GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2025-2026

Bachelor's Project Physics and Astronomy (C004228)

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

Credits 6.0 **Study time 180 h**

Course offerings and teaching methods in academic year 2025-2026

A (Year)	Dutch, English	Gent	practical	25.0h

Lecturers in academic year 2025-2026

Boone, Matthieu	WE05	lecturer-in-charge
De Rijcke, Sven	WE05	co-lecturer
Detavernier, Christophe	WE04	co-lecturer
Leys, Christophe	TW17	co-lecturer

Offered in the following programmes in 2025-2026	crdts	offering
Bachelor of Science in Physics and Astronomy	6	A
Preparatory Course Master of Science in Physics and Astronomy	6	A
Preparatory Course Master of Science in Physics and Astronomy	6	A

Teaching languages

English, Dutch

Keywords

projects, experimental skills, communication skills

Position of the course

This course unit belongs to the learning pathway "Experimental physics and astronomy; data processing" in the Bachelor program Physics and Astronomy
In this course students will work independently to acquire new experimental skills, and to apply these to a specific problem. The presentation of the results provides an exercise in communication skills. The course emphasizes the student's ability to work independently.

Contents

Performing experimental work and reporting on the results.

Initial competences

The students should have completed the following courses from the bachelor Physics and Astronomy (or their equivalent):

- Material physics
- Experiments in physics and astronomy 1&2
- Statistical data analysis
- Stars and planets

Final competences

1 The bachelor project results in acquiring a physical way of thinking, where physical models are verified against experimental data.
2 Students are expected to plan and execute experiments.
3 Students are expected to analyze and interpret the data and to communicate their conclusions in a written report and a presentation.
4 Finding and critically interpreting literature.
5 Acquiring an understanding of the importance of experimental physics for a variety of technological applications.
6 Students are expected to collect, analyse and report scientific data in an honest and deontologically correct way.

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Practical

Extra information on the teaching methods

Independent work with individual support.

Study material

None

References

Course content-related study coaching

The lecturer and his/her collaborators can be contacted for additional information.
Every project is supported individually.

Assessment moments

end-of-term and continuous assessment

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

Oral assessment, Assignment

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

Oral assessment, Assignment

Examination methods in case of permanent assessment

Professional practice, Participation

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

- Evaluation (permanent assessment) of the experimental work conducted over 12 half-days during the semester.
- Written evaluation (periodic assessment): writing of a scientific report which contains the motivation, research question, experimental method, results, and conclusions of the work.
- Oral evaluation (periodic assessment): presentation of the results, including a Q&A session with instructors, supervisors, and the audience.

Calculation of the examination mark

The final score is determined by a weighted average of the three partial scores: 60% for the experimental work, 20% for the scientific report, and 20% for the presentation and answering of questions. In cases of unjustified absence or non-participation in the experimental work, the student is not allowed to submit a scientific report or participate in the oral presentation. Students who fail to take part in the periodic evaluation by not having submitted the report and/or by not participating in the oral presentation can receive, at most, a non-deliberable final grade.