GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2024-2025

Physics and Astronomy Laboratory 2 (C004218)

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 2024-2025

A (Year)	Dutch, English	Gent	practical	43.75h
			lecture	3.75h

Lecturers in academic year 2024-2025

Van Waeyenberge, Bartel	WE04	lecturer-in-charge

Offered in the following programmes in 2024-2025	**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

Physics Laboratory.

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. Engaging students in gaining significant experiences with experimental processes. Developing a large range of basic skills and tools of experimental physics and data analysis. Developing collaborative learning skills.

Contents

- Lectures: methodology and discussion of ICT tools
- Practicum: mixture of conventional and open investigations in the field of sound, electromagnetism, physical optics and non-classical physics.

Initial competences

Basic knowledge of physics and Introductory Physics Laboratory I

Final competences

1 Students must be able to set up a simple experiment.
2 Be able to find the revelant theories and models in standard sources and apply them correctly.
3 Have a critical and scientific attitude towards taking and processing data.
4 Communicate on scientific results in written and oral form.
5 Use appropriate ICT components for data processing and written and oral communication.
6 Being able to work together in a structured manner to successfully complete a group project.

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

Lecture, Practical

Extra information on the teaching methods

Computers are used for collection, analysis and graphical display of data.

Study material

Type: Syllabus

Name: Lab course notes
Indicative price: Free or paid by faculty
Optional: no
Language : Dutch
Number of Pages : 50
Available on Ufora : Yes

References

- John R. Taylor : An Introduction to Error Analysis - The study of Uncertainties in Physical Measurements, Oxford University Press, ISBN 0-935702-10-5
- G.L. Squires : Practical Physics, Cambridge University Press, ISBN 0-52127095-2
- Syllabi used for Introductory Physics

Course content-related study coaching

Lecturer and Teaching asistants. Use of Ufora.

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

Oral assessment, Skills test, Participation, Presentation, Peer and/or self assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is not possible

Extra information on the examination methods

Continuous evaluation during practical work of experimental and communicative skills. Evaluation of written and oral reports. Oral questioning

Calculation of the examination mark

The final score will be the calculated average of all assignments.
All lab assignments are mandatory. Students who are absent for the lab exercises (practicum) for a valid reason have to make up the missed assignments at a later time. In case the absence is unjustified or the report and/or lab notebook is submitted after the deadline, a zero mark will be given for this assignment.