



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		In Vivo and In Vitro Evaluations of Drug Effect							
Course Code		VFT632		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	4	Workload	94 (Hours)	Theory	1	Practice	0	Laboratory	0
Objectives of the Course		In vivo and in vitro evaluation of drug action to be informed about the methods use							
Course Content		Drugs and drug-like substances according to their chemical structure and their effects in vitro and in vivo metabolism of the methods used to evaluate, in particular the general principles of in vitro and in vivo evaluation of, pratikte examined the importance of the use of human and animal health and place.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, 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	Veterinary Pharmacology and Therapeutics, 8th Edition, Jim E. Riviere (Editor), Mark G. Papich (Editor), 2009.
2	Modern Pharmacology, 6th Edition, Lippincott Williams and Wilkins, 2004 (Ed. C.R. Craig and R.E. Stitzel)
3	Basic and Clinical Pharmacology, 9th Edition, McGraw-Hill, New York, 2004 (Ed. B. Katzung)
4	Goodman and Gilman's The Pharmacological Basis of Therapeutics 11th Edition, McGraw-Hill, 2006 (Eds. Brunton, Lazo, Parker, Buxton and Blumenthal)
5	Lippincott's Illustrated Reviews: Pharmacology, 3rd Edition, Lippincott Williams and Wilkins, 2005 (Eds. Howard, Mycek, Harvey & Champe)
6	The Veterinary Formulary edited by Yolande Bishop. London Pharmaceutical Press in association with the British Veterinary Association 2001.
7	Pharmacology. Franklin A. Ahrens. Baltimore, Md. London Williams & Wilkins 1996
8	The physiological basis of veterinary clinical pharmacology J. Desmond Baggot. Oxford Blackwell Science 2001.
9	Veterinary pharmacolgy and therapeutics edited by H. Richard Adams. Ames, Iwa Iwa State University Press 2001.
10	Veterinary Drug Therapy, 1994. Ths. B. Barragry. Multiple chice questins in Clinical Pharmacology, 2001, Mant, Lewis and Ritter. Arnld.
11	Klinik Farmakolojinin Esasları ve Temel Düzenlemeler, Prof. Dr. Oğuz KAYAALP, Pelikan -2008
12	Veteriner Hekimliğinde Toksikoloji, Prof. Dr. Sezai KAYA, Prof. Dr. İbrahim PİRİNÇCİ, Prof. Dr. Ayhan ÜNSAL, Prof. Dr. Ali BİLGİLİ, Prof. Dr. Ferda AKAR, Prof. Dr. Abdullah DOĞAN, Doç. Dr. Ender YARSAN, Medisan-2002

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction to the effects of drugs
2	Theoretical	Chemical structure - activity relationship
3	Theoretical	Ion channels
4	Theoretical	Ion channels
5	Theoretical	Intracellular messengers
6	Theoretical	Intracellular messengers
7	Theoretical	Intracellular messengers
8	Intermediate Exam	Midterm exam
9	Theoretical	Pharmacodynamics
10	Theoretical	In vitro methods
11	Theoretical	In vitro methods
12	Theoretical	In vitro methods
13	Theoretical	In vitro methods
14	Theoretical	Homework (Pharmacodynamic factors affecting response) discussion
15	Theoretical	article discussion



16	Final Exam	Final exam
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Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	1	42
Assignment	5	5	1	30
Midterm Examination	1	10	1	11
Final Examination	1	10	1	11
Total Workload (Hours)				94
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Drugs and drug-like substances according to their chemical structure and their effects in vitro and in vivo metabolism to know the methods used to evaluate
2	Evaluating the drug effect the general principles of in vitro and in vivo, in practice, use of the importance of the human and animal health learning
3	To learn knowledge and propose suggestions on the area.
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 (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			
P2		4		4	
P3		4	4	5	
P4	3		5		
P6		4			
P7		4			



P8					4
P9		4			
P10		4			
P11		5	4		5
P12		4		4	
P13		4			
P14			4		5
P16		4			

