



AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
VETERINARY PHYSIOLOGY
PHYSIOLOGY (VETERINARY)
PHYSIOLOGY (VETERINARY) MASTER
COURSE INFORMATION FORM

| | | | | | | | | | |
|--|--|----------|--------------|--------|--------------------------------|----------|---|------------|---|
| Course Title | Blood and Circulatory System Physiopathology | | | | | | | | |
| Course Code | VFZ534 | | Course Level | | Second Cycle (Master's Degree) | | | | |
| ECTS Credit | 2 | Workload | 50 (Hours) | Theory | 1 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | To be make comprehended congenital and acquired disorders about production and function of erythrocytes, leukocytes, and platelet. To teach of mechanical and electrical activity of the heart. To teach problems about blood circulation such as pressure, resistance, flow rate | | | | | | | | |
| Course Content | To comprehend regarding disorders of the construction and destruction of red blood cell, hemoglobinopathies, disorders related to white blood cell production and function, platelets and clotting mechanism abnormalities, changes in the heart's electrical and mechanical activity, blood pressure and pulse rate, circulation, the shock, ischemia and edema | | | | | | | | |
| 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 | 38 |
| Final Examination | 1 | 60 |
| Quiz | 2 | 1 |
| Term Assignment | 1 | 1 |

Recommended or Required Reading

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|----|--|
| 1 | Reece W.O. (2008) Dukes Veteriner Fizyoloji Cilt I ve II, Onikinci Baskı (Türkçe Çeviri). Ed: Yıldız S. Medipres, Malatya |
| 2 | Guyton AC, Hall JE (2001) Tıbbi Fizyoloji Onuncu baskı (Türkçe Çeviri). Ed: Çavuşoğlu H. Nobel Tıp Kitabevi, İstanbul |
| 3 | Noyan A. (2003). Yaşamda ve Hekimlikte Fizyoloji. 13. baskı, Meteksan-Ankara |
| 4 | Randall D., Burggren W., French K, Fernald R., (1997). Eckert Animal Physiology. Mechanisms and Adaptations. 4th Ed., New York |
| 5 | G.C. Whittow et al. (1998). Sturke's Avian Physiology |
| 6 | Willmer P., Stone G., Johnston I. (2005). Environmental Physiology of Animals. 2nd Ed. Blackwell Publishing |
| 7 | Despopoulos A., Silbernagl S. (2003). Color Atlas of Physiology 5th Ed. Thieme, Stuttgart New York |
| 8 | Vander et al. (2001). Human Physiology: The Mechanism of Body Function, 8th Ed. The McGraw-Hill Companies |
| 9 | Harvey J.W. (2001). Atlas of Veterinary Hematology. W.B. Saunders Company |
| 10 | Weiss D.J., Wardrop J. (2010). Schalm's Veterinary Hematology. 6th Ed. Blackwell Publishing Ltd |

| Week | Weekly Detailed Course Contents | |
|------|---------------------------------|---|
| 1 | Theoretical | Erythrocyte production and destruction |
| 2 | Theoretical | Anemias |
| 3 | Theoretical | Polysitemia |
| 4 | Theoretical | Construction and destruction of hemoglobin, hemoglobinopathies |
| 5 | Theoretical | Structure and function of leukocytes and related disorders |
| 6 | Theoretical | Construction and destruction of platelet |
| 7 | Theoretical | Mechanism of coagulation and its abnormalities |
| 8 | Theoretical | Midterm |
| 9 | Theoretical | The heart's electrical activity, electrocardiogram, and cardiac arrhythmias |
| 10 | Theoretical | Heart sounds and murmurs |
| 11 | Theoretical | Shock and its compensation mechanisms |
| 13 | Theoretical | Regulation of blood pressure, hypertension and hypotension |
| 14 | Theoretical | Pulse types |



| | | |
|----|-------------|---------------|
| 15 | Theoretical | Presentations |
|----|-------------|---------------|

Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|---------------------------------------|----------|-------------|----------|----------------|
| Lecture - Theory | 14 | 0.5 | 1 | 21 |
| Assignment | 2 | 2 | 1 | 6 |
| Term Project | 1 | 8 | 1 | 9 |
| Quiz | 2 | 1 | 1 | 4 |
| Midterm Examination | 1 | 2 | 1 | 3 |
| Final Examination | 1 | 6 | 1 | 7 |
| Total Workload (Hours) | | | | 50 |
| [Total Workload (Hours) / 25*] = ECTS | | | | 2 |

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

| | |
|---|---|
| 1 | To comprehend the definition of anemia and its causes and types |
| 2 | To comprehend of leukocyte types and its functional disorders |
| 3 | To learn abnormalities of coagulation mechanism |
| 4 | To comprehend disorders which can be showed during electrical and mechanical activity |
| 5 | To understanding regulation of pulse and blood pressure, causes of shock and ischemia and occurred compensation mechanisms of all of them |
| 6 | To have knowledge about microcirculation, lymph circulation disorders and edema formation |

Programme Outcomes (Physiology (Veterinary) Master)

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|----|--|
| 1 | Understands and defines the interdisciplinary interaction with the associated fields |
| 2 | Uses theoretical and practical information learned in the education |
| 3 | Creates solution proposals by using background education |
| 4 | Combines and interprets the information from different disciplines, and creates solution proposals and scientific information to contribute the solution process, when needed |
| 5 | Involves in professional organizations and institutions related with the educational background |
| 6 | Takes responsibility for individual and group work, and do the assignments in line with the skills |
| 7 | Communicates with the professionals out of the field when it is necessary, and contributes to the solution as a team member |
| 8 | Understands the production and publishing methods of scientific information |
| 9 | Determines the source and the type of information that is needed related with the field and chooses the activities that s/he wants to participate, by using his/her critical thinking abilities that is developed in the education |
| 10 | Excels technological devices both for professional and social purposes |
| 11 | Compiles any kind of data related with the field (field observations, produced scientific information etc.) and analyzes and interprets the results according to the aims of the research |
| 12 | Determines the environmental health rules and applies them for prevention |
| 13 | Applies the knowledge gained in professional level with the awareness of the needs of the region and the country, and develops a defense capability |
| 14 | Conceptualizes the phenomena and the events related with the field, studies scientific methods and techniques, interprets results; analyzes and hypothesizes methods in accordance with the results and designs solution or treatment alternatives addressing the problems |
| 15 | Follows up the updates of information in the field by using all kinds of sources (scientific information, legislations etc.), and uses when needed |

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 |
|----|----|----|----|----|----|----|
| P1 | 2 | 2 | 2 | 2 | 2 | 2 |
| P2 | 4 | 4 | 4 | 4 | 4 | 4 |
| P3 | 4 | 4 | 4 | 4 | 4 | 4 |
| P4 | 2 | 2 | 2 | 2 | 2 | 2 |
| P5 | 2 | 2 | 2 | 2 | 2 | 2 |
| P6 | 1 | 1 | 1 | 1 | 1 | 1 |
| P7 | 1 | 1 | 1 | 1 | 1 | 1 |
| P8 | 2 | 2 | 2 | 2 | 2 | 2 |



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|-----|---|---|---|---|---|---|
| P9 | 2 | 2 | 2 | 2 | 2 | 2 |
| P10 | 3 | 3 | 3 | 3 | 3 | 3 |
| P11 | 4 | 4 | 4 | 4 | 4 | 4 |
| P12 | 1 | 1 | 1 | 1 | 1 | 1 |
| P13 | 2 | 2 | 2 | 2 | 2 | 2 |
| P14 | 2 | 2 | 2 | 2 | 2 | 2 |
| P15 | 3 | 3 | 3 | 3 | 3 | 3 |

