3	**Assignment 3:** Compare between different classes of antifungal drugs	9th	2.5	a 1, a2, b1, b2, c1, d 1

4	**Assignment 4:** Compare between different classes of antiviral drugs	12th	2.5	a 1, a2, b1, b2, c1, d 1
	Total		10	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Assignments**	3th, 6th, 9th, 12th	10	10%	a 1, a2, b1, b2, c1, d 1
2	**Quiz 1**	6th	5	5%	a 1, a2, b1, b2,
3	**Midterm Exam**	8th	20	20%	a 1, a2, b1, b2,
4	**Quiz 2**	12th	5	5%	a 1, a2, b1, b2,
5	**Final Exam**	16th	60	60%	a 1, a2, b1, b2,
	Total		**100**	**100%**	

IX. Learning Resources:

1- Required Textbook(s) (maximum two).

1- Karen Whalen, 2014. Lippincott's Illustrated Reviews: Pharmacology, 6th edition.
2- Katzung & Trevor, 2015. Pharmacology: Examination & Board review. Katzung & Trevor, 11th edition

2- Essential References.

1- Mary Lee. 2013; American Society of Health-System Pharmacists Staff (Contribution by). Basi Skills in Interpreting Laboratory Data, ISBN: 9781585285488
2. Katzung, 2014. Basic & Clinical & Pharmacology,,13th edition .
2- Brunton, 2012 . Goodman & Gilman's The Pharmacological Basis of Therapeutics, ed.12th editi

3- Electronic Materials and Web Sites *etc.*

1- https://musc.libguides.com/druginformation/labinteractions
2-http://accesspharmacy.mhmedical.com/
2-www.uptodate.com
3-http://www.elm.jo/

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.

2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

Faculty of Dentistry

Department of Oral Surgery

Doctor of Dental Surgery

Course Plan (Syllabus) Pharmacology (1)

Course No. ( )

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:	Dr. Ali Alyahawi	**Office Hours**					
Location& Telephone No.:	Sana'a 775957401	**2 Hour Weekly**					
E-mail:	Alyahawipharm@yahoo.com	SAT	SUN	MON	TUE	WED	THU

II. Course Identification and General Information:

1	**Course Title:**	Basic Pharmacology I			
2	**Course Code & Number:**				
3	**Credit Hours:**	**Credit Hours**	**Theory Hours**		**Lab. Hours**
			Lecture	**Exercise**	
		3	2	--	2
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5	**Pre –Requisite (if any):**	General Chemistry & Physiology			
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IV. Course Intended Learning Outcomes (CILOs) :

A. Knowledge and Understanding: Upon successful completion of the course, students will be able to:	
a1	Discuss the major steps of pharmacokinetics and pharmacodynamics
a2	Discuss the pharmacologic effects, adverse reactions, contraindications, and dental considerations of chemotherapeutic agents and agents used in ANS
B. Intellectual Skills: Upon successful completion of the course, students will be able to:	
b1	Explain the special concepts useful in the study of pharmacokinetics and pharmacodynamics.
b2	Compare the specific pharmacology of the major classes of chemotherapeutics agents and ANS
C. Professional and Practical Skills: Upon successful completion of the course, students will be able to:	
c1	Apply properly the drugs of chemotherapeutic agents and Autonomic Drugs especially those of dental importance based on drug benefits and the common serious side effects.
c2	Differentiate between microbial infections types according to clinical diagnostic methods.
D. Transferable Skills: Upon successful completion of the course, students will be able to:	
d1	Share successfully therapeutic decisions based on updated professional medical information available.

V. Course Content:

A – Theoretical Aspect:

Order	Units/Topics List	Sub Topics List	Number of Weeks	contact hours
1	**Introduction to pharmacology**	- Definition and brief history	1	2
2	**Pharmacokinetics**	- The Dynamics of Drug Absorption, Distribution, Metabolism, and Elimination	2	4
3	**Pharmacodynamics**	- Pharmacodynamics Concepts - Mechanisms of Drug Action	1	2
4	**ANS**	- Cholinomimetics/cholinesterase antagonists - Anticholinergics - Adrenoreceptor agonists/sympathomimetics - Adrenoreceptor antagonists.	3	4
5	**Midterm Exam**		1	2
6	**Chemotherapeutic drugs**	- Chemotherapy of bacterial infections	4	8
		- Antifungal Agents	2	

		- Antiviral Agents	1	2
7	**Final Exam**		1	2
Number of Weeks /and Units Per Semester			**16**	**32**

VI. Teaching Strategies of the Course:

- Lectures
- Discussion
- Seminars
- Presentation
- Self-Learning

VII. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Exam
- Research
- Homework
- Group work

VIII. Assignments:

No	Assignments	Week Due	Mark
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3	**Assignment 3:** Compare between different classes of antifungal drugs	9th	2.5
4	**Assignment 4:** Compare between different classes of antiviral drugs	12th	2.5
	Total		10

IX. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Assignments	3th, 6th, 9th,12th	10	10%
2	Quiz 1	6th	5	5%
3	Midterm Exam	8th	20	20%
4	Quiz 2	12th	5	5%
5	Final Exam	16th	60	60%
	Total		100	100%

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