UCLouvain

lbio1236

2021

Integrated animal biology : coordination, perception and locomotion

4.00 credits	40.0 h + 10.0 h	Q2

Teacher(s)	Clotman Frédéric (compensates Knoops Bernard) ;Dumont Patrick ;Dumont Patrick (compensates Knoops Bernard) ;Gofflot Françoise ;Knoops Bernard ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	*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.*
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 To establish the bases in biochemistry, physiology and histology, the main animal tissues will be studied, emphasis being put on mammalian tissues. Certain notions in cellular biology will also be deepened with the objective of integrating morphological, physiological and biochemical aspects in cellular processes.
Evaluation methods	Written examination. The questions will concern the subject of the different parts of the course, ie the locomotion, the nervous system, the sense organs and the endocrine system, including the teaching of practical work.
Teaching methods	*Ex cathedra* classes, inverted classes, practical work.
Content	This teaching unit will include, 1. For the part of the study of the musculoskeletal system: A. The skeleton Axial skeleton Belts The appendicular skeleton B. Skeletal muscles Organization of skeletal muscles 2. For the part of the study of the nervous system: A. Sensitivity and sensory treatments The somesthetic system Pain Visual pathways The auditory system The vestibular system Chemical senses B. Motor skills and central control Motor neurons and motor control Central controls of the brain stem and spinal cord Modulation of movements by the ganglia of the base Modulation of movements by the cerebellum Eye movements The vegetative nervous system 3. For the part dealing with sensory reception: A. the chemical senses the olfactory mucosa taste buds B. The eye and vision C. The ear and the auditory and vestibular systems 4. For the part of the study of the endocrine system: A. Introduction Overall view of the endocrine system The different types of hormones

	Mechanisms of hormonal action Endocrine regulation: important concepts B. The main endocrine glands Hypothalamus and pituitary gland Thyroid The parathyroid glands The endocrine pancreas The epiphysis (pineal gland) The adrenal The organs / structures of the different systems taught in the lectures will be illustrated during practical sessions thanks to the observation and analysis of histological sections.
Inline resources	Course Powerpoints available on Moodle.
Bibliography	Ouvrages de référence : Neurosciences (Purves *et aL*, éditions de Boeck). Pour la partie relative au système endocrinien: Précis de Physiologie Médicale (Guyton & Hall ; Piccin Nuova Libraria); The endocrine System (Hinson, Raven & Chew ; Elsevier). Ouvrages conseillés, non indispensables.
Other infos	Presence in practical work is mandatory. Any unjustified absence will be sanctioned. Moreover, the holders of the course may, under the article 72 of the General Regulations for Studies and Examinations, propose to the jury to oppose the registration of a student who has not attended to the various sessions of the practical works (without justficiation), for the January, June or September sessions.
Faculty or entity in charge	BIOL

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Minor in Biology	MINBIOL	4		
Bachelor in Biology	BIOL1BA	4	LCHM1141B AND LBIO1111 AND LBIO1112	
Master [120] in Biochemistry and Molecular and Cell Biology	BBMC2M	4		