AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Toxicogenetics and Applications								
Course Code	VFT556		Couse Level	Second Cycle (Master's Degree)					
ECTS Credit	4	Workload	95 *(Hours)*	Theory	1	Practice	2	Laboratory	0
Objectives of the Course	Learn about toxic factors in the relationship between genetic and hereditary disorders, and epidemiological frequency effects the usefulness of toxic substances and/or detrimental effects caused by toxic substances and substances and properties of the effects of genetic mutation, teratogenicity and carcinogenicity testing and practical.								
Course Content	Toxic factors in the relationship between genetic and hereditary disorders, and epidemiological frequency effects the usefulness of toxic substances and/or detrimental effects caused by toxic substances and substances and properties of the effects of genetic mutation, teratogenicity and carcinogenicity testing and practical are examined.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Discussion, Case Study, Individual Study, Problem Solving								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Modern Toxicology, Ernest HODGSON, Patricia E. LEVI; Elsevier, London, 1987.
2	Principles and Methods of Toxicology, A. Wallace HAYES, Edward BROTHERS; Ann Arbor Press, 2001.
3	Handbook of Experimental Pharmacology – 199; Comparative and Veterinary Pharmacology, Fiona CUNNINGHAM, Jonathan ELLIOTT, Peter LEES (Editors); Springer Press, 2009.

Week	Weekly Detailed Course Contents	
1	Theoretical	Basic concepts in genetic structure
	Practice	Method to determine the applications guide
2	Theoretical	Evaluation of the contribution of genetic and environmental factors
	Practice	Method to determine the applications guide
3	Theoretical	Genetic damage, and markers of the effects
	Practice	Selection of genetic testing and study design
4	Theoretical	DNA damage repair, and genetic risk assessment process
	Practice	Selection of genetic testing and study design
5	Theoretical	Fields of toxicogenetic
	Practice	Genetic hazard and risk assessment methods
6	Theoretical	The effects of toxic substances - or inhibition of enzyme induction
	Practice	Genetic hazard and risk assessment methods
7	Theoretical	Article discussion
	Practice	Paper presentation
8	Intermediate Exam	Midterm exam
9	Theoretical	Mutation, the mutagenic properties of substances and
	Practice	Mutagenicity tests and applications
10	Theoretical	Mutation, the mutagenic properties of substances
	Practice	Mutagenicity tests and applications
11	Theoretical	Teratogenicity, teratogenic substances and their properties
	Practice	Teratogenic tests and applications
12	Theoretical	Teratogenicity, teratogenic substances and their properties
	Practice	Teratogenic tests and applications
13	Theoretical	Carcinogenicity, carcinogenic substances and their properties

13	Practice	Tests and applications of carcinogenic
14	Theoretical	Carcinogenicity, carcinogenic substances and their properties
	Practice	Tests and applications of carcinogenic
15	Theoretical	Article discussion
	Practice	Paper presentation
16	Final Exam	Final

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	1	42
Lecture - Practice	14	1	2	42
Midterm Examination	1	3	1	4
Final Examination	1	6	1	7
			Total Workload (Hours)	95
			[Total Workload (Hours) / 25*] = **ECTS**	4

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	Learn about the relationship between toxic substances and genetically.
2	Learn about the genetic effects of toxic substances and their properties.
3	Gain information about the toxicity tests and applications.
4	To find out and use resources about the profession in the area.
5	To give lectures and/or presentations and discuss with professionals in the area.

Programme Outcomes *(Veterinary Pharmacology and Toxicology Master)*

1	to be able to comprehend expert knowledge on field of pharmacology and toxicology in veterinary medicine
2	to be able to define expert knowledge on interdisciplinary interaction in pharmacology and toxicology
3	to be able to formulate ideas to solve complex problems using theoretical and practical information gained throughout the pharmacology and toxicology education
4	to be able to integrate and interpret information in the area of pharmacology and toxicology with information in different fields and, if the need arises, provides scientific information and solutions to solve problems.
5	to be able to develop and use strategies in his/her field of expertise in Master's Program of Pharmacology and Toxicology
6	to be able to comprehend methods of obtained and submitted scientific knowledge
7	to be able to analyse current information related to his/her field of expertise (scientific information, procedures etc.) and use them when necessary.
8	to be able to apply technological tools in social relationships of vocational and professional environment.
9	to be able to review, evaluate and interpret any data (field observations, available scientific information etc.) towards a specific purpose.
10	to be able to comprehend expert knowledge on the function and basic pharmacological features of pharmacology and sub-branches of science, relationship between the drug and poison, pharmacokinetic, effects of the drugs, the dose-intensity and dose-effect relationship.
11	to be able to identify expert knowledge on the function and basic toxicological features of poison, classifications and types of poisoning, toxicokinetic, general principles of treatment of poisoning.
12	to be able to define and use laboratory equipment in a pharmacology and toxicology laboratory.

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

	L1	L2	L3	L4	L5
P1	5	5	5		
P2	4				
P3					4
P4					4
P5					5
P6				5	5
P7				5	
P8			5		5
P9	4	4		5	5
P11		5	5		

P12			5		