AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Pharmacogenetics and Applications								
Course Code	VFT674		Couse Level	Third Cycle (Doctorate Degree)					
ECTS Credit	6	Workload	150 *(Hours)*	Theory	1	Practice	2	Laboratory	0
Objectives of the Course	To be informed about pharmacogenetics, their genetic structure their responses to drugs due to existing variations with changes in its metabolism of drugs involved or the effective functioning of the mechanism of the drug in some people, the usefulness of the genetic differences in the structures and/or harmful.								
Course Content	Pharmacogenetics; their genetic structure their responses to drugs due to existing variations evaluate changes of the drugs involved in its metabolism, or the effective functioning of the mechanism of the drug in some people, the usefulness of the genetic differences in the structures and/or harmful effects 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	Principles and Methods of Toxicology, A. Wallace HAYES, Edward BROTHERS; Ann Arbor Press, 2001.
2	Modern Toxicology, Ernest HODGSON, Patricia E. LEVI; Elsevier, London, 1987.
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, 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	Pharmacogenetics domains
	Practice	Genetic risk assessment methods
6	Theoretical	Change due to drug interactions and genetics
	Practice	Genetic risk assessment methods
7	Theoretical	Article discussion
	Practice	Paper presentation
8	Intermediate Exam	Midterm exam
9	Theoretical	Genetic difference in impact on drug interactions - or inhibition of enzyme induction
	Practice	Impact of pharmacogenetics in the treatment of drug tests
10	Theoretical	Pharmacodynamics of drugs that changes the genetic difference
	Practice	Examination of the application fields of pharmacogenetic tests
11	Theoretical	Examination of drug and enzyme polymorphism
	Practice	Phenotypic methods applications
12	Theoretical	Examination of drug and enzyme polymorphism
	Practice	Probe drug applications
13	Theoretical	Clinical use of pharmacogenomics studies
	Practice	Pharmacogenetic applications of molecular cytogenetic testing

14	Theoretical	Clinical use of pharmacogenomics studies
	Practice	Pharmacogenetic applications of molecular genetic testing
15	Theoretical	Article discussion
	Practice	Article discussion
16	Final Exam	FİNAL

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	4	1	70
Lecture - Practice	15	3	1	60
Midterm Examination	1	7	1	8
Final Examination	1	11	1	12
			Total Workload (Hours)	150
			[Total Workload (Hours) / 25*] = **ECTS**	6

**25 hour workload is accepted as 1 ECTS*

Learning Outcomes

1	Learn about genetic differences in humans and animals and their responses to drugs
2	To obtain information on genetic structures in the metabolism of drugs.
3	Learn about the harmful effects of drugs in humans and animals.
4	To obtain information on pharmacogenetic testing and application areas.
5	To learn knowledge and propose suggestions on the area

Programme Outcomes *(Pharmacology and Toxicology (Veterinary Medicine) Doctorate)*

1	Gains expert knowledge on field of pharmacology and toxicology in veterinary medicine and, gains expert knowledge on interdisciplinary interaction in pharmacology and toxicology
2	To be equipped with the knowledge to develop original ideas about necessary issues in the field by using of both graduate and expertise levels knowledge, to be able to develop original definitions, products and diagnostic procedures, etc. via deepening and questioning these knowledge.
3	Develops and uses strategies in his/her field of expertise in PhD Program of Pharmacology and Toxicology
4	Reviews, evaluates and interprets any data (field observations, available scientific information etc.) towards a specific purpose.
5	Gains 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.
6	Gains expert knowledge on the function and basic toxicological features of poison, classifications and types of poisoning, toxicokinetic, general principles of treatment of poisoning.
7	Can offer training to technical staff who will work in pharmacology and toxicology laboratory
8	Reach to competence to prepare courses at the undergraduate level
9	Determines and uses laboratory equipment and consumables in a pharmacology and toxicology laboratory.
10	To be able to plan an interdisciplinary project and build team for the known or new defined problems and to manage and complete such a project when necessary.
11	To share his/her knowledge in the field with others by attending at field-related or other congresses, panels, symposiums, workshops, seminars, article discussions and problem solving sessions, etc., and to contribute to the solution in the team by establishing relations with the experts in different fields.
12	To contribute the scientific knowledge in the field via publications in national and international peer-reviewed scientific journals.
13	Takes roles in vocational organizations and institution.
14	Forms ideas to solve complex problems using theoretical and practical information gained throughout the pharmacology and toxicology education.
15	To adopt lifelong learning as a principle and acknowledge that the information gained through research is the most valuable gain.
16	Knows and protects rights of ideas and industrial property (patent right)

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	4	
P3				3	5
P4				4	4
P5		5	5	5	

P6			5		
P7				5	
P9				5	
P10				4	
P11				4	5
P13				5	
P14					5