

4.00 credits

30.0 h

Q1

Teacher(s)	Noël Marie-Pascale ;
Language :	French
Place of the course	Louvain-la-Neuve
Learning outcomes	
Evaluation methods	The certification evaluation is carried out in two parts: on the one hand, the oral presentation of a precise synthesis carried out in a team on one of the topics covered by the course and on the other hand, by a written exam containing mostly open questions requiring a short and precise answer. The exam may also include some multiple choice questions. During the September session, if a very small number of students are registered for the exam, the teacher may decide to propose an oral exam instead of a written exam.
Teaching methods	This year, the course will alternate between a few lectures (the first and last) and presentations by teams of students.
Content	<p>Topics: Cognitive bases of digital development in children and dyscalculia - Pre-numerical tools in babies, including the analog line metaphor (or ANS: approximate number system)</p> <ul style="list-style-type: none"> <li>- Counting (development of the verbal numerical chain) and enumeration (principles and development of the cardinal value of number words)</li> <li>- Symbolic codes :</li> <li>- oral/written verbal numbers, arabic numbers, lexicon, syntax, transcoding</li> <li>- base 10 representation</li> <li>- Access to the magnitude of large numbers</li> <li>- Link between these basic numerical capabilities and arithmetic performance</li> <li>- Calculation :</li> </ul> <ol style="list-style-type: none"> <li>1. o Sensitivity to additions-removals in babies; non-verbal calculations in infants, approximate calculation ;</li> <li>2. o strategy development, Siegler's association distribution model, base 10 for complex calculations</li> </ol> <ul style="list-style-type: none"> <li>- word problem solving</li> <li>- Rational numbers: decimal numbers and fractions</li> <li>- Dyscalculia :</li> </ul> <ol style="list-style-type: none"> <li>1. o definition, prevalence, difficulties presented, associations with other disorders,</li> <li>2. o causal hypotheses (genetic contribution; role of general cognitive factors, deficit in basic numerical factors, etc.)</li> <li>3. o neuro-functional correlates</li> <li>4. - Rehabilitation and experimental training</li> </ol> <ul style="list-style-type: none"> <li>- Special issues that may be considered:</li> </ul> <ol style="list-style-type: none"> <li>1. relationship between fingers and numbers ;</li> <li>2. hypersensitivity to interference in arithmetic fact deficits;</li> <li>3. deficit of the semantic representation of number in visuo-spatial dyspraxias.</li> </ol>
Inline resources	<p>Pdf documents corresponding to the slides of the course are available on moodle.</p> <p>Other ressource: a synthesis from INSERM</p> <p><a href="http://www.ipubli.inserm.fr/bitstream/handle/10608/110/Synthese.html#titre_n1_10">http://www.ipubli.inserm.fr/bitstream/handle/10608/110/Synthese.html#titre_n1_10</a></p>
Bibliography	<p>Ouvrages de référence:</p> <p>Noël, M-P &amp; Karagiannakis, G. (2020). Dyscalculie et difficultés d'apprentissages. Guide pratique de prise en charge.</p>
Other infos	<p>Assessment : individual written examination Support: documents, powerpoint presentations etc available on iCampus, references to published articles</p>
Faculty or entity in charge	ELOG

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Psychology and Education : Speech and Language Therapy	LOGO1BA	4		