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| 3.0 credits | 22.5 h + 6.0 h | 2q |
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| Teacher(s) : | Donnay Isabelle ; |
| Language : | Français |
| Place of the course | Louvain-la-Neuve |
| Prerequisites : | Knowledge in embryology, cell and molecular biology, biochemistry and anatomy of domestic animals. <i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i> |
| Main themes : | The course deals, on a functional point of view, with the basis of general physiology and neuromuscular physiology (membrane potential, synapses, neurotransmitters, skeletal and smooth muscle contraction, sensory receptors and pathways, motor control, vision and audition). It focuses on the characteristics of domestic animals and on the key points for the clinical diagnosis. Practical exercises deal with reflexes and positioning responses as well as the analysis of simple clinical cases in relation with the theoretical course. |
| Aims : | At the end of this activity, the student : - Knows and understands the generation of membrane potential et its modifications; the functioning of the striated and smooth muscles; the role and functioning of the various parts of the sensory and motor nervous systems; the functioning of the main sense organs. - Knows and understands the origin of the main differences between domestic species concerning the functioning of the nervous system and the sense organs. - Is able to interpret some clinical signs related to a dysfunction of the neuromuscular system. - Is able to perform and interpret basic reflexes and positioning responses on a domestic animal (dog) Is able to link different concepts seen during the course in order to answer on a clear and structured way to transversal questions related to neuromuscular physiology. <i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i> |
| Evaluation methods : | Written examination based partly on transversal questions and comparisons. The focus is set on the global understanding of functions and on the reasoning skills. Reports of the practical sessions are included in the final evaluation. |
| Teaching methods : | Oral presentations with small active learning activities (guided questions) and concrete examples. Practical sessions realized in groups with living dogs (first session) or from movies and descriptions of clinical cases (second session). The students have to write a short report during each session. |
| Content : | 1. Table of content : theoretical part - Introduction - Resting membrane potential and action potential - Synapses - Muscle contraction (skeletal and smooth muscle) - Sensory receptors and pathways - Motor control - Cerebellum and vestibular system - Sense organs (audition and vision) - Autonomous nervous system 2. Content of the practical exercises A first practical session deals with reflexes and positioning responses; during a second practical session, the students analyse simple clinical cases in relation with the theoretical part of the course. |
| Bibliography : | Powerpoint files available on iCampus. Reference books available at the BST. Links with websites. |
| Faculty or entity in charge: | VETE |

| Programmes / formations proposant cette unité d'enseignement (UE) | | | | |
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| Intitulé du programme | Sigle | Credits | Prerequis | Acquis d'apprentissage |
| Bachelor in Veterinary Medicine | VETE1BA | 3 | LBIO1111 and LPHY1114LPHY1115 |  |