

**Reference Internship: Sciences (H002170)**

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

**Credits 3.0** **Study time 90 h**

**Course offerings and teaching methods in academic year 2025-2026**

|          |       |      |  |
|----------|-------|------|--|
| A (Year) | Dutch | Gent | work placement<br>peer teaching<br>practical<br>lecture<br>seminar |
|----------|-------|------|--|

**Lecturers in academic year 2025-2026**

|                        |      |                    |
|------------------------|------|--------------------|
| Strubbe, Katrien       | WE06 | lecturer-in-charge |
| Adriaens, Dominique    | WE11 | co-lecturer        |
| Coolsaet, Kris         | WE02 | co-lecturer        |
| Cottenier, Stefaan     | TW08 | co-lecturer        |
| Smet, Philippe         | WE04 | co-lecturer        |
| Van de Weghe, Nico     | WE12 | co-lecturer        |
| Van Maldeghem, Hendrik | WE02 | co-lecturer        |

**Offered in the following programmes in 2025-2026**

|   | crdts | offering |
|---|-------|----------|
| Bachelor of Science in Biology  | 3     | A        |
| Bachelor of Science in Geology  | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Biochemistry and Biotechnology) | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Biology)                        | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Chemistry)                      | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Computer Science)               | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Geography and Geomatics)        | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Geology)                        | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Mathematics)                    | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)(main subject Physics and Astronomy)          | 3     | A        |
| Master of Science in Teaching in Science and Technology (abridged programme)  | 3     | A        |

**Teaching languages**

Dutch

**Keywords**

Learning outcomes, curricula, lesson preparation, microteaching, internship, reflection.

**Position of the course**

This course unit contributes to the realization of the basic competencies for teachers and the educational competencies of the educational master program UGent, as included in the program description and concretized in the competence

## Contents

Common and specific sessions are organized within this training component. The common session will cover the do's and dont's of when creating a lesson preparation. This content is further used in the specific sessions. The specific sessions are determined according to the discipline of the student.

### *Subject Didactics of Geography:*

- Introduction to attainment levels and curricula, with guided lesson preparation of topics that are part of the observation and microteaching lessons ;
- Microteaching within the science faculty
- Carrying out observation lessons in a class with a member of the subject didactic team/teacher
- Elaboration of a concrete (and limited) lesson plan, linked to the subject of the lesson given;
- Meso-activities with a member of the subject didactic team/teacher that give an idea of the other activities (outside of teaching) associated with the teaching profession

### *Subject Didactics of Biology:*

- Introduction to attainment targets and curricula, making lesson preparations under supervision of topics that are part of the observation and co-teaching lessons
- Carrying out observation lessons in a class with a member of the subject didactic team
- Co-teaching with a member of the teaching team, on at least two topics of varying complexity
- Elaboration of a concrete (and limited) lesson plan, linked to the topic of the lesson given;
- Meso-activities with a member of the subject didactic team that reflect the other activities (other than teaching) associated with the teaching profession;
- Teaching activity in and in cooperation with the Ghent University Museum (preparation, consultation with didactic team, and co-supervision of a class group);
- Conversation with alumni teachers.

### *Subject Didactics of Chemistry:*

- Introduction to attainment targets and curricula, whereby under supervision lesson preparations are made for topics that are part of the observation and internship activity.
- Lesson preparation
- Microteaching
- Observation on the shop floor, followed by an internship activity.
- Meso-activities that give a picture of the teaching profession in addition to the teaching activities
- Interview discussions with fellow students, members of the subject teaching team, and teachers in the field

### *Subject Didactics of Physics:*

- Introduction to attainment levels and curricula, with supervised lesson preparation of topics that are part of the observation and internship activity
- The physics knowledge gained in the domain courses serves as a basis for getting acquainted with a teaching situation in which the student gradually makes the transition from the role of learner to the role of teacher. Topics covered are:
- Observation skills.
  - Introduction to subject teaching research in physics.
  - Physics final attainment levels and curricula of the various grids.
  - Elaboration of a concrete lesson component, including supporting documentation, with emphasis on a demonstration experiment or a practicum.
  - Introduction to activating forms of work for physics teaching, and their role in responding to diversity and pluralism.
  - Microteaching on this lesson component followed by feedback, reflection and

adjustment.

- Conducting this lesson component for a group of learners (e.g., in a class via co-teaching, during science or technology fair, in the GUM).
- Collect feedback from the class group, and use it to guide your teaching.
- Intervision discussion and talk with alumni teachers of physics.

*Competency Didactics of Computer Science:*

- Introduction to attainment levels and curricula, preparing lessons under supervision on topics that are part of the observation and co-teaching lessons.
- This course is primarily an introduction to the practice of teaching computer science in a secondary school in Flanders. The following topics are covered:
- Preparing a lesson
  - Locating, reading, interpreting and processing curricula / attainment targets
  - General introduction to didactic methods
  - Microteaching
  - Observation at a secondary school
  - Internship activity with students in secondary education, preferably at a school.

*Subject Didactics of Mathematics:*

- Introduction to attainment targets and curricula in mathematics, whereby under supervision lesson preparations are made of topics that are part of microteaching and of the observation and co-teaching lessons.
- Elaboration of a concrete (and limited) lesson plan, linked to the topic of the lesson given.
- Microteaching
- Observation internship
- Co-teaching with a member of the subject teaching team on at least two topics of different complexity
- Meso-activities that reflect the other activities (beyond teaching) associated with the teaching profession.

**Initial competences**

It is very strongly recommended that this subject be included at the same time as the corresponding cluster didactics,

**Final competences**

- 1 Students have knowledge of the authentic context of the teaching profession, in all its aspects.
- 2 Students come into contact with various forms of education in Flanders
- 3 Students develop a (self) reflective and investigative attitude toward teaching.
- 4 Students develop an awareness of the challenges of the field, coupled with the diversity of the target groups.
- 5 Students can make a conscious decision about the extent to which they wish to enter the teaching profession.

**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**

Seminar, Lecture, Practical, Work placement, Peer teaching

**Extra information on the teaching methods**

Lecture: theory.

Work sessions: guided exercises, application of theory.

Microteaching: teaching students from the educational master's in science and technology.

Internship: observation and teaching on a topic to be determined in an educational setting.

Practicum: on performed internship activities.

This course assumes the responsible use of generative artificial intelligence (GAI).

During the lessons, what this means will be explained

## **Study material**

### **Type: Slides**

Name: orientatiestage wetenschappen  
Indicative price: Free or paid by faculty  
Optional: no  
Language : Dutch  
Available on Ufora : Yes  
Online Available : Yes  
Available in the Library : No  
Available through Student Association : No

### **Type: Internship**

Name: orientatiestage wetenschappen  
Indicative price: € 20  
Optional: yes  
Additional information: material needed for internship, depends on student (topic of class)

## **References**

Are communicated through the electronic learning platform.

## **Course content-related study coaching**

Held by teacher, teaching didacticians and teaching supervisor, during and after classes and by appointment. Can be done online and on campus, in consultation between student and subject teaching team.

## **Assessment moments**

continuous assessment

## **Examination methods in case of periodic assessment during the first examination period**

## **Examination methods in case of periodic assessment during the second examination period**

## **Examination methods in case of permanent assessment**

Professional practice, Assignment

## **Possibilities of retake in case of permanent assessment**

examination during the second examination period is possible

## **Extra information on the examination methods**

Assignments related to guided exercises are evaluated, as are internship activities. The portfolio must be kept, these records are also evaluated. For some activities (micro-teaching, internship) the physical presence of the student is mandatory. all assignments and activities must be performed, possibly they will be made up if the student(s), even if the student is absent with valid reason. Absence from an activity will result in the student being unsuccessful. Two justified absences will be allowed.

## **Calculation of the examination mark**

The final score is a weighted average of the scores obtained during the academic year.

Failure to participate in one or more components of the evaluation may result in a fail for the entirety of the course unit. If the final score would be a grade of 8 or more out of 20, it will be reduced to the highest non-delinquent grade (maximum 7/20).

## **Facilities for Working Students**

Work-study students contact the responsible teacher to discuss their specific situation.