




5 credits

45.0 h

Q1

Teacher(s)	Duque Julie coordinator ;Jankovski Aleksandar (compensates Missal Marcus) ;Missal Marcus ;
Language :	French
Place of the course	Louvain-la-Neuve
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	- Introduction to the most important techniques in Neurosciences: recordings, reversible lesions, transcranial magnetic stimulation, functional brain imaging' - Receptors and transduction mechanisms - Central processing of sensory informations: vision, tactile, pain, proprioception and balance. - Motor control: spinal reflexes, muscle tone, posture, corticospinal system, motor cortical areas, basal ganglia, cerebellum, voluntary movements, locomotion, motor coordination' - Sensori-motor integration; role of the posterior parietal cortex in movement control. - Distinct forms of learning and memory.
Aims	<p>1</p> <ul style="list-style-type: none"> - To study the normal function of the sensory systems, especially the visual and somatosensory systems. - To study the neurophysiological mechanisms responsible for controlling movements, from the simple reflexes to the most sophisticated voluntary hand movements. - To investigate the neural basis of learning and memory. - To provide the basic knowledge for further advanced Neuroscience courses. <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	Multiple-choice test.
Teaching methods	Lectures.
Content	- Introduction to the most important techniques in Neurosciences: recordings, reversible lesions, transcranial magnetic stimulation, functional brain imaging - Receptors and transduction mechanisms - Central processing of sensory informations: vision, tactile, pain, proprioception and balance. - Motor control: spinal reflexes, muscle tone, posture, corticospinal system, motor cortical areas, basal ganglia, cerebellum, voluntary movements, locomotion, motor coordination - Sensori-motor integration; role of the posterior parietal cortex in movement control. - Distinct forms of learning and memory.
Inline resources	Lectures available on Moodle: https://moodleucl.uclouvain.be/course/view.php?id=5603
Bibliography	<ul style="list-style-type: none"> • https://moodleucl.uclouvain.be/course/view.php?id=5603 <p>Neurosciences, Purves et al. Editeur: De Boeck Supérieur.</p>
Other infos	Rating: Review written or oral and / or elements of continuous assessment Support: Syllabus and / or book (s) Framing: Holder (s)
Faculty or entity in charge	FSM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Physiotherapy and Rehabilitation	KINE1BA	5	LIEPR1001 AND LIEPR1004	
Bachelor in Engineering	FSA1BA	5	LGBIO1111	
Bachelor in Motor skills : General	EDPH1BA	5	LIEPR1001 AND LIEPR1002 AND LIEPR1004 AND LIEPR1021 AND LIEPR1022	
Minor in Engineering Sciences : biomedical	LGBIO100I	5		