

Capita Selecta Particle Physics (C003129)

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 (semester 2)

English

Gent

seminar

lecture

Lecturers in academic year 2025-2026

Dobur, Didar

WE05

lecturer-in-charge

Ghosh, Archisman

WE05

co-lecturer

Moortgat, Filip

WE05

co-lecturer

Van der Linden, Jan

WE05

co-lecturer

Offered in the following programmes in 2025-2026

[Master of Science in Teaching in Science and Technology \(main subject Physics and Astronomy\)](#)

6

A

[Master of Science in Physics and Astronomy](#)

6

A

[Master of Science in Physics and Astronomy](#)

6

A

[Exchange Programme in Physics and Astronomy \(Master's Level\)](#)

6

A

Teaching languages

English

Keywords

Particle physics, key literature

Position of the course

Advanced course in Particle Physics. The students can take this course after completing Subatomic Physics II. The purpose of the course is to take the students through the key publications in research in particle physics. Emphasis is lead on research related to activities in Gent.

Contents

Several (10-12) key publications in the field of particle physics are studied. These allow the students to obtain an overview of the present evolutions in this field, while at the same time giving an in-depth study of the nature of scientific discoveries.

Initial competences

Basic knowledge of quantum mechanics, quantum field theory and subatomic physics.

Final competences

- 1 The students have acquired the ability to read publications in front-line journals, like Physical Review Letters or Physics Reports.
- 2 They can follow and understand lectures at an advanced level.

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

Extra information on the teaching methods

Each student is required to give a presentation and write a report on one of the topics.

Study material

Type: Slides

Name: Copies of slides or copies of scientific papers'

Indicative price: € 5

Optional: no

Additional information: Depending on the topic: copies of slides or copies of scientific papers

References**Course content-related study coaching**

- Direct contact with the lecturer in interactive sessions.
- Interaction through Ufora.

Assessment moments

end-of-term and continuous assessment

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

Written assessment, Assignment

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

Assignment

Examination methods in case of permanent assessment

Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

Extra information on the examination methods

Each student gives an oral presentation and provides a write-up of a selected topic.

Calculation of the examination mark

The examination mark is calculated as the average of the mark given for the presentation and the mark given for the writeup.