UCLouvain

wsbim1321

2018

3 credits	30.0 h	Q1

Teacher(s)	Clotman Frédéric ;Gailly Philippe ;Kienlen-Campard Pascal coordinator ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	Neuroscience Course WSBIM1220 *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.*
Main themes	- Pain - Memory ' Biological rhythms
Aims	1 At the end of the course, the student will be able to: 1. Describe the different forms of memory. 2. Describe the structures involved in encoding and storing memory. 3. Explain the cellular and molecular pre- and post-synaptic mechanisms of different forms of synaptic plasticity. 4. Define and explain different notions related to pain. 5. Explain pathways and mechanisms of activation and modulation of pain pathways. 6. Describe the consequences and mechanisms of alterations in pain pathways, and their measurements in humans and animals. 7. Describe the different treatments for pain and their mechanisms of action. 8. Define the concept of rhythm at the level of the neuron and the nervous system. 9. Explain the molecular mechanisms and neural pathways that control the circadian clock. 10. Describe the structures involved in waking-sleep patterns and explain the mechanisms associated with sleep disorders. - - - - *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".*
Evaluation methods	Written exam. Open-ended questions.
Teaching methods	Magisterial teaching
Content	The course (master) proposes to deepen the basic knowledge acquired in neuroscience (WSBIM1220) by addressing 3 major functions controlled by the nervous system: - Pain - Memory - Biological rhythms The aim of the course is to provide students with a suitable knowledge base to understand the mechanisms implemented by the nervous system to control these 3 functions and the associated pathologies. The opportunity is offered to students to familiarize themselves with experimental approaches essential to understanding the 3 functions studied
Inline resources	The course's Moodle platform groups together the course's support document as well as links to resources or sites that complement the topics covered.
Bibliography	• documents de cours pdf 200pages recto verso • Course slides, additional resources (poster, videos discussed during the course) and Internet links are available on the moodle website. Principles of neural science. Kandel et al. Mc Graw Hill Neurosciences. D Purves et al. de Boeck Mechanisms of memory. JD Sweatt. Academic Press Memory. From mind to molecules. L Squire and ER Kandel. Roberts & Company Publishers Le phénomène de la douleur (Comprendre pour soigner). Serge Marchand. Masson

Faculty or entity in charge	SBIM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Additionnal module in Biomedical Sciences	WSBIM100P	3		