

5.0 credits	60.0 h	1q
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Teacher(s) :	Pesenti Mauro ; Mouraux André ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	The course focuses on the attentional, mnemonic and visual mechanisms from a psychophysiological perspective (plasticity and learning mechanisms, interaction of genetic and epigenetic variables, attentional filtering mechanisms etc.) and a neuropsychological perspective (effect of cerebral lesions on cognitive functioning and behaviour) through animal models, case analysis patients with cerebral lesions and functional imaging techniques.
Aims :	<p>Students should be able to :</p> <ul style="list-style-type: none"> - understand the psychophysiological mechanisms of basic cognitive functions; - understand the pathology of behaviour and cognition following a cerebral lesion in a human subject; - adopt a critical stance towards all the methods of recording cerebral functions which enable links to be established between behaviour and cognitive functions. <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 :	<p>The assessment is made by a written exam including:</p> <ul style="list-style-type: none"> ' multiple choice questions and true-false questions; ' questions of definition of main terms/concepts; ' open questions. <p>Students are notified early in the course of the assessment methods, that are recalled at the end of the semester. Some examples of possible questions are presented in class and available on iCampus.</p> <p>The course is not subject to ongoing evaluation.</p>
Content :	<p>The course is an introduction to basic concepts of contemporary psychophysiology and neuropsychology, including functional neuroimaging techniques. It focuses on the mechanisms of attention, memory and visual processing, addressed from psychophysiological (mechanisms of plasticity and learning, interaction of genetic and epigenetic variables, mechanisms of attentional filtering, etc.) and neuropsychological (effects of brain damage on cognitive functioning and behaviour) points of view, through animal models, analyses of cases of brain-damaged patients and functional neuroimaging techniques.</p> <p>The "psychophysiology" section aims (1) to introduce to basic elements of the structure, electro-chemical functioning and function of the nervous system, and to study through experimental observations made in humans and animals the physiological mechanisms involved in (2) memory and learning, (3) attentional filtering and (4) emotions. Special emphasis is placed on the neurobiological mechanisms of neuroplasticity underlying our adaptability and our individuation. At the end of this section, the students will have acquired an understanding of the psychophysiological mechanisms of basic cognitive functions, and knowledge of methods of recording cerebral functions to link behaviour and cognitive functions. These elements enable the students to address the second section of the course devoted to neuropsychology.</p> <p>The "neuropsychology" section aims to present (1) the theoretical and methodological bases of contemporary neuropsychological practice, and (2) the major brain damage and diseases through case studies and video documents. At the end of this section, the student will be able to understand impairments of behaviour and cognition resulting from brain damage in human beings, and to take a critical look at all the methods of recording cerebral functions to link behaviour and cognitive functions.</p>
Bibliography :	<p>Basic reference books (see list below) are present at the library of the Psychology faculty; the following books are recommended:</p> <ul style="list-style-type: none"> -- Boisacq-Schepens, N. & mp; Crommelinck, M. (2000) Neurosciences. Paris : Dunod. -- Purves, D. et al. (2003) Neurosciences. DeBoeck Université. -- Kandel, E., Schwartz, J., Jessel, T. (2000) Principles of neural science (4ème édition). New York: McGraw-Hill -- Seron, X. (2002). La neuropsychologie cognitive. (5ème édition). Que sais-je? Paris: PUF. -- Seron, X. & mp; Van der Linden, M. (Eds.) (2000). Traité de neuropsychologie clinique. Marseille: Solal.
Other infos :	<p>Prerequisites : PSP1120, PSP1131, PSP1132, PSP1133, PSP1145 or equivalent courses.</p> <p>The course material consists of:</p> <ul style="list-style-type: none"> -- slides presented in class, available on iCampus; -- summary chapters from books in French and English. For some chapters of the course, typed notes are also available to students on iCampus. Each chapter is accompanied by a reference list that includes (1) all the studies mentioned explicitly, (2) recommended readings, and (3) where possible, some websites allowing the students to deepen their knowledge interactively.
Faculty or entity in charge:	PSP