



Department of Biology
College of Science
University of Salahaddin
Subject: Toxicology (Theory)
Course Book: Fourth Class
Academic year: 2022-2023

Course book

Course Title		Toxicology - theory
Code	Theory Hr./week	Practical Hr./week
SBIO	2	2

Course type	Compulsory
Department/College	Biology/Science
Course language	English

Course lecturer(s)	Dr. Abdulilah Saleh Ismaeil
Contact	abdulilah.ismaeil@su.edu.krd Tel: (+9647504733977)
Teacher's academic Profile	<p>I graduated in 1998 from Salahaddin University - college of science, biology department, ranked third among biology department. I got master science (Food microbiology) in 2005 at college of science-salahaddin university.</p> <p>I got PhD in Food Microbiology at college of science-salahaddin university in 2020.</p>
Course Objectives	<ul style="list-style-type: none"> • The course introduces the basic concepts of food toxicology. Toxicology has got special attention to the deleterious effects of chemicals and physical agents on all living systems. Toxicology can be an independent descriptive, empiric discipline to the fact of difficulty in diagnosis, controversial management and unknown end points. Many lethal exposures deserve early diagnosis & management before the confirmatory evidences.

<p>Intended Learning Outcomes</p>	<p>Upon completion of this course students learn:</p> <ul style="list-style-type: none"> ➤ Known types of toxicants. ➤ How decrease exposure to toxic compounds. ➤ Differentiate between poison and toxin. ➤ How the toxins introduce to human. ➤ Biotransformation of toxin. ➤ Excretion different toxicants.
<p>Forms of teaching</p>	<p>The lectures will given to the student before lecture time, during the lecture time the subjects will be explained using data show and Wight board together.</p>
<p>Examinations and Grading</p>	<p>The students are required to do two theoretical examination (15%).</p> <p>Final examination 50%</p>
<p>Course Reading List and References:</p>	<ol style="list-style-type: none"> 1- Gilbert, S. G. 2005. A small dose of toxicology, Taylor & Francis e-Library. 2- Klaassen, C. D. 2008. Toxicology The basic science of poisons, seventh edition. The McGraw-Hill Companies. 3- Alemu, B. 2007. Toxicology, Lecture notes For Medical Laboratory Science Students, Ethiopia Ministry of Health. 4- Hodgson, E. 2010. A textbook of Modern toxicology, fourth edition. A John Wiley & Sons, Inc., Publication

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Weekly Subjects

First week

An Introduction of toxicology, Epidemiology, Toxicologic terms and definitions

Second week

Basic classification of toxicology, Toxicokinetics and Toxicodynamics

Third week

Dose response, General approach to poisoned patients.

Fourth week

Basic toxicological testing methods

Fifth week

Bacterial toxins, Bacterial Toxigenesis, Types of Bacterial toxins.

Sixth week

Mycotoxins, its definition and General features of mycotoxin formation, Mycotoxicosis

Seventh week - First exam.

Eighth week

Foodborne intoxication, Clinical signs and symptoms, Biotoxications.

Ninth week

Biological effects of radiation, types of radiation, Radiotherapy.

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Tenth week

Metals as Toxicants, Common Toxic Mechanisms and Sites of Action, lead, mercury and cadmium.

Eleventh week

Solvents as toxicants, Classes of solvents, Solvent abuse, Environmental contamination, Toxicokinetics,

Twelfth week

Properties and toxicities of animal venoms, Properties of animal toxins, Scorpions, Bees, Snake.

Thirteenth week

Toxic effects of pesticides, Economics and public health, Use of Pesticides, Human Poisoning, Insecticides, Herbicides, Fungicides, Rodenticides.

Fourteenth week - Second exam.