

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.







2 credits

15.0 h + 5.0 h

Q2

Teacher(s)	Plumat Jim ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	<p>The topics addressed are those related to the teaching of physics in the third degree :</p> <ul style="list-style-type: none"> <li>· the conceptual difficulties related to the topics to be taught in physics,</li> <li>· the interest and use of experimental and non-experimental activities, which are essential in physics.</li> </ul> <p>Practical sessions to implement essential experiments in physics and to analyse learning difficulties.</p>
Aims	<p><b>a. Contribution of the teaching unit to the learning outcomes of the programme (PHYS2MA)</b>                  2.2, 2.3, 2.4, 2.6, 2.7, 2.8                  3.1, 3.2, 3.3                  10.1, 10.2, 10.3</p> <p><b>b. Specific learning outcomes of the teaching unit</b>                  At the end of this teaching unit, the student will be able to :</p> <ol style="list-style-type: none"> <li>1. use the disciplinary didactics and epistemology that guide pedagogical action in third-degree physics classes ;</li> <li>2. transfer scholarly knowledge into school knowledge in physics at the third degree ;</li> <li>3. design and plan teaching-learning (TL) situations according to the students concerned and in relation to the competency frameworks and programmes;</li> <li>4. demonstrate mastery of the new disciplinary and interdisciplinary knowledge to be taught ;</li> <li>5. explore new disciplinary, interdisciplinary and technological approaches and teaching tools ;</li> <li>6. design, conduct and evaluate an experimental sequence ;</li> <li>7. interrogate his/her representations and initial conceptions with a view to making them evolve ;</li> <li>8. adopt a reflexive attitude towards teaching practices based on didactic and pedagogical principles as well as educational research.</li> </ol> <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><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b>                  The involvement of students in the teaching unit will be an important part of the final evaluation. At the end of the teaching unit, the students will be brought to make a personal file including a sequence of TL ; this sequence will ideally present an experimental dimension. The evaluation will consist of the student's testimony of his/her expertise in the conception of this TL sequence during an oral examination.</p>
Teaching methods	<p><b>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</b>                  The teaching activities will be carried out by the holder of the teaching unit, mainly in co-construction with the students (group work, learning by projects, practical work, ...), but will also include lectures, personal readings, preparation of reports, ...</p>
Content	<p>This teaching unit consists in "tooling" the students to become future physics teachers in the third degree. The aim is to present the elements of didactics related to the teaching of physics in the third degree but also to ensure the transfer and the appropriation of these tools by the future teachers through course preparations.</p>
Bibliography	<p>Des ouvrages en relation avec les disciplines enseignées et avec la didactique seront présentés lors des cours.                  Books related to the subjects taught and to the teaching practice will be presented during the lectures.</p>
Other infos	<p>The teaching unit LPHYS2471 is a compulsory didactical teaching unit for students enrolled in the Aggregation in physics and an optional teaching unit for students enrolled in the Aggregation in biology or chemistry. Option Graduate Program for students enrolled in the Biology or Chemistry program.</p>

Faculty or entity in charge	CAFC
-----------------------------	------

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Chemistry	<a href="#">CHIM2M</a>	2		
Master [120] in Biology of Organisms and Ecology	<a href="#">BOE2M</a>	2		
Master [120] in Biochemistry and Molecular and Cell Biology	<a href="#">BBMC2M</a>	2		
Teacher Training Certificate (upper secondary education) - Physics	<a href="#">PHYS2A</a>	2		
Teacher Training Certificate (upper secondary education) - Chemistry	<a href="#">CHIM2A</a>	2		
Teacher Training Certificate (upper secondary education) - Biology	<a href="#">BIOL2A</a>	2		
Master [120] in Physics	<a href="#">PHYS2M</a>	2		