

מבוא לטוקסיקולוגיה Introduction to Toxicology

סמסטר ב' 2022

Course Introduction:

Toxicology is the study of how exogenous exposure effects human physiology and health. This course will provide an overview of basic toxicological principles as well as discuss organ specific toxicity. The students will learn how to utilize the toxicological literature to be able to estimate the risk to public health from exposure to toxic substances. The students will use this knowledge and apply it to real world case scenarios in order to understand the toxic effect of common occupational and environmental hazards.

A. Course Instructor:

Yonah Amster MD MPH (Course Coordinator) Email: eamster@post.harvard.edu
Cell: 054-356-5855 Office hours: Wednesday: Scheduled with lecturer

B. Lecture Topics:

Lecture	Topics
1	General Principles 1: Dose, Occupational toxicology, Environmental toxicology
2	General Principles 2: Mechanistic, descriptive, and regulatory toxicology
3	General Principles 3: Distribution, excretion, metabolism
4	General Principles 4: Toxicity testing, biomonitoring, risk assessment, on-line tools
5	Occupational toxicants: Metals, pesticides, solvents
6	Carcinogenicity and Geno-toxicity

7	Special lecture: Society of toxicology webinar (Quiz)
8	Organ system 1: Nephrotoxicity
9	Organ system 2: Hematototoxicity
10	Organ system 3: Respiratory toxicity
11	Organ system 4: Gastrotoxicity/hepatotoxicity
12	Organ system 5: Neurotoxicity and psychotoxins
13	Course conclusion and review

C. Course grade:

- a. 40% Quiz (Lectures 1-6)
- b. 40% Class lecture (כיתה הפוכה)
- c. 20% Class participation

D. Course text/readings:

Casarett & Doull's Toxicology: The Basic Science of Poisons, Eighth Edition 8th Edition

E. Resources:

- a. <http://www.toxicology.org/education/pw/presentations.asp>
- b. מרכז רעלים ברמב"ם
<https://www.rambam.org.il/departmentsandclinics/laboratories-division/clinical-pharmacology-and-toxicology/pharmacology-and-pharmacogenetics-laboratory/>
- c. משרד הבריאות: <https://www.gov.il/he/departments/general/toxicology-lab>
- d. Agency for Toxic Substance and Disease Registry: <https://www.atsdr.cdc.gov/>
- e. Toxic substance Portal: <https://wwwn.cdc.gov/TSP/index.aspx>