

Republic of Yemen
Ministry of Higher Education & Scientific Research
21 September University for Medicals and Applied Sciences



Faculty of Clinical Pharmacy

Bachelor of Pharm. D.

Course Specification of Clinical **Toxicology**

Course Code. (02.03.242)

2021-2022



T4: This Template is Developed and Approved by CAQA-Yemen, 2023

Prepared by:
Dr. Hassan Al-Mahbashi

Reviewed by:
Dr. Ali Alyahawi

Head of the Department:

Quality Unit:
Dr. Abdulelah Thabet

Dean
Dr. Ali Alyahawi

I. General Information:

1.	Course Title:	Clinical Toxicology			
2.	Course Code:	02.03.242			
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours
			Lecture	Tutorial/Seminar	Lab Clinical
		3	2		2 --
4.	Level/ Semester at which this Course is offered:	Level 5/ Semester 1			
5.	Pre –Requisite (if any):	Pharmacology I, II			
6.	Co –Requisite (if any):	-			
7.	Program (s) in which the Course is Offered:	Bachelor of Clinical Pharmacy & Pharm. D.			
8.	Language of Teaching the Course:	English			
9.	Location of Teaching the Course:	Faculty of Clinical Pharmacy			
10.	Prepared by:	Prof. Hassan Mohammed Al-Mahbashi			
11.	Date and Number of Approval by Council:				

II. Course Description:

The course will provide students with the general aspects of general toxicology, clinical toxicology, toxicity of common drugs, household products, narcotics and animals toxins. In addition, the course discusses first aid management of poisoning cases and antidotes with examples of available ones and their clinical uses.

III. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs	
A. Knowledge and Understanding:		I, P or M/A	
a1	Explain the various means of possible exposure to therapeutic and toxic agents and their toxickinetics	I	A1, A3
a2	Outline proper management of acute and chronic toxicity of common drugs. adapt the proper treatment for such cases.	I	A5
B. Intellectual Skills:			
b1	Understanding the toxicokinetic, serious consequences of toxic drugs and chemicals exposure and design strategies for how to prevent, manage and respond to toxin threats.	P	B3
b2	Analyze patient data to identify and manage any assigned toxic compound.	P	B5
C. Professional and Practical Skills:			
c1	Interpret the mechanism, toxicokinetics and clinical pictures of toxicity of common drugs and how to do first aid measurements for each one.	P	C1
c2	Apply the principles of drug information for the antidotes and treatment of various toxic substances.	P	C5
D. Transferable Skills:			
d1	Share successfully appropriate therapeutic decisions for individual poisoned patients.	A	D1
d2	Uses a new technology and resources of toxicology center to improve research and postgraduate studies.	A	D3
I= Introduced, P=Practiced or M/A= Mastered/Advanced			

(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	Explain the various means of possible exposure to therapeutic and toxic agents and their toxickinetics	- Lecture - Instructor – student Interactive - Office hour	- Exam - Assignment - Quiz
a2	Outline proper management of acute and chronic toxicity of common drugs. adapt the proper treatment for such cases.	- Lecture - Instructor – student Interactive - Office hour	- Exam - Assignment - Quiz
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Understanding the toxicokinetics , serious consequences of toxic drugs and chemicals exposure and design strategies for how to prevent, manage and respond to toxin threats,	- Lecture - Instructor – student Interactive - Exercises - Solving Problem Methods	- Problem-Solving Exercises. - Assignment - Quiz
b2	Analyze patient data to identify and manage any assigned toxic compound.	- Lecture - Instructor – student Interactive - Exercises - Solving Problem Methods	- Problem-Solving Exercises. - 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	Interpret the mechanism, toxicokinetics and clinical pictures of toxicity of common drugs and how to do first aid measurements for each one.	- Lecture - Instructor – student Interactive - Self-Learning	- Exam - Assignment - Quiz
c2	Apply the principles of drug information for the antidotes and treatment of various toxic substances.	- Lecture - Instructor – student Interactive - Self-Learning	- 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 appropriate therapeutic decisions for individual poisoned patients.	- Self-Learning - Seminar - Exercises	- Presentation - Assignment - Quiz
d2	Uses a new technology and resources of toxicology center to improve research and postgraduate studies.	- Seminar - Instructor–student Interactive - Exercises	Presentation

IV. Course Contents:

A. Theoretical Aspect:

Order	Units/Topics List	Learning Outcomes	Sub Topics List	Num1ber of Weeks	Contact Hours
1	Introduction	a1, b1, d1, d2	- Definition , Different areas of toxicology - Types of exposures to poisons - Classification of poisons	1	2
2	Fate of poisons (Toxicokinetic)	a1, b1, c1	- Absorption - Distribution - Metabolism - Excretion	1	2
3	First aid management of acute poisoning	a1, a2, b1, b2, c1, c2, d1, d2	- ABCS - Decontamination	1	2
4	First aid management of acute poisoning	a1, a2, b1, b2, c1, c2, d1, d2	- Elimination from blood and tissues - Antidote	1	2
5	Corrosive poisons	a1, a2, b1, b2, c1, c2, d1, d2	- Strong acids - Strong base	1	2
6	Corrosive poisons	a1, a2, b1, b2, c1, c2, d1, d2	- Organic acids - House hold poisons	1	2
7	Mid-term exam	a1, a2, b1, b2	-	1	2
8	Metals toxicity	a1, a2, b1, b2, c1, c2, d1, d2	- Lead - Arsenic - Iron	1	2

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Head of the Department:

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9	Pesticides	a1, a2, b1, b2, c1, c2, d1, d2	- Insecticides (OPC, organochlorine) - Rodenticides	1	2
10	Sedative and hypnotics	a1, a2, b1, b2, c1, c2, d1, d2	- Benzodiazepines - Barbiturates - TCA	1	2
11	NSAID	a1, a2, b1, b2, c1, c2, d1, d2	- Paracetamol - Aspirin	1	2
12	Asphyxiant	a1, a2, b1, b2, c1, c2, d1, d2	- CO - CN	1	2
13	Volatile poisons	a1, a2, b1, b2, c1, c2, d1, d2	- Ethanol - Methanol	1	2
14	Animal poisons	a1, a2, b1, b2, c1, c2, d1, d2	- Snake pit - Scorpion pit	1	2
15	Narcotics and drug abuse	a1, a2, b1, b2, c1, c2, d1, d2	- Opioid - Cannabis - Codeine	1	2
16	Final exam	a1, a2, b1, b2,		1	2
Number of Weeks /and Units Per Semester				16	32

B. Practical Aspect:				
No.	Tasks/ Experiments	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	- Introduction and different fields of toxicology and antidotal therapy	2	4	a1,a2, b1,b2,c1,c2
2	- CNS stimulants and CNS depressants	2	4	a1,a2, b1,b2,c1,c2
3	- Mercury poisoning	1	2	c1,c2
4	- Lead poisoning	1	2	c1,c2
5	- Mid-Exam	1	2	a1,a2, b1,b2,c1,c2
6	- Cyanide poisoning	1	2	a1,a2,c1,c2
7	- Carbon monoxide poisoning	1	2	b1,b2,c1,c2
8	- Digoxin toxicity	1	2	c1, c2
9	- Corrosives	1	2	c1,c2
10	- Salicylate poisoning	1	2	c1,c2
11	- Revision	1	2	a1,a2, b1,b2,c1,c2



12	- Final Exam	1	2	a1,a2, b1,b2,c1,c2
Number of Weeks /and Units Per Semester		14	28	

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1 homework	4 th	2.5	a1, a2, b1, b2, c1, c2
2	Assignment 2: problem solve	9 th	2.5	a1, a2, b1, b2, c1, c2, d1, d2
Total				5

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	4th, 9th	5	5%	a1, a2, b1, b2, c1, c2, d1, d2
2	Quiz & Practical Reports	2 nd -13 th	5	5%	a1, a2,c1, c2, d1, d2
	Midterm Exam (Theory)	Week 7	15	20%	a1, a2, b1, b2
3	Midterm Exam (Practical)	Week 7	10	10%	c1, c2
4	Final Practical Exam	14 th	15	15%	c1, c2, d1, d2
5	Final Exam (Theory)	Week 16	50	50%	a1, a2, b1, b2
Total			100	100%	

IX. Learning Resources:

1- Required Textbook(s):

- 1- Curtis D. Klaassen Casarett and Doull's (2013). Toxicology: The Basic Science of Poisons, 8th Ed. (ISBN: 978-0071769235)

2- Essential References.

- 1 Robert S. Hoffman, Mary Ann Howland, Neal A. Lewin, Lewis S. Nelson, and Lew Goldfrank (2014). Goldfrank's Toxicologic Emergencies, 10th Ed. (ISBN: 978-0-07-180188)

3- Electronic Materials and Web Sites etc.

- 1-1 -American College of Toxicology, www.actox.org

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

Class Attendance:

- 1 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.

Tardiness:

- 2 A student will be considered late if he/she is not in class after 10 minutes of the start time of class.

Exam Attendance/Punctuality:

- 3 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.

Assignments & Projects:

- 4 Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.

Cheating:

- 5 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.

Forgery and Impersonation:

- 6 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.

Other policies:

- 7 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 Clinical Pharmacy

Bachelor of Pharm. D

Course Plan (Syllabus) of Clinical Toxicology

Course Code. 02.03.242

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

2021- 2022

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

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D. Transferable Skills:

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V. Course Contents:

A. Theoretical Aspect:

خطأ! لم يتم العثور على مصدر المرجع.

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6	Corrosive poisons	a1, a2, b1, b2, c1, c2, d1, d2	- Organic acids - House hold poisons	1	2
7	Mid term exam	a1, a2, b1, b2,	-	1	2
8	Metals toxicity	a1, a2, b1, b2, c1, c2, d1, d2	- Lead - Arsenic - Iron	1	2
9	Pesticides	a1, a2, b1, b2, c1, c2, d1, d2	- Insecticides (OPC, organochlorine) - Rodenticides	1	2
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Number of Weeks /and Units Per Semester				16	32

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3	- Mercury poisoning	1	2	c1,c2
4	- Lead poisoning	1	2	c1,c2
5	- Mid-Exam	1	2	a1,a2, b1,b2,c1,c2
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12	- Final Exam	1	2	a1,a2, b1,b2,c1,c2
Number of Weeks /and Units Per Semester		14	28	

VI. Teaching Strategies of the Course:

- Lecture
- Instructor – student Interactive
- Exercises
- Presentation
- Office hours
- Seminar
- Assignment
- Self-Learning

VII. Assessment Methods of the Course:

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- Assignments
- Quiz
- Exam
- Oral Presentation

VIII. Assignments:

No.	Assignments	Week Due	Mark
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