



Quality Assurance Unit



**Tanta University
Faculty of Medicine**

Medicine and Surgery Bachelor Program – Credit Point

MSBP -CP

Course Specifications

[Clinical Toxicology]

Semester 3

2023 -2024

Code: CT 2102

1- Administrative Information

1. Program title: Medicine and Surgery Bachelor Program – Credit Point MSBP -CP
2. Course title: Clinical Toxicology
3. Course code: CT 2102
4. Course coordinator: Prof. Mervat Oreby
5. Department(s) offering the course : Forensic Medicine and Clinical Toxicology
6. Academic year: 2023- 2024
7. Level: Level two – Semester three
8. . Date of approval by:
 - Council of the Faculty of Medicine, Tanta University 5-9-2023
9. No. of hours:

Credit points			Online lectures	Practical/clinical	Media	Self-learning hours	Exam	Taught hrs.
4	Contact hours	70 %	28- Interactive-online on Microsoft Team	28	12 online on Microsoft Team		2	100
	Self-learning hours	30%				30		

2- Professional Information

Academic standards adopted in this course is designed according to NARS 2017 which adopted by the faculty council in 24/3/ 2018

3 – Course Description

Clinical Toxicology is the study of clinical diagnosis and treatment of poisonings, including the assessment of toxic potential, stabilization of vital function, and specific antidotal measures.

4- Overall Course Aim/Objective

Aim:

Develop a general working knowledge of the principles and practice of clinical toxicology. The level of professional preparation provided by this course would enable a practitioner to function as contributing health care team member when faced with a toxic exposure experience, including emergencies.

Objectives:

- Demonstrate and apply an understanding of general toxicology principles and clinical management practice
- Demonstrate and apply an understanding of the history, assessment, and therapy considerations associated with the management of a toxic exposure
- Demonstrate and apply an understanding of the characteristics of and treatment guidelines for specific toxic substances
- Demonstrate the achievement of an ability to function in a professional capacity that is appropriate and functional when he or she encounters a toxic exposure

5 - Intended learning outcomes (ILOs)

By the end of this course the student will be able to:

Competency Area I: The graduate as a health care provider

- I1: Take and record a structured, patient centered toxicological history. (program ILO 1.1)**
- I2: Perform a complete or focused mental examination and physical examination in acute toxicological cases appropriate to the age, sex. In ethical Manner. (program ILO 1.2, 1.3)**
- I3: select the most appropriate and cost effective diagnostic laboratory and radiological investigations and other types of investigations for toxicological cases to reach the proper final. (program ILO 1.6)**
- I4: Establish the diagnosis of the specific poison based on history, physical and laboratory test findings, add to that systemic thinking and personal judgment. (Program ILO 1.8, 1.10)**
- I5: Formulate patient-centered treatment plans in acute poisoned patients. (Program ILO 1.13)**
- I6: Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures for common toxicological case (Program ILO 1.15)**

Competency Area II: The graduate as a health promoter

- II1: Demonstrate the role of nutrition(as in corrosives) and physical activity(as in snake bites) in toxicology. (Program ILO 2.3)**
- II2: Recognize the epidemiology of common poisons within his/her community, and apply the systematic approaches useful in reducing the incidence and prevalence of those poisons. (Program ILO 2.6)**

Competency Area III: The graduate as a professional

III.1. Exhibit appropriate professional behaviors and relationships during history taking, demonstrating honesty, integrity, commitment, compassion, and respect. (Program ILO 3.1)

III.2. Ensure confidentiality and privacy of patients' information received during history taking. (Program ILO 3.5)

Competency Area IV: The graduate as a scholar and scientist

IV1: Recognize the mode of poisons, mechanism, and complications of common poisons affecting human body and its organ systems. (Program ILO 4.5)

IV2: Describe the principles of management of common poisons. (Program ILO 4.5)

Competency Area V: The graduate as a member of the health team and system

V.1. Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management. (Program ILO 5.2)

V.2. Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary. (Program ILO 5.7)

Competency Area VI: The graduate as a lifelong learner and researcher

VI1: Apply the principles of lifelong learning. (Program ILO 6.3)

VI2: Engage in inter-professional activities and collaborative learning to continuously improve personal practice and contribute to collective improvements in practice. (Program ILO 6.4)

VI3: Consider the resources of biomedical information including the available electronic facilities and communication technology to update his/her knowledge, improve his/her medical practice and to manage and manipulate information effectively. (Program ILO 6.6)

6 – Course/ Course Contents

Courses	online Lecture	Web based L	Patient L	Tutorial	Workshop			Small group teaching		Bedside T	Skill L.	Portfolio
					Media	Lab	Computer	CB L	PB L			

Clinical Toxicology	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓
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topics	No of hours					ILOs covered
	Online lectures	Lab.	media	Self-directed learning	Exam	
The general approach to medical toxicology	8h	11h	6h			I1,I2,I4,,I6
The clinical basis of medical toxicology	20h	17h	6h			I1,I2,I3,I4,I5,I6- II1,2- IV1,2
Total	28h	28h	12h	30	2	

7 - Teaching and learning methods

- Online **lectures (live and videos)**
- Small-group active learning
- Case-based small group discussion
- Self-directed learning
- Hands on training with supervision
- Oral presentation using PowerPoint
- Multi-media
- Lab contact hours
- Home assignments
- Patient-centered discussions

Item	Time schedule	Teaching hours/week
Online lectures	1 time	2h
Practical	1 time	2h

Item	Time schedule	Teaching hours/week
Online Multi-media	1 times /week	1h
Self-directed learning		30hrs

8 - Student evaluation

8-1 COURSE POLICIES

8.1.1. Attendance:

Attendance is mandatory to all sessions. Due to the course emphasis in developing skills and not only knowledge, the students' participation in all course activities is critical. Students who expect to be late for a mandatory class, lab, or small group session for any reason must contact the course director before the start of class. Unexcused absences demonstrate unprofessional behavior by the student.

8-1-2 Remediation of Unsatisfactory Performance in Course

A student who performs below the satisfactory level will be notified to Course Director for the purpose of developing a formal remediation plan which will be established by the course director and the student.

8-1-3 Missing tests

- Students with sufficient reason for missing a test will have no grade for the missed test and their mean grade for tests will be based only on those that they completed.
- Students missing a test without sufficient reason will have a zero as grade for the missed tests, which will be incorporated to obtain the mean grade for their tests and the final grade for the course.

8-2 Course assessment:

Formative and summative assessment: they include:

1. Assignments & Quizzes (Electronic) and logbook.
2. Written exams: MCQs, short answered questions and case studies (problem solving) (electronic or paper based)..
3. Clinical and practical skills assessment: Objective Structured Practical and Clinical Exams (OSPE/OSCE).

8-3 course assessment schedule and grading:

Grades are obtained based on the following complementary assessments:

Assessment Method	Date	Description	ILOs/Competencies assessed	Marks	% of Total
1.Continuous Assessments (Portfolio)	Through semester	- One Quiz - Log book - Assignments	I1,I2,I3,I4,I5,I6- II1,2-III1,2-IV1,2-V1,2-VI1,2	24	30%
	Week 6	Seminar (presentation and Report			
2.Mid-term-written Exam	Midterm Week 9	MCQ	I1,I2,I3,I4,I5,I6- II1,2	8	10%
3- Practical Exam	End semester Week15	OSPE-OSCE	I4,5-V1,2	24	30%
4-Final-written Exam	End semester Week 16	MCQ & short answered questions	I1,I2,I3,I4,I5,I6- II1,2	24	30%
Total				80	100

9. Facilities required

- Lecture rooms with data show and computer facilities
- A u-shaped teaching halls with internet connection (hosting 24 students)
- Computer lab equipped with internet connection
- Flip chart and colored pen
- A wall board
- Facilities for photocopying

10 - List of references

Mandatory book: the department book

Recommended reference textbooks:

- Hadad and Winchesters Clinical Management of Poisoning and Drug Overdose 4th edition, 2007
 - Goldfrank's Toxicologic Emergencies, 8th edition , 2006
- Recommended reference textbooks:

2. Electronic Materials, Web Sites etc.

- medscape
- Mayo clinic
- E medicie

Course coordinator: Mervat Oreby

A) Summary of topics matched with competencies' domains ILOs in the course

The name of course	University: Tanta /Academy					
Code of course	Faculty: Medicine					
Topics of the course	Health care provider	Health promoter	Professionalism	Scholar and scientist	Health team & system	LLL & researcher
Online lectures:						
The general approach to medical toxicology	√	√	√	√	√	√
The clinical basis of medical toxicology	√	√		√		√
Practical						
1-General Toxicology	√		√	√	√	√
2-Toxicological Signs	√		√	√	√	√
3-Toxicological Investigation	√		√	√	√	√
4-Skill Lab	√		√	√	√	√
5-Toxic Seeds	√		√	√	√	√
6-Natural toxins and envenomation	√		√	√	√	√
7-Household Poisoning	√		√	√	√	√
8-Antidotes	√		√	√	√	√
9-How to deal with pesticides	√		√	√	√	√

Topics of the course	Health care provider	Health promoter	Professionalism	Scholar and scientist	Health team & system	LLL & researcher
10-Clinical Cases Presentations from Tanta Poison Control Center- part 1	√		√	√	√	√
11-Clinical Cases Presentations from Tanta Poison Control Center – part 2	√		√	√	√	√
Multi-media						
1-Toxicological History taking	√	√	√	√	√	√
2-Gastric lavage	√	√		√	√	√
3-First aids in snake bites	√	√	√	√	√	√
4-First aids in corrosives ingestion	√	√	√	√	√	√
5-Nontoxic ingestion	√	√	√	√	√	√
6-emergency care in toxicology	√	√	√	√	√	√
7-ICU in poisoned patient	√	√	√	√	√	√
8-Withdrawal symptoms and detoxification	√	√	√	√	√	√

Topics of the course	Health care provider	Health promoter	Professionalism	Scholar and scientist	Health team & system	LLL & researcher
9- Organophosphorous poisoning	√	√	√	√	√	√
10-Poison prevention education	√	√	√	√	√	√
Self-directed learning						
	√	√	√	√	√	√

B) Summary of topics, schedule, and methods of teaching & assessment, ILOs assessed, hours and marks of the module:

Topics of the course	Objectives	Week	Method of teaching	Method of assessment	ILOs	Hours	Weight in assessment
Online lectures:							
General toxicology	-Discuss the general approach of diagnosis and treatment of poisoned patient	1,2,3	Online	MCQ, ultrashort	I1,I2,I4,I6	8	
Envenomation emergencies	-Discuss classification of snakes. -Recognize the mechanism of toxicity & clinical	4	Online	MCQ ultrashort	I1,I2,I3,I4,I5,I6- II1,2- IV1,2	2	

Topics of the course	Objectives	Week	Method of teaching	Method of assessment	ILOs	Hours	Weight in assessment
	picture of snake bite. -Discuss the general instructions & approach for management of snake bite.						
Corrosives	-Discuss types of corrosive - Describe mechanism of action & clinical picture of corrosives -Recognize management of corrosive poisoning.	5	Online	MCQ ultrashort	I1,I2,I3,I4,I5,I6-II1,2- IV1,2	3	
Pesticides	- Identify types of pesticides - Describe mechanism of action of	6	Online	MCQ ultrashort	I1,I2,I3,I4,I5,I6-II2- IV1,2	2	

Topics of the course	Objectives	Week	Method of teaching	Method of assessment	ILOs	Hours	Weight in assessment
	organophosphorus pesticides. -Identify management of organophosphorus poisoning.						
Analgesic & anti pyrextics	- Identify types of analgesics. - Recognize mechanism of toxicity of analgesics overdose -Identify clinical picture of analgesics toxicity -Mention the general & specific lines of treatment of analgesics overdose	7	Online	MCQ Ultrashort	I1,I2,I3,I4,I5,I6- II2- IV1,2	2	
Toxic syndromes	-Mention types of toxidrome -Identify clinical manifestations of each toxidrome.	8	Online	MCQ ultrashort	I1,I2,I3,I4,I5,I6- II2- IV1,2	2	

Topics of the course	Objectives	Week	Method of teaching	Method of assessment	ILOs	Hours	Weight in assessment
Noxious gases	- Identify types of noxious gases. -verify mechanism of toxicity of noxious gases. -identify clinical picture of toxicity by noxious gases. -Recognize treatment of noxious gases toxicity.	9	Online	MCQ Ultrashort	I1,I2,I3,I4,I5,I6- II2- IV1,2	2	
Volatiles	-Verify types of volatile. -Mechanism of toxicity of volatiles. -Clinical picture of volatile toxicity. -Differential diagnosis & investigations of volatile toxicity. -Treatment of volatile toxicity	10	Online	MCQ Ultrashort	I1,I2,I3,I4,I5,I6- II2- IV1,2	2	

Topics of the course	Objectives	Week	Method of teaching	Method of assessment	ILOs	Hours	Weight in assessment
Substance dependence	- Recognize definition of drug dependence. -Identify criteria of drug dependence. -Mention examples of substance dependence and clinical picture of each type. - Management of substance dependence.	11	Online	Mcq Ultrashort	I1,I2,I3,I4,I5,I6- II2- IV1,2	2	
Iron	- Verfiy mechanism of toxicity of iron overdose - Mention clinical picture of iron toxicity. -identify differential diagnosis & investigations of tron toxicity - Verify treatment of iron toxicity and its specific antidote	12	Online	MCQ Ultrashort	I1,I2,I3,I4,I5,I6- II2- IV1,2	1	

Topics of the course	Objectives	Week	Method of teaching	Method of assessment	ILOs	Hours	Weight in assessment
Problem solving	-Identify how to think and solve clinical problems. -Verify how to write the appropriate answers for these clinical problems	12	Online	MCQ Ultrashort	I1,I2,I3,I4,I5,I6- II2- IV1,2	2	

C) Course – program ILOs Matrix

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		Course ILOs	Healthcare provider							Health promoter			Scientist									
		Program ILOs	I1	I2	I3	I4	I5	I6		II1	II2		III1	III2								
Competency 1	1.1		*																			
	1.2.			*																		
	1.3.			*																		
	1.4.																					
	1.5.																					
	1.6.				*																	
	1.7.																					
	1.8.					*																
	1.9																					
	1.10					*		*														
	1.11																					
	1.12																					

Course ILOs Program ILOs		Healthcare provider							Health promoter			Scientist									
		I1	I2	I3	I4	I5	I6			II1	II2		III1	III2							
	1.13				*																
	1.14																				
	1.15					*															
Competency 2	2.1.																				
	2.2.																				
	2.3.								*												
	2.4																				
	2.5																				
	2.6									*											
	2.7																				
Competency 3	3.1.												*								
	3.2.																				
	3.3.																				

Course ILOs Program ILOs		Healthcare provider							Health promoter			Scientist									
		I1	I2	I3	I4	I5	I6		II1	II2		III1	III2								
	3.4.																				
	3.5.												*								
	3.6.																				
	3.7.																				
	3.8.																				
	3.9																				

Course ILOs Program ILOS		scientist				Health team							researcher			
		IV1	IV2			V1	V2						VI1	VI2	VI3	
Competency 4	4.1															
	4.2															
	4.3															
	4.4															
	4.5	*	*													
	4.6															
	4.7															
	4.8															
Competency 5	5.1															
	5.2					*										
	5.3															

Course ILOs Program ILOs		scientist				Health team						researcher			
		IV1	IV2			V1	V2					VI1	VI2	VI3	
	5.4														
	5.5														
	5.6														
	5.7						*								
	5.8														
	5.9														
Competency 6	6.1														
	6.2														
	6.3											*			
	6.4												*		
	6.5														
	6.6													*	

Course ILOs Program ILOS		scientist				Health team							researcher			
		IV1	IV2			V1	V2						VI1	VI2	VI3	
	6.7															
	6.8															
	6.9															
	6.10															*