



UNIVERSIDADE DE LISBOA
Faculdade de Medicina Veterinária

Topographic and Imaging Anatomy

Curricular Year: 1st

Duration: 2nd Semester

Credits: 5 ECTS

Teachers: Graça Maria Alexandre Pires (CCP e R); António Ferreira; Fernando Ferreira; João Afonso; Luísa Mendes Jorge; Miguel Carreira; Rui Lemos Ferreira; Sandra de Jesus.

Contact Hours: 62H Total.

28H Lectures; 28H Practical and laboratory teaching; 6H Tutorial orientation.

Learning objectives:

The design of a curricular content objectives is based on the acquisition of knowledge and fulfillment of specific tasks, for which the trainee becomes qualified at the end of the training period. The focus of the Topographic Anatomy course is based on a functional approach to the organs and systems that capture information from the body itself and outside it, and that integrate the animal into the outside world. Thus, the focus of learning is the integrative organs, such as the central and peripheral nervous system and the autonomic vegetative ones, as well as a loco-regional and systemic approach to the elements of the cardiovascular system. As anatomical knowledge is recruited for diagnostic and surgical approaches, radiographic and ultrasound anatomies are learning themes, as well as the development of practical skills, such as dissection and manipulation of bone, muscle and tendon tissues, for successful surgical practice and compassionate care of veterinary patients.

Program contents:

Visual organ: tunics, visual fields, stereoscopic conditions, lens, chambers, lacrimal apparatus, intra and extraocular muscles, accessory organs of the eye. Bird's eye. Nervous system: Meninges. Ependymal cavity system. Medulla, morphology; cauda equina; motor, sensory and vegetative centers. Routes of association. Ascending and descend-ing tracts. Bulb; pons, cerebral peduncles, association fibers. Cranial nerves (connected nuclei, distribution, action). Sleep and vigilance. Red nucleus, locus Niger. Bulbar olive. Tectum nucleus. Archaeocerebellum, paleocerebellum and neocerebellum. Thalamus, metathalamus, subthalamus, hypothalamus. Telencephalon, hippocampus. Neopal-lium. Peripheric and autonomic nervous system. Surgical anatomy of the appendicular and axial skeleton, including the spine. Manipulation of bone, muscle and tendon tissues for surgical purposes. Radiographic anatomy, radio-graphic technique and positioning for thorax, skeleton and abdomen images. Ultrasound of the abdomen.

Bibliography:

Alexandre-Pires, G., 2002. Guide to Practical Classes of Anatomy .ppa FMV-UTL.

Brown, M.; Brown, L,2021- Radiography for Veterinary Technicians, Ed. Elsevier New York, 7thEd

Dyce, K.M., Sack, W.O., Wensing, C.J.G., 2019. Textbook on Veterinary Anatomy. Ed: Guanabara. 5th edition



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Konig, H. E. Anatomy of Domestic Animals. Text and Colorful Atlas, 2021., Ed: Artmed Editora, 7th Ed

Kenneth A. Johnson, 2013. Piermattei's Atlas of Surgical Approaches to the Bones and Joints of the Dog and Cat, Elsevier HS

Machado A, Haertel L.M., 2014. Functional Neuroanatomy - 3rd ed, Atheneu, Brazil

Minto B., Dias, L. (2022). Treaty of Orthopedics of Dogs and Cats. Volumes 1 and 2

Nyland, T.G. & Mattoon, J.S. (2020). Small Animal Diagnostic Ultrasound. 3rd edition. Elsevier

Thrall D.; Robertson, I., 2022-Atlas Normal Radiographic Anatomy and Anatomic Variants in the Dog and Cat. Ed. Elsevier NY 3rd Ed.

Tobias, K. M., & Johnston, S. A., 2018. Veterinary Surgery: Small Animal Expert Consult-E-Book. Elsevier HS.

Assessment:

Assessment of the theoretical component of learning:

The assessment of the theoretical component will be accomplished through a written examination including short answer / closed ended questions, multiple-choice questions (MCQ), true and false, missing words / incomplete sentences and constructed-response questions (CRQs) or open-ended questions.

Works over various anatomical concepts will be carried on, without manipulation of animals or organs.

Evaluation of the practical component of learning:

Can occur according to distinct aspects agreed at the beginning of learning process, namely:

- a) Preparation of individual/group reports on the focus subjects of learning;
- b) In a final written exam in which students identify particularized anatomical structures, its inherent function, location and relations in a loco-regional and systemic context;
- c) Identification by dissection or recognition of particularized anatomical structures.

The assessment of students is also an important tool that allows translating the effectiveness of the teaching-learning methodologies used, allowing the appropriate adjustments to be made in the teaching methodologies and assessment of knowledge and skills.

The final classification is obtained using the formula:

$FC = 0,5T (0,8 \text{ exam} + \text{Work group}^*) + 0,5 P$ whenever the development of a specific work is stipulated.

Without agreed work: $FC = 0,5 T + 0,5 P$