





**This learning unit is not open to incoming exchange students!**

Teacher(s)	Dias de Carvalho Junior Gabriel ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	<ul style="list-style-type: none"> <li>• The course LSCI2320 taught in Q1 (S1 to S4) must have been taken.</li> <li>• The knowledge of the discipline(s) to be taught, i.e., the knowledge of physics related to the 2nd grades of secondary education in general science.</li> <li>• Clear and correct communication in the language of instruction both orally and in writing.</li> <li>• The interpersonal skills and professional postures normally expected of a teacher.</li> </ul>
Main themes	<ol style="list-style-type: none"> <li>1. The didactic specificities of a teaching sequence in physics at the 2nd level (D2)</li> <li>2. Experimentation, the scientific approach and the investigative approach in D2</li> <li>3. Problematization and modeling in D2</li> <li>4. The importance of epistemology; the major epistemological currents</li> <li>5. Evaluation</li> <li>6. Difficult concepts to teach in physics at D2</li> </ol>
Learning outcomes	
Evaluation methods	<p>Students enrolled in the geography or mathematics aggregation, specifically in module LPHYS2471 C, are assessed in January as follows:</p> <p>Activity 1: Physics laboratory-related activities: 20% of the total grade</p> <p>Activity 2: Written test (November) on the fundamental concepts to be taught at D2 level in physics: 10% of the total grade</p> <p>Activity 3: Report on a 10-hour observation internship in physics: 30% of the total grade</p> <p>Activity 4: Individual written assessment (January) on the topics covered in didactics and epistemology of physics: 40% of the total grade</p> <p>Each of these four activities must be passed with a score equal to or greater than 10/20 for this UE to be considered successful. The absorbing mark principle is applied to this UE.</p> <p>Attendance in this course is mandatory. In accordance with Article 72 of the General Regulations for Studies and Examinations, the course coordinator may propose to the board to oppose the enrollment of a student who has not attended at least 80% of the classes, either during the January or September session.</p>
Teaching methods	The teaching activities are those recommended in secondary education: group work, lectures, flipped classrooms, practical work, laboratory sessions, etc. The didactic approach emphasizes co-construction with the students.
Content	This teaching unit aims to 'equip' students to become future physics teachers at the D2 level. This involves not only presenting didactic elements related to physics education at the D2 level but also ensuring that future teachers transfer and adopt these tools through course preparations.
Inline resources	<p>on MoodleUCL, acronym LPHYS2471.</p> <p>The site contains the documents presented and used during the courses and allows the deposit of the students' productions.</p>
Bibliography	Des ouvrages en relation avec les disciplines enseignées et avec la didactique seront présentés lors des cours.
Other infos	<p>LPHYS2471 C is an optional course for students enrolled in the geography or mathematics aggregation. It can only be taken if the course LSCI2320 has been completed beforehand.</p> <p>LPHYS2471 C is offered in Q1 during weeks 8 to 14, with a duration of 2 hours per week (15 hours equivalent to 2 credits).</p>
Faculty or entity in charge	CAFC

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Teacher Training Certificate (upper secondary education) - Mathematics	MATH2A	2		
Teacher Training Certificate (upper secondary education) - Geography	GEO2A	2		
Master [120] in Mathematics	MATH2M	2		
Master [120] in Geography : General	GEOG2M	2		