


3.00 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	- Pain - Memory ' Biological rhythms
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <p>At the end of the course, the student will be able to:</p> <ol style="list-style-type: none"> <li>1. Describe the different forms of memory.</li> <li>2. Describe the structures involved in encoding and storing memory.</li> <li>3. Explain the cellular and molecular pre- and post-synaptic mechanisms of different forms of synaptic plasticity.</li> <li>4. Define and explain different notions related to pain.</li> <li>5. Explain pathways and mechanisms of activation and modulation of pain pathways.</li> <li>6. Describe the consequences and mechanisms of alterations in pain pathways, and their measurements in humans and animals.</li> <li>7. Describe the different treatments for pain and their mechanisms of action.</li> <li>8. Define the concept of rhythm at the level of the neuron and the nervous system.</li> <li>9. Explain the molecular mechanisms and neural pathways that control the circadian clock.</li> <li>10. Describe the structures involved in waking-sleep patterns and explain the mechanisms associated with sleep disorders.</li> </ol>
Evaluation methods	Written exam, essay questions and short answer questions. Multiple choice questions. Weighting per teacher: 50% of the final mark awarded for Marcus Missal's part, 30% for Pascal Kienlen-Campard's part and 20% for Philippe Gailly's part.
Teaching methods	Plenary lectures.
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.
Faculty or entity in charge	SBIM

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Additionnal module in Biomedical Sciences	<a href="#">APPSBIM</a>	3		
Bachelor in Biomedicine	<a href="#">SBIM1BA</a>	3	<a href="#">WSBIM1201T</a> AND <a href="#">WSBIM1201P</a> AND <a href="#">WSBIM1220</a>	