

## The University of Jordan

**Faculty:** Pharmacy

**Program:** Pharmacy / Pharm D

**Department:** Department of Biopharmaceutics & Clinical Pharmacy

**Academic Year/ Semester:** Second semester 2014/2015

### Selected Topics in Clinical Toxicology (1213563)

<b>Credit hours</b>	2 credit hours	<b>Level</b>	5 <sup>th</sup> year	<b>Pre-requisite</b>	Toxicology (1203562)
<b>Lecturer</b>	Dr. Oriana Awwad	<b>Office number</b>	- 325	<b>Office phone</b>	- 23362
<b>E-mail</b>	<a href="mailto:o.awwad@ju.edu.jo">o.awwad@ju.edu.jo</a>	<b>Place</b>	- 3 <sup>rd</sup> floor		
<b>Course website</b>	<a href="http://www2.ju.edu.jo/sites/Academic/o.awwad/default.aspx">http://www2.ju.edu.jo/sites/Academic/o.awwad/default.aspx</a>				

#### Course Description

This 2-credit hours course is designed to give pharmacists a background in the medical and toxicological principles of toxicants commonly encountered in poison control centers and emergency departments. Clinical Toxicology covers selected drug classes and their toxic effects on the body as well as treatment approaches.

#### Learning Objectives

By the end of this course, the students will:

1. Be familiar with the process used to interpret biotoxicological data.
2. List and discuss in details treatment of any poisoned patient.
3. Review and assimilate toxicologic mechanisms and clinical presentation of toxins covered in class.
4. If presented with a case scenario of a patient exposed to a toxin discussed in class, design a comprehensive treatment plan.

#### Intended Learning Outcomes (ILOs):

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

**A. Knowledge and Understanding:** Student is expected to:

- A.1- Expand his knowledge in a critical medical setting
- A.2- A.3- Be familiar with the treatment algorithm (toxicants-specific)
- A.4- Provide knowledge of the commonly encountered intoxications

A.6- Have knowledge of clinical presentations and the differential lab physical examinations

**B. Intellectual Analytical and Cognitive Skills:** Student is expected to:

B.1- Detect, analyze, and prioritize the medical problems

B.2- Solve common medical problems related to clinical toxicology

B.3- Evaluate risks in clinical toxicology management practice

B.4- Through case discussion, to be able to identify toxin-related problems and recommend the appropriate pharmacological and non-pharmacological treatment methods

**C. Subject-Specific Skills:** Student is expected to:

C.1- Have a critical understanding of the principles underpinning the various

C.2- Through collaboration with poison control center at the Jordan University Hospital, the students will be aware about the most common type on intoxications in Jordan

C.3- Provide knowledge of the most commonly encountered antidotes, their mechanisms of actions, routes of administration and any special precautions

**D. Transferable Key Skills:** Students is expected to:

D.1- Make appropriate therapeutic decisions for individual poisoned patients

D.2- Recognize different resources of toxicology (books, professional sites and scientific journals) and know how to evaluate the big quantity of information available

D.3- Take responsibility for own work and to exercise substantial autonomy and initiative in a learning environment

### **Course Contents**

Week 1: Clinical laboratory results and their evaluation

Week 2: Supportive of convulsion, coma, hypotension and hypertension

Week 3: Supportive care for hypothermia, hyperthermia, fluid intolerance, acid-base imbalance

Week 4: Clinical toxicology of Antidepressants

Week 5: Clinical toxicology of Benzodiazepines

Week 6: Clinical toxicology of anticoagulants

Week 7: Clinical toxicology of Anti-infective agents

Week 8: Clinical toxicology of Diuretics  
Clinical toxicology of Digitalis

Week 9: Clinical toxicology of Hypoglycemic Agents

Week 10: Clinical toxicology of Oral Contraceptives

Week 11: Toxic exposure during pregnancy

Week 12: Intoxication in infants and geriatrics

### **Learning Methodology**

- The course consists of two hours sessions/week
- The lecture include power point presentation that will be prepared for each topic and given to the students as primary source of learning
- The concept acquired by the students will be examined during the semester through the exams as showed below in the evaluation

### **Evaluation**

<b>Evaluation</b>	<b>Point %</b>	<b>Date</b>	<b>Material</b>
<b><i>Midterm Exam</i></b>	<b><u>40%</u></b>	<b><u>To be announced</u></b>	<b><u>To be announced</u></b>
<b><i>Quiz</i></b>	<b><u>10%</u></b>	<b><u>To be announced</u></b>	<b><u>To be announced</u></b>
<b><i>Final Exam</i></b>	<b><u>50%</u></b>	<b><u>To be announced</u></b>	<b><u>To be announced</u></b>

### **Main Reference/s:**

1. Casarett & Doull's: Essentials of Toxicology, 2<sup>nd</sup> Ed. 2010 by Curtis Klaassen and John Watkins III (ISBN: 978-0071622400)
2. Casarett and Doull's Toxicology: The Basic Science of Poisons, 8<sup>th</sup> Ed. 2013 by Curtis D. Klaassen (ISBN: 978-0071769235)
3. Poisoning and Drug Overdose, 6<sup>th</sup> Ed. 2012 by Kent R. Olson (ISBN: 978-0071668330)
4. Goldfrank's Toxicologic Emergencies, 10<sup>th</sup> Ed. 2014 by Robert S. Hoffman, Mary Ann Howland, Neal A. Lewin, Lewis S. Nelson, and Lewis R. Goldfrank (ISBN: 978-0-07-180184-3)
5. Clinical toxicology : principles and mechanisms, 2<sup>nd</sup> Ed. 2010 by Barile, Frank A. (ISBN: 978-1420092257)

### **Important regulations:-**

- Attendance to the lectures is expected and mandatory.
  - Students who are more than 5-10 minutes late for, or who leave early from class will be counted as absent.
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- First warning – with 4 absences
  - Last warning – with 5 absences

- Failing in the subject – with 6 absences

**Cheating policy:** The participation, the commitment of cheating will lead to applying all following penalties together:

- Failing the subject he/she cheated at
- Failing the other subjects taken in the same course
- Not allowed to register for the next semester
- The summer semester is not considered as a semester

**Makeup exams:** Makeup exams should not be given unless there is a valid excuse: student's hospitalization or death of a first degree family member. Arrangements to take an exam at a time different than the one scheduled MUST be made prior to the scheduled exam time.