

**TISHK INTERNATIONAL UNIVERSITY**  
**FACULTY OF APPLIED SCIENCE**  
**Department of MEDICAL ANALYSIS,**  
**-2022 Spring**  
**Course Information for MA 404 MEDICAL TOXICOLOGY**

**Course Name:** MEDICAL TOXICOLOGY

Code	Regular Semester	Theoretical	Practical	Credits	ECTS
MA 404	8	2	-	2	3

**Name of Lecturer(s)-  
Academic Title:** Ismael Bilal - PHD

**Teaching Assistant:** None

**Course Language:** English

**Course Type:** Main

**Office Hours** Tuesday 11:00-13:00

**Contact Email:** ismael.bilal@tiu.edu.iq  
Tel:07504514337

**Teacher's academic  
profile:** Lecturer

**Course Objectives:** This course book includes basic understanding of the toxic and side effect due to misuse of drugs and chemicals in which we are contact with. Also understanding the environmental toxicity (car, water, and soil), industrial toxicity (metals, alkali and acids), and the major sign and symptoms of toxicity and how we can protect or treat them.

**Course Description  
(Course overview):** Toxicology is a type of analytical science which incorporates biology, chemistry and pharmacology for the purpose of study of medicines or toxins, their effects and their detection. This course will include elements of many previous courses such as pharmacology, biochemistry, physiology, pathology and Medical Specimens. Students will integrate their current comprehension of these other sciences and study them in a new way. Toxicology plays an important role in analytical medicine and toxicological departments are commonly located in most hospitals and in numerous private analytical labs. Toxicology is an important discipline in the practice of medical analysis and the aim of this course is to provide students with the tools and know-how practice this science with confidence and efficacy and for providing a foundation for further study in this specialty.

**COURSE CONTENT**

Week	Hour	Date	Topic
1	2	6-10/2/2022	Introduction of toxicology
2	2	13-17/2/2022	General approach to the posion patient
3	2	20-24/2/2022	Clinical Toxicology Laboratory
4	2	27/2-3/3/2022	Practical Aspect of Analytical Toxicology
5	2	6-10/3/2022	Toxicant of the Public Health Hazards
6	2	27-31/3/2022	Medical Toxicants
7	2	3-7/4/2022	Environmental Toxicants
8	2	10-14/4/2022	Midterm Exam
9	2	17-21/4/2022	Midterm Exam
10	2	24-28/4/2022	Drug and Uses
11	2	8-12/5/2022	Natural Toxicants
12	2	15-19/5/2022	Industrial Toxicants
13	2	22-26/5/2022	Principle of the management of the poisoning
14	2	29/5-2/6/2022	Revision

15	2	5-9/6/2022	Final Exam
16	2	12-16/6/2022	Final Exam

**COURSE/STUDENT LEARNING OUTCOMES**

- 1 1. Have a comprehensive knowledge of all the basic principles in Clinical Toxicology.
- 2 2. Understanding the mechanism of toxicity of medications and chemicals on human
- 3 3. Recognize the toxic dose and toxic effects of xenobiotic that produce systemic toxicity on human health.
- 4 4. Description of poison prevention and control strategy
- 5 5. The basic principle of management of poisoning.

**COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES**

(Blank : no contribution, I: Introduction, P: Proficient, A: Advanced )

**Program Learning Outcomes**

**Cont.**

- |    |  |   |
|----|--|---|
| 1  | Evaluate clinical laboratory data by interpreting laboratory results and relating the data to various disease states.  | I |
| 2  | apply principles of evidence-based medicine to determine clinical diagnoses.   | I |
| 3  | apply the basic principles of gross and microscopic anatomy, physiology, biochemistry, immunology, microbiology/virology.  | I |
| 4  | formulate and implement acceptable treatment modalities to various disease states.   |   |
| 5  | use technology effectively in the delivery of instruction, assessment, and professional development.   | P |
| 6  | exhibit essential employability qualities by demonstrating laboratory safety, analyzing laboratory results, and displaying professional conduct.   |   |
| 7  | exhibit organizational skills, accountability, and ethical behavior.   | I |
| 8  | apply skills needed in operating laboratory equipment for testing, assessing quality assurance for lab equipment, and adhering to standard safety practices in the laboratory environment. |   |
| 9  | apply problem-solving and decision-making skills.  | I |
| 10 | apply and promote health policies and regulatory standards in the field career.  | I |
| 11 | develop research in the field of medical analysis using qualitative and quantitative methods.  |   |

**Prerequisites (Course Reading List and References):**

Cassarett and Doulls, Toxicology, 6th Ed., Curtis S. Klassan, 2001, McGraw H.

**Student's obligation (Special Requirements):**

Richard C. Dart, Medical Toxicology, third Ed, E. Martin Caravati, 2004.

**Course Book/Textbook:**

To develop an understanding about the mechanism of toxicity of many drugs and compounds on human body and produce their toxic or cell health.

**Other Course Materials/References:**

Lipophilicity in drug action and toxicology

**Teaching Methods (Forms of Teaching):**

Lectures, Presentation, Seminar, Assignments, , ,

**COURSE EVALUATION CRITERIA**

Method	Quantity	Percentage (%)
Seminar	1	10
Attendance	1	5
Participation	1	5
Quiz	2	5
Midterm Exam	1	30
Final Exam	1	40
<b>Total</b>		<b>100</b>

**Examinations:** Essay Questions, True-False, Fill in the Blanks, Multiple Choices, Short Answers, Matching, , ,

**Extra Notes:**

**ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD**

<b>Activities</b>	<b>Quantity</b>	<b>Workload Hours for 1 quantity*</b>	<b>Total Workload</b>
Theoretical Hours	16	2	32
Practical Hours	16	0	0
Final Exam	1	2	2
Seminar	1	4	4
Attendance	1	4	4
Participation	1	4	4
Quiz	2	4	8
Midterm Exam	1	2	2
<b>Total Workload</b>			<b>56</b>
<b>ECTS Credit (Total workload/25)</b>			<b>2.24</b>

**Peer review**

Signature:

Name:

Lecturer

Signature:

Name:

Head of Department

Signature:

Name:

Dean