



AYDIN ADNAN MENDERES UNIVERSITY
AYDIN VOCATIONAL SCHOOL OF HEALTH SERVICES
MEDICAL SERVICES AND TECHNIQUES
MEDICAL LABORATORY TECHNIQUES
COURSE INFORMATION FORM

Course Title	Toxicology								
Course Code	TL301	Course Level			Short Cycle (Associate's Degree)				
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	Toxin, toxicity, Major classes of environmental contaminants. Uptake, biotransformation, detoxification, elimination and accumulation of toxicants. To give the necessary information on hygiene and working environment								
Course Content	Toxic substances in the body in, distribution, biotransformation and excretion, effect of poisons shapes, lead, mercury, arsenic, antimony, cadmium, barium, etc., and metal salts, carbon monoxide, hidrojen siyanür, sulfurhydrogen, phosgenegases, etc., hydrocarbons, halogenated aliphatic hydrocarbons, aromatic hydrocarbons, aliphatic aromatic amines, alcohols, esters, amines and organic sulfur compounds, toxicity, effect types, and hygienic conditions.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Toksikoloji ,Prof.Dr.Nevin VURAL,Ankara Universitesi Eczacilik Fakültesi Yayınları No: 73, 2005
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Week	Weekly Detailed Course Contents	
1	Theoretical	Definition and History of toxicology, toxicology, General Concepts, Place of Toxicology in Environmental Engineering
2	Theoretical	Classification of toxic substances according to Chemical Structure
3	Theoretical	The ROUTE of toxic substances to live organisms
4	Theoretical	Assesment of toxic impact
5	Theoretical	Mutagen and Teratogen substances, chemical karsinogens
6	Theoretical	Chemical substances in the surrounding abiotic and contaminants
7	Theoretical	Effect of metal contaminants
8	Intermediate Exam	Mid-term exam
9	Theoretical	Gas and particulate contaminants in air
10	Theoretical	The toxic effect of organic solvents
11	Theoretical	Pesticides and soil pollutants
12	Theoretical	Behavior of Pesticides in the surrounding of Biotic and abiotic
13	Theoretical	Radiation and Toxicology of radioactive isotopes
14	Theoretical	İmportant toxic substances in used industry
15	Theoretical	General repeat

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Assignment	14	0	3	42
Midterm Examination	1	1	2	3
Final Examination	1	0	2	2
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	1. Define Venom and poison, the active ingredient and the sources of lead poisoning, diagnostic and the therapeutic approaches.
2	2. Define toxic substances to explain the issue of ways to access the live organism
3	3. Define Toxic mode of action
4	4. Recognize the effects of metallic pollutants.
5	Recognize the effects of gas pollutants in the air.
6	Recognize the effects of dust in the air pollutants
7	Recognizes the toxic effects of organic solvents.
8	List important issue of toxic substances used in industry reviews.

Programme Outcomes (Medical Laboratory Techniques)

1	To be able to have sufficient background in medical laboratory techniques and medical laboratory branches (biochemistry, microbiology, parasitology, cytogenetics etc.); the ability to use theoretical and practical knowledge in these fields.
2	To be able to have the basic theoretical and practical knowledge and other resources have been supported applications and tools based on secondary-level qualifications gained in the field of Medical Laboratory Techniques Program to-date textbooks containing formations
3	To be able to have basic knowledge about structure and function of systems in human, to analyse these data on tissue, cell and diseases.
4	To be able to analyse the medical samples necessary for physicians by using tools, equipment and techniques at the diagnostic and the therapeutic laboratories of health agencies and evaluate the data.
5	To be able to use the medical laboratory tools and equipments according to rules and techniques, and make controls and maintenance of them
6	To be able to perform basic tests of related different medical laboratories, prepare solutions.
7	To be able to perform proper sample collection and transport procedures for the medical laboratory tests from the patient.
8	To be able to perform preanalytical sample preparation procedure, prepare inspection preparations, perform disinfection and sterilization
9	To be able to interpret and evaluate data, define and analyze problems, develop solutions based on research and proofs by using acquired basic knowledge and skills with in the field.
10	To be able to have knowledge about work organization and carry out related practice in medical laboratories
11	To be able to carry out laboratory safety protocols, take individual safety precaution and create safe laboratory environment.
12	To be able to gain the ability to apply by viewing and evaluating the processes related to his/her fields in public and private sector.
13	To be able to gain the awareness of the necessity of life long learning, ability to follow developments in science and technology and self-renewal.
14	To be able to help laboratory experts and medical scientists for their researches
15	To be able to be aware of individual and public health, environmental protection and job security issues, understanding the basic level of the relationship.
16	To be able to grasp principles of Atatürk and their evolutions, to ensure national, ethical, spiritual and cultural values, to adopt to universal and contemporary developments
17	To be able to communicate efficiently for medical service and speak Turkish efficiently.
18	To be able to communicate in English at basic level, utilize foreign language on occupational practice

Contribution of Learning Outcomes to Programme Outcomes 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

	L1	L2	L3	L4	L5	L6	L7	L8
P1	5	5	5	5	5	5	5	5
P5	5	5	5	5	5	5	5	5
P9	5	5	5	5	5	5	5	5
P14	4	4	4	4	4	4	4	4

