

Course Unit	Histology and Anatomopathology		Field of study	Veterinary Sciences	
Bachelor in	Veterinary Nursing		School	School of Agriculture	
Academic Year	2019/2020	Year of study	1	Level	1-1
Type	Semestral	Semester	2	Code	9085-408-1205-00-19
Workload (hours)	162	Contact hours	T 30	TP -	PL 30
			TC -	S -	E -
			OT 20	O -	

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Hélder Miranda Pires Quintas

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. At the end of the course unit the learner is expected to have knowledge theoretical and practical about the microscopic structure of the animal organs and its functions;
2. to know the most common histotechniques;
3. to be able to assist necropsy procedures.

Prerequisites

Before the course unit the learner is expected to be able to:
Not applicable.

Course contents

General concepts about histology and pathology. Animal tissues and systems. Blood and immune system. Histological samples and manipulations. Necropsy and pathology. Inflammation and general pathological concepts.

Course contents (extended version)

1. The cell.
2. The epithelium, classification, basement membrane, cellular attachments, glands.
3. Connective tissue, cells, fibers, ground substance, classification, adipose tissue.
4. Cartilage and bone, osteogenesis. Bone marrow.
5. Smooth, skeletal and cardiac muscle. Nervous tissue, peripheral and central nervous tissue.
6. Circulatory system. Urinary System. Endocrine System. Eye and ear.
7. Respiratory system. Digestive system, glands, liver. Monogastric and polygastric animals.
8. Immune System.
9. Inflammation and general pathology.

Recommended reading

1. Maxie, G. (editor), 2015. Jubb, Kennedy & Palmer's Pathology of Domestic Animals. 6ª edição, Elsevier Health Sciences, 2456 pp.
2. Bacha, L., Bacha, W., 2012. Color Atlas of Veterinary Histology. John Wiley and Sons Ltd, 356 pp.
3. Zachary, J., McGavin, D., 2011. Pathologic Basis of Veterinary Disease. 5ª edição, Elsevier - Health Sciences Division, 1344 pp.
4. Brooks, H., 2010. General Pathology for Veterinary Nurses. John Wiley and Sons Ltd, 256 pp.
5. Samuelson, D., 2007. Tratado de Histologia Veterinária. Editora Elsevier, 527 pp.

Teaching and learning methods

Lectures will be support by media and multimedia resources. Practical classes will engage direct working with animals, samples, models and microscopes. There will be necropsis and case studies.

Assessment methods

1. Test (25%)+Restrict Exam(25%)+ Practical Exam(50%) - (Regular, Student Worker) (Final)
2. Theoretical part (50%) + Practical part (50%) - (Student Worker) (Final)
3. Theoretical part (50%) + Practical part (50%) - (Regular, Student Worker) (Final, Supplementary, Special)

Language of instruction

Portuguese

Electronic validation

Hélder Miranda Pires Quintas	Álvaro Luís Pegado Lemos Mendonça	Hélder Miranda Pires Quintas	Alfredo Jorge Costa Teixeira
06-11-2019	09-11-2019	10-11-2019	11-11-2019