

Republic of Yemen  
Ministry of Higher Education & Scientific Research  
Emirates International University



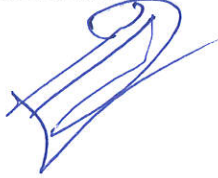
Faculty of Dentistry  
Department of Basic science  
Doctor of Dental Surgery

Course Specification of Pharmacology (2)  
Course No. (-----)

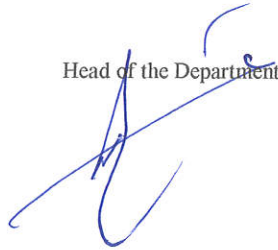


All Rights Reserved, © Emirates International University.

Review committee:



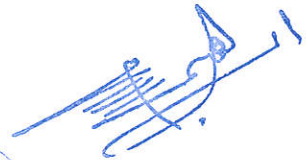
Head of the Department



Quality Assurance head



Dean of Faculty



### I. Course Identification and General Information:

1	Course Title:	Pharmacology (2)			
2	Course Code & Number:	----			
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		2	2	--	--
4	Study Level/ Semester at which this Course is offered:	3 <sup>rd</sup> Level / 1 <sup>st</sup> Semester			
5	Pre –Requisite (if any):	Pharmacology (1)			
6	Co –Requisite (if any):	None			
7	Program (s) in which the Course is Offered:	Bachelor of Dentistry			
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:

The course content aims to familiarize dental students with the types of drugs and their uses, mechanisms of action and side effects that are needed in dental patients. The course content will focus on pharmacology of analgesics, anesthetics, antianxiety, cardiovascular drugs, drugs used in dental emergency, drugs used in pregnancy and breast feeding, and the most common dental drug interactions.



III. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs Learning out of program		
<b>A. Knowledge and Understanding:</b>		I, A or E		
a1	Describe the elements of a drug prescription and the regulations designed to regulate drugs.			A3, A5
a2	Discuss the properties, pharmacologic effects, drug interactions, and uses of analgesics, cardiovascular drugs, and drugs used in common dental emergency			A1
a3	Define drugs used in the common oral conditions, pregnancy and breast feeding, and the most common dental drug interactions			A6
<b>B. Intellectual Skills:</b>				
b1	Compare the special concepts of pharmacokinetics and pharmacodynamics of analgesics, anesthetics, antianxiety, cardiovascular drugs, and drugs used in dental emergency.			B1, B3
b2	Explain the most common dental drug interactions and the specific pharmacology of drugs used in pregnancy and breast feeding and common oral conditions.			B4
<b>C. Professional and Practical Skills:</b>				
c1	Apply properly of analgesics, anesthetics, antianxiety, cardiovascular drugs, and drugs used in common dental emergency especially those of dental importance based on drug benefits and the common serious side effects.			C7
<b>D. Transferable Skills:</b>				

d1	Share successfully therapeutic decisions based on updated professional medical information available.			D3, D8
----	---	--	--	--------

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

Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
a1	Describe the process of normal aging and age changes, effect of aging on teeth and oral mucosa,	Lecture Instructor – student Interactive Office hour Seminar Self-Learning	Exam Assignment Quiz
a2	Identify the psychological theories of aging, impact of aging on integrated organs and system	Lecture Instructor – student Interactive Office hour Seminar Self-learning	Exam Assignment Quiz
a3	Describe the elements of a drug prescription and the regulations designed to regulate drugs.	Lecture Instructor – student Interactive Office hour Seminar Self-learning	Exam Assignment Quiz

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

	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1	Compare the special concepts of pharmacokinetics and pharmacodynamics of analgesics, anesthetics, antianxiety, cardiovascular drugs, and drugs used in dental emergency.	Lecture Instructor – student Interactive Assignment Office hours Seminar Self-Learning	Problem-Solving Quiz Assignment
b2	Explain the most common dental drug interactions and the specific pharmacology of drugs used in pregnancy and breast feeding and common oral conditions.	Instructor – student Interactive Assignment Office hours Seminar Self-Learning	Problem-Solving Exam Assignment Quiz

**(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:**

Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
-----------------------------------	---------------------	-----------------------

c1	Apply properly of analgesics, anesthetics, antianxiety, cardiovascular drugs, and drugs used in common dental emergency especially those of dental importance based on drug benefits and the common serious side effects.	Lecture Instructor – student Interactive Office hours Seminar Self-Learning Assignment	Exam Assignment Quiz
----	---	---	----------------------------

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

Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies	
d1	Share successfully therapeutic decisions based on updated professional medical information available.	Instructor – student Interactive Self-Learning Seminar Exercises	Oral Presentation Class Discussion

**IV. Course Contents:**

**A. Theoretical Aspect:**

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Introduction	- Information, Sources, Regulatory Agencies, and Drug Legislation - Prescription Writing	1	2	a 1
2	Analgesics	- Non-opioid (Nonnarcotic) Analgesics - Opioid (Narcotic) Analgesics and Antagonists	2	4	a2, b1, b2
3	Anesthetics	- Local Anesthetics - General Anesthetics	1	2	a2, b1, b2
4	Antianxiety Agents	- Benzodiazepines and barbiturates. - Nonbenzodiazepine nonbarbiturate sedative-hypnotics and the nonbenzodiazepine-nonbarbiturate receptor agonists.	1	2	a2, b1, b2
5	Cardiovascular Drugs	- Types of antihypertensive agents	2	4	a2, b1, b2
6	Midterm Exam		1	2	a1, a2, b1, b2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
7	Cardiovascular Drugs	- Drugs that affect blood coagulation	2	4	a2, b1, b2
		- Antiarrhythmic agents	1	2	
8	Oral Conditions and Treatment	- Dental Cavities - Gum Disease (periodontal disease) - Infectious Diseases	1	2	a3, b1, b2
9	Common Dental Emergency Drugs	- Essential Emergency Drugs - Additional Emergency Drugs used in dentistry	1	2	a3, b1, b2
10	Pregnancy and Breast Feeding	- Teratogenicity and the Food and Drug Administration (FDA) categories of drugs for pregnancy. - Examples	1	2	a3, b1, b2
11	Dental Drug Interactions	- Adverse Drug Interactions in Dental Practice - Examples of Common Dental Drugs Interactions	1	2	a3, b1, b2
12	Final exam		1	2	a1,a2,a3, b1,b2
<b>Number of Weeks /and Units Per Semester</b>			<b>16</b>	<b>32</b>	

### V. Teaching Strategies of the Course:

- Lecture
- Exercises
- Presentation
- Seminar
- Assignment
- Self-Learning

### VI. Assessment Methods of the Course:

- Quizzes
- Assignment
- Midterm exam
- Final exam



<b>VII. Assignments:</b>				
No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1: List local and general anesthetics	3 <sup>th</sup>	2.5	a2, b1, b2
2	Assignment 2: Compare between different classes of analgesics drugs	6 <sup>th</sup>	2.5	a2, b1, b2, c1, d 1
3	Assignment 3: Compare between classes of coagulation drugs	9 <sup>th</sup>	2.5	a2, b1, b2, c1, d 1
4	Assignment 4: List the most common dental drug interactions	12 <sup>th</sup>	2.5	a3, b1, b2, c1, d 1
<b>Total</b>			<b>10</b>	

<b>VIII. Schedule of Assessment Tasks for Students During the Semester:</b>					
No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	3 <sup>th</sup> , 6 <sup>th</sup> , 9 <sup>th</sup> , 12 <sup>th</sup>	10	10%	a 2, a3, b1, b2, c1, d 1
2	Quiz 1	6 <sup>th</sup>	5	5%	a 1, a2, b1, b2
3	Midterm Exam	8 <sup>th</sup>	20	20%	a1, a2, b1, b2
4	Quiz 2	12 <sup>th</sup>	5	5%	a3, b1, b2, c2, d 1
5	Final Exam	16 <sup>th</sup>	60	60%	a1,a2,a3, b1,b2
<b>Total</b>				<b>100</b>	<b>100%</b>

<b>IX. Learning Resources:</b>	
<b>1- Required Textbook(s) ( maximum two ):</b>	
1- Karen Whalen, 2014. Lippincott's Illustrated Reviews: Pharmacology, 6th edition. 2- Katzung & Trevor, 2015. Pharmacology: Examination & Board review. Katzung & Trevor, 11th edition	
<b>2- Essential References.</b>	
1- Mary Lee (2013); American Society of Health-System Pharmacists Staff (Contribution by). Bas 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 edit	
<b>3- Electronic Materials and Web Sites etc.</b>	
1- <a href="https://musc.libguides.com/druginformation/labinteractions">https://musc.libguides.com/druginformation/labinteractions</a> 2- <a href="http://accesspharmacy.mhmedical.com/">http://accesspharmacy.mhmedical.com/</a> 2- <a href="http://www.uptodate.com">www.uptodate.com</a> 3- <a href="http://www.elm.jo/">http://www.elm.jo/</a>	

<b>X. Course Policies: (Based on the Uniform Students' By law (2007))</b>	
1	<b>Class Attendance:</b> 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	<b>Tardiness:</b> A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	<b>Exam Attendance/Punctuality:</b> 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	<b>Assignments &amp; Projects:</b> Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	<b>Cheating:</b> 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	<b>Forgery and Impersonation:</b> 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	<b>Other policies:</b> 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 Basic Science

### Doctor of Dental Surgery

### Course Plan (Syllabus) of Pharmacology (2)

Course No. ( ----- )

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:		Office Hours					
Location & Telephone No.:							
E-mail:		SAT	SUN	MON	TUE	WED	THU



## II. Course Identification and General Information:

1	Course Title:	Pharmacology (2)			
2	Course Code & Number:	----			
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		2	2	--	--
4	Study Level/ Semester at which this Course is offered:	3rd Level / 1st Semester			
5	Pre –Requisite (if any):	Pharmacology (1)			
6	Co –Requisite (if any):	None			
7	Program (s) in which the Course is Offered:	Bachelor of Dentistry			
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			

## III. Course Description:

The course content aims to familiarize dental students with the types of drugs and their uses, mechanisms of action and side effects that are needed in dental patients. The course content will focus on pharmacology of analgesics, anesthetics, antianxiety, cardiovascular drugs, drugs used in dental emergency, drugs used in pregnancy and breast feeding, and the most common dental drug interactions.

#### IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

<b>A. Knowledge and Understanding:</b>	
a1	Describe the elements of a drug prescription and the regulations designed to regulate drugs.
a2	Discuss the properties, pharmacologic effects, drug interactions, and uses of analgesics, cardiovascular drugs, and drugs used in common dental emergency
a3	Define drugs used in the common oral conditions, pregnancy and breast feeding, and the most common dental drug interactions
<b>B. Intellectual Skills:</b>	
b1	Compare the special concepts of pharmacokinetics and pharmacodynamics of analgesics, anesthetics, antianxiety, cardiovascular drugs, and drugs used in dental emergency.
b2	Explain the most common dental drug interactions and the specific pharmacology of drugs used in pregnancy and breast feeding and common oral conditions.
<b>C. Professional and Practical Skills:</b>	
c1	Apply properly of analgesics, anesthetics, antianxiety, cardiovascular drugs, and drugs used in common dental emergency especially those of dental importance based on drug benefits and the common serious side effects.
<b>D. Transferable Skills:</b>	
d1	Share successfully therapeutic decisions based on updated professional medical information available.

#### V. Course Contents:

##### A. Theoretical Aspect:

No	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Introduction	- Information, Sources, Regulatory Agencies, and Drug Legislation - Prescription Writing	1	2
2	Analgesics	- Non-opioid (Nonnarcotic) Analgesics - Opioid (Narcotic) Analgesics and Antagonists	2	4
3	Anesthetics	- Local Anesthetics - General Anesthetics	1	2
4	Antianxiety Agents	- Benzodiazepines and barbiturates. - Nonbenzodiazepine nonbarbiturate	1	

		sedative-hypnotics and the nonbenzodiazepine-nonbarbiturate receptor agonists.		2
5	Cardiovascular Drugs	- Types of antihypertensive agents	2	4
6	Midterm Exam		1	2
7	Cardiovascular Drugs	- Drugs that affect blood coagulation	2	4
		- Antiarrhythmic agents	1	2
8	Oral Conditions and Treatment	- Dental Cavities - Gum Disease (periodontal disease) - Infectious Diseases	1	2
9	Common Dental Emergency Drugs	- Essential Emergency Drugs - Additional Emergency Drugs used in dentistry	1	2
10	Pregnancy and Breast Feeding	- Teratogenicity and the Food and Drug Administration (FDA) categories of drugs for pregnancy. - Examples	1	2
11	Dental Drug Interactions	- Adverse Drug Interactions in Dental Practice - Examples of Common Dental Drugs Interactions	1	2
12	Final exam		1	2
Number of Weeks /and Units Per Semester			16	32

#### VI. Teaching Strategies of the Course:

- Lecture
- Exercises
- Presentation
- Seminar
- Assignment
- Self-Learning

#### VII. Assessment Methods of the Course:

- Quizzes
- Assignment
- Midterm exam
- Final exam

### VIII. Assignments:

No.	Assignments	Week Due	Mark
1	Assignment 1: List local and general anesthetics	3th	2.5
2	Assignment 2: Compare between different classes of analgesics drugs	6th	2.5
3	Assignment 3: Compare between classes of coagulation drugs	9th	2.5
4	Assignment 4: List the most common dental drug interactions	12th	2.5
<b>Total</b>			<b>10</b>

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

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

### X. 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). Basic 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 edition

#### 3- Electronic Materials and Web Sites etc.

- 1- <https://musclibguides.com/druginformation/labinteractions>
- 2- <http://accesspharmacy.mhmedical.com/>
- 2- [www.uptodate.com](http://www.uptodate.com)
- 3- <http://www.elm.jo/>

## XI. Course Policies: (Based on the Uniform Students' Bylaw (2007))

1	<b>Class Attendance:</b> 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	<b>Tardiness:</b> A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	<b>Exam Attendance/Punctuality:</b> 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	<b>Assignments &amp; Projects:</b> Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	<b>Cheating:</b> 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	<b>Forgery and Impersonation:</b> 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	<b>Other policies:</b> 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.