MASTER OF SCIENCE IN PHYSICS AND ASTRONOMY

120 ECTS CREDITS - LANGUAGE: ENGLISH

FACULTY OF SCIENCES

2025-26

We organise our study programme together with Vrije Universiteit Brussel (VUB). This allows both institutions to pool their expertise, and to offer students a wider range of elective course units, dissertation topics, ...

WHAT

The importance of physics in today's knowledge society cannot be overstated, and its influence can be found in numerous fields, particularly in technology and medicine. The research domain of physics and astronomy is vast and extends from the world of the very smallest (the so-called elementary particles) to the study of the very largest (the universe). A defining feature of physics is that these subjects are addressed in a highly theoretical way, in close interaction with experiments and computational modelling. Both on a national and international level, physics is the cradle of many important and innovative concepts, models, and techniques.

Many of these innovative physical concepts and techniques have an interdisciplinary character, as clearly illustrated by the existence of dynamic specialized fields such as solid state physics, medical physics and biophysics. Not only the principles but also the applications of physics can be found in many aspects of our knowledge society. A great number of scientific advancements in physics and astronomy have made their way from the laboratory to technological applications in our society. There is no reason to assume that this will be any different in the future.

STRUCTURE

The curriculum for the Master's program in Physics and Astronomy is based on the following principles: 36 ECTS credits for compulsory general courses, 30 ECTS credits for the master's thesis, and 54 ECTS credits for elective courses. Given the wide range of career opportunities, you can use these 54 ECTS credits to specialize (at least 30 credits in the domains of astronomy, solid-state physics, nuclear and particle physics, theoretical physics, or interdisciplinary electives) and/or broaden your knowledge by selecting socially and/or economically relevant courses.

You will also choose one or more courses in the domain of professional skills, which may include internships in an industrial or research setting. The compulsory courses in the first semester provide an in-depth overview of all research fields in which Ghent University has strong expertise. These courses help you make an informed choice from the broad range of research opportunities.

From the second semester of the first master's year onward, you will spend a significant part of your study time within an academic research group, through elective courses and the master's thesis, and optionally also with project work. You can deepen your knowledge in a particular direction by selecting from a wide range of elective courses.

You will conclude your academic journey by writing your master's thesis. This offers you the opportunity to further refine your research skills and to actively participate in one of the research groups, allowing you to go deeper into a specific field.

In addition to the (domain) Master's programme described above, you can also choose a Master's Programme in Teaching (in Dutch: Educatieve Master). For more information, go to (www.ugent.be/educatievemaster, 120 ECTS-credits).

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TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

1 **Rechtstreeks:**
- Bachelor in de fysica
- Bachelor in de fysica en de sterrenkunde

2 **Na het met succes voltooien van een voorbereidingsprogramma:**

aantal studiepunten te bepalen door de faculteit
- Bachelor in de ingenieurswetenschappen, afstudeerrichting: toegepaste natuurkunde
- Bachelor in de ingenieurswetenschappen: toegepaste natuurkunde
- Bachelor in de ingenieurswetenschappen: toegepaste natuurkunde
- Bachelor in de wiskunde
- Bachelor in de wiskunde

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

It is mandatory to submit the results of the **GRE-Subject test in Physics**.
Without this, applications will not be assessed/evaluated and as such, admission will be denied.

Exemptions from submitting a GRE

Following students are exempted from submitting a GRE test:
- **Students who obtained their degree from a university located in an EEA-country** (European Economic Area): *Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, The Netherlands.*

Students will be invited to an interview, assessing both motivation and required competences to follow the programme.

LANGUAGE REQUIREMENTS

Language requirements	Dutch: no language requirements English: CEFR level B2

PRACTICAL INFORMATION

Study programme

studiekiezer.ugent.be/master-of-science-in-physics-and-astronomy-CMPHYS-en/programma

Information sessions

EVOLV

evolv.gent/en/students/further-studies

Enrolling institution

Information on enrolment at Ghent University.

Tuition fee

More information is to be found on: www.ugent.be/tuitionfee

GHENT UNIVERSITY

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