

Teaching Methodology: Chemistry II (H001732)

Course size (nominal values; actual values may depend on programme)

Credits 6.0 Study time 180 h Contact hrs 60.0 h

Course offerings and teaching methods in academic year 2018-2019

A (semester 2)	Dutch	lecture	15.0 h
		practicum	10.0 h
		project	10.0 h
		microteaching	10.0 h
		seminar: coached	11.25 h
		exercises	
		excursion	3.75 h

Lecturers in academic year 2018-2019

Vanhoe, Hans	WE06	staff member
Strubbe, Katrien	WE06	lecturer-in-charge

Offered in the following programmes in 2018-2019

	crdts	offering
Master of Science in Biochemistry and Biotechnology	6	A
Master of Science in Biochemistry and Biotechnology	6	A
Master of Science in Chemistry	6	A
Master of Science in Physics and Astronomy	6	A
Master of Science in Geography	6	A
Master of Science in Geology	6	A
Master of Science in Geomatics and Surveying	6	A
Academic Teacher Education in Chemistry	6	A

Teaching languages

Dutch

Keywords

Education in chemistry, science education

Position of the course

This course contributes to the realisation of the basis professional teacher competencies as stated in the course description and in the matrix of competencies that can be consulted on www.lerarenopleiding.ugent.be

Contents

The contents fit in with the subject related education in the bachelor's and master's programmes.

In the theoretical part following topics are considered:

- subject related assessment forms (including alternative forms, such as portfolio, self evaluation and peer evaluation);
- discussion concerning appropriate media and learning materials;
- the development of syllabi and educational tools;
- the use of subject related activating and task oriented teaching methods tools, such as excursion, practice-based exercises, research projects;
- the management of specific learning problems;
- diversity and intercultural aspects in formation and educational situations;
- cross-curricular and current social questions and the selection of pedagogical content;
- implementation of social and cross-curricular themes;

- diversity and intercultural education;
- In the practical part following topics are considered:
- interpersonal behaviour;
 - cooperative learning;
 - different forms of assessment;
 - models of supporting the students and professionals learning, especially during their practice;
 - the development of syllabi and educational tools;
 - diversity and intercultural aspects in formation and educational situations;
 - cross-curricular and current social questions and the selection of pedagogical content;
 - implementation of social and cross-curricular themes;
 - diversity and intercultural education;
 - implementation of cross-curricular themes concerning educating a sense of public responsibility, educating democracy;
 - activating and task oriented instructions in secondary and/or higher education.

Initial competences

Final competences

- 1 to choose and formulate learning goals
- 2 to select, structure and translate learning experiences and learning content into learning activities
- 3 to have insight in the organisation of excursions
- 4 to determine appropriate learning and evaluation methods
- 5 to choose and adapt learning material, individually and as a member of a team
- 6 to realise a powerful learning environment for all learners
- 7 to broaden, deepen and apply domain specific knowledge and skills
- 8 to create a well structured learning environment
- 9 to perform administrative tasks correctly
- 10 to interpret and deal with accessible result from action research in education

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Excursion, lecture, microteaching, practicum, project, seminar: coached exercises

Extra information on the teaching methods

For the theoretical part interactive lectures and seminars are provided. For the practical part following teaching methods are used:

- seminars;
- micro-teaching,
- excursion,
- project,
- practical sessions

The student-teachers - teachers in training - in a LIO-trajectory have to realize the above-mentioned goals and competences through an alternative portfolio-trajectory. The assignments are elaborated in a manual. There are a number of contact-moments, intervention and coaching. A full LIO-trajectory includes a teaching assignment of minimal 500 hours (this corresponds with teaching assignment of 12 hours a week). Students with an assignment between 200 and 500 hours participate in the LIO-trajectory on a part-time basis. A candidate with a LIO-trajectory of less than 200 hours (this corresponds to a teaching assignment of less than 5h per week) is not admitted to the portfolio-trajectory. The student then has to follow the normal learning-trajectory.

Learning materials and price

Syllabus, notes, courses and books in chemistry (secondary school), all material is available on Minerva or from the library

References

References are communicated on Minerva

Course content-related study coaching

Study coaching is provided by teaching assistants.
Interactive support using Minerva.
By appointment.

Evaluation methods

end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Written examination

Examination methods in case of periodic evaluation during the second examination period

Written examination

Examination methods in case of permanent evaluation

Participation, assignment, skills test, report

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

Extra information on the examination methods

evaluation is based on cooperation and attitudes during the exercises and the quality of the reports.

Details on permanent evaluation:

- Method: For the exercises part there is permanent evaluation on the basis of assignments, cooperation and attitudes.
- Frequency: presence during the exercises is mandatory. Only two absences that are justified, are accepted.
- Description of second exam opportunity: in general a retake of the exams is possible, but some of the exercises and practical sessions cannot be retaken.
- Feedback: by appointment

written examination.

The student-teachers (teachers in training) in a LIO-trajectory are evaluated on a permanent basis based their assignments in their portfolio.

Calculation of the examination mark

Ramifications of the unfounded absence or non-participation in (part of) the permanent evaluation: students who eschew periodic and/or permanent evaluations for the course unit concerned are given a non-deliberative final quotation.