مركز الاعتماد وضمان الجودة
ACCREDITATION & QUALITY ASSURANCE CENTER

The University of Jordan

Accreditation & Quality Assurance Center

Course Syllabus

Course Name: Chemical Toxins.

1	Course title	Chemical Toxins
2	Course number	0531702
3	**Credit hours (theory, practical)**	**3.0**
	Contact hours (theory, practical)	
4	Prerequisites/corequisites	**None**
5	Program title	**Master Of Analytical Toxicology**
6	Program code	
7	Awarding institution	**The University of Jordan**
8	Faculty	**Medicine**
9	Department	**Pathology, Microbiology & Forensic Medicine**
10	Level of course	**1st year**
11	Year of study and semester (s)	**1st semester 1st year**
12	Final Qualification	
13	Other department (s) involved in teaching the course	
14	Language of Instruction	**English**
15	Date of production/revision	**13/10/16**

16. Course Coordinator:

Prof. Abdelkader Battah.
***office number*: Faculty of Medicine 215**
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17. Other instructors:

18. Course Description:

This course covers the theoretical aspects of dangerous chemicals and toxin of different origin. It deals with poison sources, storage, and disposal according to health safety regulation. Also this course deals with these toxin effects on the human being and the environment.

1. 19. Course aims and outcomes:

Successful completion of the course should lead to the following outcomes**:**

A. Knowledge and Understanding: Student is expected to:
   A_1. Describe the toxic responses of toxins on various organ systems.
   A_2. Describe the toxic responses of selected classes of substances.
   A_3. Identify the major substance of abuse and comprehend laws governing its use
   A_4. Demonstrate an understanding of adverse effect of toxins.
   A_5. Realize the Basic principles of management of intoxication with these toxins
   A_6. Research the literature to identify toxicity and suggest outline of precautions.
   A_7. Evaluate data regarding inter-related scientific principles to understand how and why processes and events with critical evaluation of current literature
   A8**.** Compose and practice effective written and oral communication regarding issues in this toxicology course**.**

B. **Intellectual Analytical and Cognitive Skills:** Student is expected to Build up knowledge and scientific skills regarding the types and sources of chemical toxins, their pathophysiology of intoxication and manifestation, their principle investigation, precaution and management.

C. **Subject-Specific Skills:** Students is expected to: **C_1.** Acquire knowledge about the basic principles of the pathophysiology of intoxication, manifestation and management. **C_2.** Recognize common poisons, circumstance of poisoning and their target tissue. **C_3.** Evaluate the toxicity and methods of investigation.

D. **Transferable Key Skills:** Students is expected to be able to:
   D_1. Know and understand the principles of pathophysiology of intoxication by different chemical on biological systems.
   D_2. Recognize the nature and sources of toxins, routes of exposure, clinical manifestation of toxicity and the principles lines of management and precaution
   D_3. Suggest suitable method for investigating poisoning with toxins including poison identification and detection in biological samples and what are the specific analytical techniques applied.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction to Chemical Toxins.	*1*		**Lecture**		
Toxic gases, fumes and volatile (Classifications, CO, CN, fumes, VSA).	*2*		**Presentation , Discussion**		
Toxic gases, fumes and volatile (Classifications, CO, CN, fumes, VSA).	*3*		**Presentation , Discussion**		
Household products (Classifications, Bleaches, Detergents, Corrosives, Hydrocarbons.	*4*		**Presentation , Discussion**		
Household products (Classifications, Bleaches, Detergents, Corrosives, Hydrocarbons.	*5*		**Presentation , Discussion**		
Pesticides.	*6*		**Presentation , Discussion**		
Pesticides.	*7*		**Presentation , Discussion**		
Substances of abuse (Laws & regulations, CNS Depressants and stimulant, Hallucinogens).	8		**Presentation , Discussion**		
CNS Depressants and stimulant, Hallucinogens).	*9*		**Presentation , Discussion**		
Doping in sport.	*10*		**Presentation , Discussion**		
Alcohols.	*11*		**Presentation , Discussion**		

Heavy metals (Lead, Iron, Arsenic, Thallium, Mercury).	*12*		**Presentation, Discussion**		
Chemical warfare agents and Toxins of plant and fungal origins.	*13*		**Presentation, Discussion**		
Toxins of animal and marine origin and Anti-inflammatory (NSAID, Steroids).	*14*		**Presentation, Discussion**		
Antidiabetics and Antibiotics and Anticonvulsants, Antidepressants.	*15*		**Presentation, Discussion**		

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following <u>teaching and learning methods</u>:

Seminars and Discussions:	**Yes**
Homework and Assignments:	**Yes**

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following <u>assessment methods and requirements</u>:

Home work and Assignments

• Each student is assigned a few topics from the course syllabus in which he/she explores the assigned references, literature and internet where he/she will write an assay in organized scientific style which will be presented and discussed with the other colleagues in a form of seminar.

23. Course Policies:

A- Attendance policies:

B- Absences from exams and handing in assignments on time:

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior:

E- Grading policy:

F- Available university services that support achievement in the course:

24. Required equipment:

25. References:

Main Reference(s

1-Casarett and Doulls Toxicology, The Basic Science of Poisons, Klaassen CD, Amadur MO and Doull J.
2-Principles of Clinical Toxicology, Gossel TA, Bricker JD.
3- Medical Toxicology, Diagnosis and Treatment of Human Poisoning, Ellenhorn, Barceloux

References:

1 Hand book of Human Toxicology. Massaro ED.
2 Clarke's Isolation and Identification of Drugs, Moffat A.
3 Goodman and Gilman's, the Pharmacological Basis of Therapeutics, Gilman AG, Goodman LS and Gilman A.
4 A Text book of Modern Toxicology, Ernest Hodgson
5 Internet containing documented scientific information

26. Additional information:

Name of Course Coordinator: ----------Signature: ---------- Date: ----------

Head of curriculum committee/Department: ---------- Signature: ----------

Head of Department: Prof.Abdelkader Battah Signature: ----------

Head of curriculum committee/Faculty: ---------- Signature: ----------

Dean: ---------- -Signature: ----------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File