








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

Teacher(s)	de Wergifosse Marc ;Matthys Nathalie ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	Didactics and Epistemology of Science Course : LSCI2320
Main themes	<p>The topics covered are those related to teaching chemistry in the second and the third grade :</p> <ul style="list-style-type: none"> <li>• Conceptual difficulties related to the topics to be taught in chemistry,</li> <li>• The interest and exploitation of experimental or non-experimental activities, essential in chemistry,</li> </ul> <p>Practical sessions on the implementation of essential experiments in chemistry and analysis of learning difficulties.</p>
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 chemistry program (of the didactic finality), this teaching unit contributes to the development and acquisition of the following competencies: 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 teaching unit</b></p> <p>At the end of this teaching unit, the student is able to :</p> <ol style="list-style-type: none"> <li>1                     <ul style="list-style-type: none"> <li>• Use disciplinary didactics and epistemology to guide the pedagogical action in the 3rd level chemistry courses,</li> <li>• Transpose scholarly knowledge into academic knowledge in 3rd grade chemistry,</li> <li>• To design and plan teaching-learning situations (TLS) according to the students concerned and in connection with the reference frameworks of competences and the programs,</li> <li>• To demonstrate mastery of new disciplinary and interdisciplinary knowledge to be taught,</li> <li>• To explore new approaches and pedagogical tools in the subject, interdisciplinary and technological areas,</li> <li>• Design, conduct and evaluate an experimental sequence,</li> <li>• To question one's initial representations and conceptions in order to change them,</li> </ul> </li> </ol> <p>Adopt a reflective attitude on one's teaching practices based on didactic and pedagogical principles as well as on educational research.</p>
Evaluation methods	<p>Enrolled students will be evaluated as follows :</p> <ul style="list-style-type: none"> <li>- Student involvement during classes, group and personal work and labs: 10% of the total grade,</li> <li>- Completion of a personal file including :                     <ol style="list-style-type: none"> <li>1/ reflective work on :                             <ul style="list-style-type: none"> <li>- a contextualization,</li> <li>- a pre-design,</li> <li>- a manipulation.</li> </ul> </li> <li>2/ a proposal for a teaching sequence ideally including an experimental dimension based on different UAAs approached in the D3 of upper secondary education: 50% of the total mark</li> </ol> </li> <li>- Presentation and defense of the file during an oral exam: 40% of the total grade.</li> </ul>
Teaching methods	The teaching activities will be carried out by the course holder, mainly in co-construction with the students (group work, APP, practical work, ...) but will also include lectures, readings, reports, ...
Content	This teaching unit consists in "equipping" students to become future teachers of chemistry at the 3rd level. The aim is to present the elements of didactics related to the teaching of chemistry at the 3rd level but also to ensure the transfer and appropriation of these tools by the future teachers through course preparations.
Inline resources	on MoodleUCL, acronym LCHM2340.

	The site contains the documents presented and used during the courses and allows the deposit of the students' productions.
Bibliography	Des ouvrages en relation avec les disciplines enseignées et avec la didactique seront présentés lors des cours. ----- Works related to the disciplines taught and to didactics will be presented during the courses.
Other infos	LCHIM2340 is <b>a required</b> didactic course for students registered for the agrégation in chemistry and an elective for students registered for the agrégation in biology or physics.
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) - Physics	PHYS2A	4		
Master [120] in Biology of Organisms and Ecology	BOE2M	4		
Master [120] in Biochemistry and Molecular and Cell Biology	BBMC2M	4		
Teacher Training Certificate (upper secondary education) - Biology	BIOL2A	4		
Master [120] in Chemistry	CHIM2M	4		
Master [120] in Physics	PHYS2M	4		
Teacher Training Certificate (upper secondary education) - Chemistry	CHIM2A	4		