

4.00 credits







37.5 h

Q1 and Q2


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

Teacher(s)	de Wergifosse Marc (coordinator) ;Matthys Nathalie ;Wilmet Stéphanie ;
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> <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> <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>Students enrolled in the entire teaching unit (LCHM2340 C and LCHM2340 D) are assessed as follows:</p> <ul style="list-style-type: none"> <li>• Activity 1: Written test (October) on the basic concepts to be taught in D2 chemistry: 10% of total grade</li> <li>• Activity 2: Chemistry laboratory activities: 20% of total grade</li> <li>• Activity 3: Individual written assessment (January) on concepts covered in chemistry didactics and epistemology in D2: 20% of total grade</li> <li>• Activity 4: Written test (February) on the basic concepts to be taught in chemistry at D3: 5% of total grade</li> <li>• Activity 5: Preparation and organization of an activity for the science fair: 5% of total grade</li> <li>• Activity 6: Individual or paired oral assessment (June) of transfer, didactic and epistemological concepts in chemistry (design and presentation of a D3 chemistry learning sequence and personal reflective work): 40% of total grade.</li> </ul> <p>Each of these 6 activities must be passed with a mark equal to or higher than 10/20 for this UE to be passed. The absorbing mark principle is applied to this UE.</p> <p>Attendance is required. In accordance with article 72 of the General Regulations for Studies and Examinations, the course instructor may propose to the jury that a student who has not attended at least 80% of the courses in the January, June or September session be refused registration.</p>
Teaching methods	Teaching activities are those recommended in secondary education: group work, lectures, flipped classes, practical work, laboratory sessions... mainly co-constructed with students.

Content	This teaching unit aims to "equip" students to become future chemistry teachers at D2 and D3 levels. The aim is not only to present didactic elements relating to the teaching of chemistry at D2 and D3, but also to ensure the transfer and appropriation of these tools by future teachers through course preparation.
Inline resources	on Moodle UCLouvain, acronym LCHM2340. The site contains documents presented and used during classes, and allows students to submit their own productions.
Bibliography	Des ouvrages et publications scientifiques en relation avec les disciplines enseignées et avec la didactique seront présentés lors des cours. ----- Works and scientific publications related to the disciplines taught and to didactics will be presented during the courses.
Other infos	LCHM2340 C + D is a compulsory didactics course for students taking the agrégation in chemistry, and an optional course for students taking the agrégation in physics, biology, geography or mathematics. It can only be taken if LSCI2320 has been taken beforehand. LCHM2340 C is an optional course for students taking the agrégation in physics, biology, geography or mathematics. It can only be taken if LSCI2320 has been taken beforehand. LCHM2340 C is given in Q1 during S8 to 14 for 2 hours a week (15 hours equivalent to 2 credits). LCHM2340 D is given in Q2 for 2 hours a week (22.5 hours equivalent to 2 credits).
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		