



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Drugs Affecting On the Liquid-Electrolite and Acid-Base Balance							
Course Code		VFT652		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	152 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		To teach basic principles in liquid-electrolite and acid-base balance, liquid-electrolite and acid-base balance disorders and agents used as plasma volume							
Course Content		Introduction, the general principles of liquid-electrolyte and acid-base balance and agents used as plasma volume expanders are examined.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), 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	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.

Week	Weekly Detailed Course Contents	
1	Theoretical	General principles of liquid-electrolyte and acid-base balance
2	Theoretical	Equivalent, osmosis and osmolarity
3	Theoretical	Physiology of liquid-electrolyte and acid-base balance
4	Theoretical	Pathophysiology of liquid-electrolyte and acid-base balance
5	Theoretical	Methods of treatment in liquid-electrolyte and acid-base balance disorder-I
6	Theoretical	Methods of treatment in liquid-electrolyte and acid-base balance disorder-II
7	Theoretical	Article discussion
8	Intermediate Exam	Midterm exam
9	Theoretical	Sodium and potassium disturbances and their treatment
10	Theoretical	Calcium and magnesium disturbances and their treatment
11	Theoretical	The other ions balance disorders and their treatment
12	Theoretical	Alkalosis and its treatment
13	Theoretical	Acidosis and its treatment
14	Theoretical	Agents used as plasma volume
15	Theoretical	Article discussion
16	Final Exam	TERM EXAM

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70



Assignment	15	3	1	60
Midterm Examination	1	8	2	10
Final Examination	1	10	2	12
Total Workload (Hours)				152
[Total Workload (Hours) / 25*] = ECTS				6
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes

1	Should obtain information on the general principles of liquid-electrolyte and acid-base balance and properties of ions
2	To learn liquid-electrolyte disorders
3	To learn acid-base balance disorders
4	Should learn agents used as plasma volume
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				
P4	4	4	4	4	
P5		5	5	5	
P6		3	3	3	
P8	4	4	4	4	4
P11					4
P14		3	3	3	5

