

Course Book

Course Description	<p style="text-align: center;">Course overview:</p> <p>This course aims to provide a comprehensive theoretical knowledge of physiological terminology and principles using a body systems approach in a comparative context, with an emphasis on domestic species. Body systems covered are the endocrine, urinary, reproductive, nervous and sensory systems</p>
Course objectives	<ul style="list-style-type: none"> - To familiarize students with the principles and basic facts of Animal Physiology and with some of the laboratory techniques and equipment used in the acquisition of physiological data. - The emphasis will be on mammalian physiology but there will be some coverage of other vertebrate taxa. - The course will focus on organ-system physiology, however, cellular and molecular mechanisms will be discussed in order to present a current view of physiological principles. - Furthermore, emphasis will be placed on nervous, muscular, cardiovascular, respiratory, renal, digestive, and endocrine physiology. Where appropriate, basic chemical and physical laws will be reviewed in order to enhance and to promote student understanding. - The laboratory component of the course is designed to reinforce the topics discussed in lecture, as well as to familiarize students with some of the laboratory techniques and equipment used in the acquisition of physiological data.
Student's obligation	<ol style="list-style-type: none"> 1-The student attention in all theoretical and practical lectures in academic year. 2-Completion of all tests. 3-Attendance in exams. 4-Write or prepare reports.
Required Learning Materials	<ol style="list-style-type: none"> 1. Daily preparation for a lecture 2. Giving students an opportunity to participate by giving seminars about the topics 3. Make quizzes before the lecture for the purpose of testing the extent of acceptance <p>For each lecture we have seminar by groups each group from two student preparing report and power point</p>

Forms of teaching	Lecture halls with data show equipment for lecture presentations, white board, overhead projector, posters, slides, laboratory, informatic laboratory. It is important that all students maintain active communication channels throughout the year. The primary communication channels to students in this course are as follows: Moodle: Students should regularly login to the moodle website (http://epu.moodle.edu.iq/) for important course-related announcements. Teaching materials and course documentation will also be posted on this site.	
Assessment scheme	- 6% Mid. Theory exam 10% Mid. practical exam 4% Quiz 40% Activity 25% final practical 15% final theory	
Specific learning outcome:	At the end of the course the student will have understood and know in detail the fundamental mechanisms that regulate cell function and intercellular communication strategies, who preside over the functions of the nervous system and the modulation of autonomic functions. He will have learned knowledge about the functions of the blood. He will have learned and will be able to analyze the digestive strategies in different species in order to build the theoretical foundations of nutrition and animal nutrition.	
Course References:	"Physiology of Domestic Animals" Sjaastadt-Sand-Hove. Scandinavian Veterinary Press second edition (2010). Duke's Physiology of domestic Animals, 12th Edition. William O'Reace Editor. Principles of Animal Physiology Games.A.Wilson Colliern Macmillan Publisockendon	
Course topics (Theory)	Week	Learning Outcome

system and the endocrine system		with focus on classic endocrine glands.
Hormones, the sources, types and functions. controlling the excretion	13	Principles of hormone action,
The composition and production of milk and the factors affecting it	14	Structure and functions of the mammary gland in animals.
Practical Topics (If there is any)	week	Learning Outcome
Laboratory instructions - Preparing laboratory animals for scientific experiments.	1	Student be able to know the laboratory safety and components
Electrical properties of the myocardium and the electrocardiogram	2	Be able to know the resting membrane potential and action potential propagation along the axon
Transfusion of blood from different animals and the use of anticoagulants and their properties	3	How to blood transfusion in Animals and types of anticoagulants.
Prepare blood stains and smears	4	How to make smear and stain blood sample
Calculate the coagulation time and the bleeding time	5	Be able to know the time of coagulation and bleeding of blood.
Calculate the percentages of the types of leukocytes	6	Be able to know the percentage counts of WBCs
The white blood cell count	7	Be able to know the count of WBCs
The red blood cell count	8	Be able to know the count of RBCs
Platelet count, Erythrocyte fragility and viscosity –	9	Be able to know the

packed cell volume. PCV,erythrocyte sedimentation rate ESR,		preparation of solutions
Blood grouping, estimation of haemoglobin	10	Be able to know how identify blood group and Hb rate
Blood pressure measuring and heart sounds	11	How measure blood pressure and identify the normal heart sounds.
Measuring respiratory volumes and calculating the capacities vital rate	12	How measure the volumes of respiration and vital rate.
Pregnancy detection and oestrus stag detection by vaginal smear	13	How take vaginal smear and detect oestrus or pregnancy.
Measure the contraction of the smooth muscle of the intestine by electrocardiogram	14	Be able to know the process of muscle contraction
<p>Questions Example Design</p> <p>Q1. Definition Q2 multi choice Q3 right or false Q4 fill in the blank Q5 describe process Q1/ what is the function :</p> <ol style="list-style-type: none"> 1- Plasma membranes 2- Ribosome 3- Blood 4- Lysosome 5- Neutrophil 		

Q2/ Fill the blank?

1- Red blood cell life ----- day.

2- Plateletes formed in the ----- .

3- They have tow kind of endoplasmic reticulum ----- ,-----.

4- Cell are the basic unit of ----- ,-----.

5- Hemoglobin is found in the ----- .

6- Mature red blood cell do not have -----.

Q3- Draw the cell and name the parts?

Q4- Classification of the white blood cell?

Extra notes:

Every week we make quiz and activity of student by external reports