Graduate School of Health Sciences / Clinical Pharmacy M.S

2024 - 2025 Academic Year

CLINICAL TOXICOLOGY

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
CLINICAL TOXICOLOGY	ECFY1247070	Spring Semester	2+0	2	6

Prerequisites Courses	
Recommended Elective Courses	
Language of Instruction	Turkish
Course Level	Second Cycle (Master's Degree)
Course Type	Elective
Course Coordinator	Prof.Dr. Gülden Zehra OMURTAG
Name of Lecturer(s)	Prof.Dr. Gülden Zehra OMURTAG, Assoc.Prof. Sultan Mehtap BÜYÜKER
Assistant(s)	
Aim	It is aimed to understand the general treatment principles in poisoning, to define side effects and allergic reactions, and to teach the role of genetic factors and adverse drug reactions in the emergence of toxicity.
Course Content	This course contains; Introduction to Clinical Toxicology,First Aid in Poisonings,Acceleration of Elimination and Antidote Mechanisms in Poisonings,Analgesic Drugs, Central Nervous System Intoxication and Treatments,Intoxication with Vitamins and Antihistamine Drugs and Their Treatment,Intoxication with Cardiovascular Drugs and Their Treatment,Substance Abuse and Drug Abuse,Preclinical and Clinical Studies,Pharmacovigilance Applications,Herbal Poisons and Their Treatment in Poisoning,Fungal Poisonings and Treatments,Poisoning with Mycotoxins,Poisoning with Organic Solvents,Poisoning with Pesticides and Their Treatment.

Course Learning Outcomes	**Teaching Methods**	**Assessment Methods**
1. Defines toxicology.	16, 9	A
1.1 Explains the concept of dose and the ways poisons enter the body and are absorbed.	16, 9	A
1.2. Define the terms allergy, polymorphism and pharmacovigilance.	16, 9	A
2. Explains acute and chronic poisoning.	16, 9	A
2.2. It shows possible treatment schemes by evaluating treatment methods and antidotes that change toxicokinetic parameters in poisonings.	16, 9	A
2.3. Explains first aid steps, specific antidotes and treatment principles.	16, 9	A
3. Explains the absorption, distribution, metabolism and elimination steps of poisons.	16, 9	A
3. Evaluates drugs in terms of pharmacodynamics, pharmacokinetics, and toxicology.	16, 9	A
3.1. Evaluates the toxic effects, side effects, and interactions of drugs used in allergy treatment with other drugs.	16, 9	A
3.2. Evaluates the toxic effects, side effects and interactions of analgesics with other drugs.	16, 9	A
3.3. Evaluates the toxic effects, side effects and interactions of drugs acting on the central nervous system with other drugs.	16, 9	A
3.4. Evaluates the toxic effects, side effects, and interactions of drugs effective on the cardiovascular system with other drugs.	16, 9	A
4. Explains the toxic effects that occur or are likely to occur due to the use of herbal products and foods.	16, 9	A
4.1. Explains mushroom poisoning and treatments.	16, 9	A
4.2. Evaluates mycotoxins, the conditions that lead to their formation, their effects, and the diseases they cause.	16, 9	A
4.3. Evaluates poisoning with pesticides and findings of exposure through residues.	16, 9	A
5. Classifies addictive substances according to their toxic effect mechanisms and method of use.	16, 9	A
5.1. Gives examples of drugs that are susceptible to abuse. Explains legal regulations.	16, 9	A
6. Defines the studies of Phases 1,2,3,4.	16, 9	A
6.1. Evaluates by comparing animal experiments performed in preclinics and data obtained in the clinic.	16, 9	A

Teaching Methods	16: Question - Answer Technique, 9: Lecture Method
Assessment Methods	A: Traditional Written Exam

Lecture Schedule

Sequence	**Topics**	**Preliminary Preparation**
1	Introduction to Clinical Toxicology	1,2
2	First Aid in Poisonings	1,2
3	Acceleration of Elimination and Antidote Mechanisms in Poisonings	1,2,3
4	Analgesic Drugs, Central Nervous System Intoxication and Treatments	1
5	Intoxication with Vitamins and Antihistamine Drugs and Their Treatment	1,2
6	Intoxication with Cardiovascular Drugs and Their Treatment	1,2,3
7	Substance Abuse and Drug Abuse	1
8	Preclinical and Clinical Studies	1
9	Pharmacovigilance Applications	1,2
10	Herbal Poisons and Their Treatment in Poisoning	1,2
11	Fungal Poisonings and Treatments	1,2
12	Poisoning with Mycotoxins	1,2,3
13	Poisoning with Organic Solvents	1
14	Poisoning with Pesticides and Their Treatment	1,2,3

Evaluation Methods	**Weight(%)**
Midterm Exam	50
General Exam	50

Resources
1. Lecture notes. 2. Ellenhorn MJ, Ellenhorn's Medical Toxicology, Second Edition, Williams & Wilkins, London, 1997. 3.Klaassen CD, Watkins III JB, Casarett & Doull's Essentials of Toxicology, The McGraw-Hill Companies, USA, 2003.