











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

Teacher(s)	De Kesel Myriam ;Matthys Nathalie ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	<ul style="list-style-type: none"> <li>• The knowledge of the discipline(s) to be taught, i.e. the knowledge of biology, chemistry and physics related to the 2nd level of secondary education in general sciences.</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 programs and reference materials</li> <li>2. Science resources (textbooks, digital tools, teaching kits)</li> <li>3. The didactic triangle, teaching and learning</li> <li>4. Didactic transposition and desynchronization</li> <li>5. Initial conceptions and epistemological obstacles</li> </ol>
Learning outcomes	<p><b>At the end of this learning unit, the student is able to :</b></p> <p><b>Contribution of the teaching unit to the AA reference framework of the program</b></p> <p>With regard to the competency framework of the biology, chemistry or physics aggregation program (of the didactic aim), this teaching unit contributes to the development and acquisition of the following competencies : AA1.1 / AA2.2 / AA2.3 / AA2.4 / AA2.6 / AA2.7 / AA2.8 / AA3.1 / AA3.2 / AA3.3.</p> <p><b>Learning outcomes at the end of the course</b></p> <ol style="list-style-type: none"> <li>1             <ul style="list-style-type: none"> <li>• Design teaching-learning situations (TLS) according to the students concerned and in relation to the competency frameworks and the programs,</li> <li>• Explore new approaches and pedagogical tools in the disciplines, interdisciplinary and technological (manuals, digital tools, pedagogical kits)</li> <li>• Transpose scholarly knowledge into school knowledge,</li> <li>• To question one's initial representations and conceptions in order to change them,</li> <li>• Identify the initial spontaneous representations and conceptions of the students in order to take them into account and make them evolve during a teaching sequence,</li> <li>• Design teaching-learning situations in three stages: contextualization, decontextualization and recontextualization</li> </ul> </li> </ol>
Evaluation methods	<p>Students are assessed as follows:</p> <p>Personal work done in the three flipped classroom modules: 50% of the total grade</p> <p>Individual written assessment (January) concerning the basic concepts of science didactics: 50% of the total grade</p> <p>Attendance to this course is required. In accordance with article 72 of the General Regulations for Studies and Examinations, the course instructors may propose to the jury to refuse registration to a student who has not attended at least 80% of the courses in the January or September session.</p>
Teaching methods	The teaching activities provided by the two co-teachers of the course are those recommended in secondary education: group work, lectures, flipped classes, MOOC ... mainly in co-construction with students.
Content	This teaching unit consists in "equipping" students to become future science teachers at the 2nd level, in biology, chemistry and physics. The aim is not only to present the elements of didactics related to science teaching but also to initiate the transfer and appropriation of these tools by the future teachers.
Inline resources	<p>on MoodleUCL, acronym LSCI2320.</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	LSCI2320 is given in Q1 during S1 to 4 for 5 hours per week

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

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Teacher Training Certificate (upper secondary education) - Mathematics	MATH2A	2		
Teacher Training Certificate (upper secondary education) - Physics	PHYS2A	2		
Master [120] in Biology of Organisms and Ecology	BOE2M	2		
Master [120] in Biochemistry and Molecular and Cell Biology	BBMC2M	2		
Teacher Training Certificate (upper secondary education) - Geography	GEO2A	2		
Teacher Training Certificate (upper secondary education) - Biology	BIOL2A	2		
Master [120] in Mathematics	MATH2M	2		
Master [120] in Chemistry	CHIM2M	2		
Master [120] in Physics	PHYS2M	2		
Teacher Training Certificate (upper secondary education) - Chemistry	CHIM2A	2		
Master [120] in Geography : General	GEOG2M	2		