

ANATOMY 3

Study program	Veterinary Medicine
Year of study	II
Semester	I
Regime of discipline	DOB
Category of discipline	Dsf
Number of lectures hours per week	2
Number of seminar/laboratory/project hours per week	3
Total number of hours according to the curriculum: lectures/seminars/laboratory/project	28/42
Number of transferable credits	5

SPECIFIC SKILLS

Professional Competence	<p>C1- Working with terms, concepts, principles, discipline-specific characteristics of the heart, arteries, veins, lymphatic vessels, nervous system the domestic mammals and birds.</p> <p>C 2 - Acquiring theoretical and practical knowledge of the blood vessels and nerves in order to apply treatments, vaccination, and other measures to prevent and combat diseases.</p> <p>C3 - Knowing the general characteristics and specific features of the lymphnodes and lymphatic vessels of the domestic mammals and birds to identify the organs which are controlled and examined in through laboratory analyzes and organoleptic quality of the food safety.</p> <p>C5 - Morphological knowledge of arteries, veins, nerves and lymphatic vessels in the domestic mammals and birds will allow accurate assessment of nutritional status and metabolic and according to the principles of maintenance, feeding, production, reproduction and animal selection.</p> <p>C6 - Identifying functional changes of certain arteries, veins, nerves and lymphatic vessels in mammals and birds. Ability to know the topography of the arteries, veins, nerves and lymphatic vessels in the domestic mammals and birds by serial sections and their correlation with modern imaging methods.</p> <p>C1- Working with terms, concepts, principles, discipline-specific characteristics of the heart, arteries, veins, lymphatic vessels, nervous system the domestic mammals and birds.</p> <p>C 2 - Acquiring theoretical and practical knowledge of the blood vessels and nerves in order to apply treatments, vaccination, and other measures to prevent and combat diseases.</p> <p>C3 - Knowing the general characteristics and specific features of the lymphnodes and lymphatic vessels of the domestic mammals and birds to identify the organs which are controlled and examined in through laboratory analyzes and organoleptic quality of the food safety.</p> <p>C5 - Morphological knowledge of arteries, veins, nerves and lymphatic vessels in the domestic mammals and birds will allow accurate assessment of nutritional status and metabolic and according to the principles of maintenance, feeding, production, reproduction and animal selection.</p> <p>C6 - Identifying functional changes of certain arteries, veins, nerves and lymphatic vessels in mammals and birds. Ability to know the topography of the arteries, veins, nerves and lymphatic vessels in the domestic mammals and birds by serial sections and their correlation with modern imaging methods.</p>
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LEARNING OUTCOMES

Knowledge	The student describes the complexity of the properties, structure, molecular organization, embryonic development, macroscopic and microscopic structure and cellular, tissue and organismal functioning as a whole; of the cell, tissues, systems and apparatuses of the animal organism and their functioning, in order to achieve clinical correlations.
Skills	The student describes the anatomical characteristics of tissues, organs, apparatuses, systems and the organism as a whole.
Responsibility and autonomy	The student applies, analyzes the implementation and formation of complex concepts regarding biological systems The student identifies the morphology of arteries, veins, lymphatic vessels, nervous system organs, endocrine glands and sense organs in domestic animals, achieving clinical correlations.

COURSE OBJECTIVES

General objective of the course	<ul style="list-style-type: none"> Knowledge of descriptive and comparative anatomy of the o arteries, veins, nerves and lymphatic vessels in the domestic mammals and birds which allow to the future veterinarian understanding and interpretation of medical and surgical disease symptoms based on knowledge of physiological and pathological mechanisms.
Specific objectives	<ul style="list-style-type: none"> To understand the structure and conformation of the vascular system in

	<p>domestic mammals and birds;</p> <ul style="list-style-type: none"> • To understand the structure and conformation of nervous system in domestic mammals and birds; • To understand the structure and conformation of the lymphatic system in domestic mammals and birds; • According with the anatomical nomenclature to identify the arteries, veins, lymphatic vessels in the domestic mammals and birds; • Using notions of descriptive and comparative anatomy to describe the central and peripheral nervous system of domestic mammals and birds; • To recognize the general features of the arteries, veins, nerves and lymphatic vessels in the domestic mammals and bird; • To describe the general characteristics of nervous system; • To recognize on the fresh or preserved specimens the general characteristics of the arteries, veins, and lymphatic vessels in the domestic mammals and birds; <p>To recognize on the fresh or preserved specimens the general characteristics of the nerves in the domestic mammals and birds;</p>
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COURSE CONTENT

LECTURES	Number of hours
Angiology - generalities. The heart and pericardium - conformation and specie- specific features	2
Arterial and venous vasculature of the head - origin, path and distribution of the arteries.	2
Arterial and venous vasculature of the neck - origin, path and distribution of the arteries.	2
Arterial and venous vasculature of the thorax and abdomen, origin, path and distribution of the arteries.	2
Arterial and venous vasculature of the limb - the origin, path and distribution of the arteries.	2
Arterial and venous vasculature of the limb and tail - the origin, path and distribution of the arteries.	2
Lymphatic system - generalities. Lymphocentres and lymph nodes - location, dependent territories.	2
Lymphatic system- specie- specific features.	2
Nervous system - generalities. Central nervous system-generalities. Brain.	2
Spinal cord and meninges.	2
The peripheral nervous system - generalities. Cranial Nerves - origin, trajectory, distribution.	2
Spinal nerves – generalities. The nerves of the brachial plexus - origin trajectory, distribution.	2
Lumbar- sacral plexus nerves - origin, trajectory, and distribution.	2
The autonomic nervous system. Sympathetic nervous system. Parasympathetic nervous system.	
SEMINAR/LABORATORY	Number of hours
Angiology - generalities. The heart and pericardium - conformation and specie- specific features	3
Arterial and venous vasculature of the head - origin, path and distribution of the arteries.	3
Arterial and venous vasculature of the neck - origin, path and distribution of the arteries.	3
Arterial and venous vasculature of the thorax and abdomen, origin, path and distribution of the arteries.	3
Arterial and venous vasculature of the limb - the origin, path and distribution of the arteries.	3
Arterial and venous vasculature of the limb and tail - the origin, path and distribution of the arteries.	3
Lymphatic system - generalities. Lymphocentres and lymph nodes - location, dependent territories.	3
Lymphatic system- specie- specific features.	3
Nervous system - generalities. Central nervous system-generalities. Brain.	3
Spinal cord and meninges.	3
The peripheral nervous system - generalities. Cranial Nerves - origin, trajectory, distribution.	3
Spinal nerves – generalities. The nerves of the brachial plexus - origin trajectory,	3

distribution.

Lumbar- sacral plexus nerves - origin, trajectory, and distribution.	3
The autonomic nervous system. Sympathetic nervous system. Parasympathetic nervous system.	3

BIBLIOGRAPHY:

1. H.E. König, H.G. Liebiech (2014) – Veterinary Anatomy of the domestic mammals, Ed. Schattauer.
2. K.M. Dyce, W.O. Sack, C.J.G. Wensing – Textbook of veterinary Anatomy, Saunders Elsevier.
3. R. Barone (1984, 1990) – Anatomie compare des mammifères domestiques, Tome 3, 4, Ed. Vigot.
4. R. Nickel, A. Schummer, E. Seiferle (1986) – Lehrbuch der Anatomie des Haustiere, Band 3, 4, Verlag Paul Parey.

ASSESSMENT

Activity type	Assessment criteria	Assessment methods	Percentage of final grade
Lectures	Using anatomically correct nomenclature; Demonstration of coherent thinking, logic, the statement of ideas or principles of descriptive and compared anatomy of the vascular and lymphatic system. Knowledge of basic concepts of descriptive and compared anatomy of the nervous system.	Summative evaluation, Exam - oral assessment	60%
Seminar/laboratory/clinical sessions	Applying knowledge in providing descriptions of vascular, lymphatic and nervous systems in the domestic mammals and birds; Integrating knowledge of angiology and nervous system in anatomy descriptive and comparative approach in the domestic mammals.	Summative assessment - practical oral exam assessment.	40%
Other activities			

Course coordinator: Prof. PhD. Marius Pentea

Practical activities coordinator L/S/P: Prof. PhD. Marius Pentea