


Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

3 credits

30.0 h

Q1

Teacher(s)	Gailly Philippe ;Kienlen-Campard Pascal ;Missal Marcus (coordinator) ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	<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	<ul style="list-style-type: none"> - What is a system? What does systems neuroscience bring that other approaches, cellular and molecular, do not? Biomedical interest. - Introduction to the main investigative methods and techniques in Systems Neuroscience: electrophysiology (extracellular), irreversible and reversible lesions, magnetic stimulation, structural and functional imaging. - Animal models and transgenesis. - Sense organs and transduction mechanisms. - Central mechanisms of sensory information processing: vision (+ eye movements), somesthesia, pain, proprioception, balance, hearing. - Motor control: tone, posture, spinal reflexes, pyramidal system, central grey nuclei (Parkinson's, Huntington's), cerebellum, automatic and voluntary movements. - Different forms of learning and memory.
Aims	<p>1 To provide students with a basic knowledge base in the field of Systemic Neurosciences needed in the Biomedical Sciences.</p> <p>-----</p> <p><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></p>
Evaluation methods	Due to the COVID-19 crisis, the information in this section is particularly likely to change. Written exam, essay questions and short answer questions. Multiple choice questions.
Content	The lecture is subdivided into 3 main parts. In the first part, general questions about the systems approach in neuroscience, as well as specific methods, animal models and transgenesis will be discussed; in the second part, sensory and motor systems will be studied; in the third part, different forms of memory and learning will be presented.
Other infos	Prerequisites: General biology, cytology and histology courses (Bac 1&2) are prerequisites as well as WSBIM1220 or equivalent.
Faculty or entity in charge	SBIM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Biomedicine	SBIM1BA	3	WMD1120 AND WMD1006 AND WSBIM1201T AND WSBIM1201P AND WSBIM1220	
Additional module in Biomedical Sciences	APPSBIM	3		