# INTERNATIONAL MASTER OF SCIENCE IN SUSTAINABLE DRUG DISCOVERY

PROGRAMME JOINTLY OFFERED BY GHENT UNIVERSITY, UNIVERSITÉ DE LILLE, MEDICAL UNIVERSITY OF GDAŃSK, UNIVERSITY OF GRONINGEN

120 ECTS CREDITS - LANGUAGE: ENGLISH



## WHAT

This master programme focuses on drug discovery, the challenging phase in the life cycle of a medicine that precedes first-in-human studies and clinical development. The programme is unique in that it will pay notable attention to sustainability, an aspect that currently receives little attention in traditional educational programmes in this area. Sustainability boundaries, including environmental, ecological and socio-economic dimensions, add an extra level of complexity to drug discovery, but are of increasing importance to competent authorities and the society at large.
The S-DISCO programme, coordinated by Ghent University, is a two-year Master programme consisting of logically aligned modules with stepwise build-up knowledge, skills and competences. By applying case-based learning, it will stimulate students to integrate, connect, confront and reconcile multi-perspective ways of looking at sustainable drug discovery.

## STRUCTURE

The International master S-DISCO is a two-year study programme (120 ECTS) in English: 90 ECTS (semesters 1-2-3) consist of face-to-face and online learning and 30 ECTS (semester 4) are dedicated to a master thesis.
The programme is preceded by a one-week summer school at Ghent University, starting with a half-day assessment of the selected candidates (compulsory), in order to help them identify sub-optimal starting competences. While one unit (i.e. Scientific communication) will be compulsory for all students, two additional units will be assigned to each student based on the results of the assessment.
The first semester follows immediately after the summer school at Ghent University and will introduce the students to the broad perspectives and basics of sustainable drug discovery. At the end of the first semester, students will go to Lille for the S-DISCO day, organized at the University of Lille. During this day, students will be exposed to the research activities of doctoral, postdoctoral and senior researchers.
The second semester will take place at the Medical University of Gdańsk, comprising more in-depth courses on e.g. molecular modelling, omics and green analytics.
The third semester takes place at the University of Lille or the University of Groningen. The different stages in the drug discovery process up to drug development are discussed, i.e. screening, target identification and validation, hit-to-lead, preclinical studies up to first-in-human trials. By selecting the appropriate mobility track, students will be able to become more proficient in certain aspects of drug discovery by benefitting from the specific expertise of the selected partner university. In Lille the focus will lie on sustainable sources, hit-to-lead and target validation, while in Groninngen it will be on green chemistry, lead-to-patient and pharmacokinetics.
The final semester is dedicated to the execution and writing of the master thesisn which will be performed under the supervision of a lecturer of one of the four consortium universities and will preferentially take place at an international (incl. non-academic) partner worldwide.

## LABOUR MARKET

Our graduates will be trained to find creative and innovative solutions for the various challenges in the pharmaceutical field. Emphasis is on the crucially important discovery phase, taking into account environmental, ecological and socio-financial sustainability aspects. Workforce shortages exist for almost every position within the pharmaceutical and related industries, and scientists with the skills offered by our Master programme are extremely in-demand by the industry. Moreover, both national medicine-competent authorities as well as international agencies, such as EMA, FDA or WHO, will look for our high-level graduates. The same is true for civil society organizations, such as NGOs, working in this field. Finally, our graduates will have acquired useful competencies for further academic studies, i.e. Ph.D., thereby deepening the drug discovery field while propagating the sustainability viewpoint in pharmaceutical research and education.

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## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

1 **Na onderzoek van de bekwaamheid van de student om de opleiding te volgen:**
- Bachelor in de biochemie en de biotechnologie
- Bachelor in de biologie
- Bachelor in de biomedische wetenschappen
- Bachelor in de chemie
- Bachelor in de diergeneeskunde
- Bachelor in de farmaceutische wetenschappen
- Bachelor in de geneeskunde
- Bachelor of Environmental Technology
- Bachelor of Food Technology
- Bachelor of Molecular Biotechnology
- Een diploma van een opleiding 'Bachelor of Science in de bio-ingenieurswetenschappen'

Additional Information on Admission (Flemish Degree)

Student selection (including scholarships) will be performed by the Selection and Admission Board (with representatives of all partner universities) after ranking all eligible applications based on (1) the quality and relevance of the previous Bachelor of Science programme in relation to S-DISCO, (2) the grades and ranking obtained in the Bachelor of Science programme, with emphasis on chemical and biology-related courses, (3) the curriculum vitae and motivation, and (4) the references. The highest ranked applicants are then invited for an online interview (week 3 or week 4 of March), that includes a scientific presentation (5 minutes) prepared by the student, followed by a questioning session. This interview score is then combined with the scores of the application documents (points 1-4), resulting in a final ranking of the candidates. Only the highest ranked students will be admitted to the programme.

## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Candidates must hold a higher education diploma issued by a competent Higher Education authority attesting the completion of a degree equivalent to a first cycle (180 ECTS - or higher) in the field of Pharmaceutical Sciences, Chemistry, Biology (incl. Biochemistry), Bio-(incl. environmental, chemical and food) Engineering, Human or Veterinary Medicine, Biomedical sciences or equivalent (which then requires formal equivalency by an official body in one of the 4 consortium countries, e.g. ENIC-NARIC).

Selection and admission
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Before the final selection of the applicant, the diploma and its transcripts have to be legalized according to the legalization procedure applicable. If these documents are not in Dutch, French, German or English, the applicant is required to add scans of these documents in one of these languages, translated by a sworn translator. Please have a look at the Ghent University website how legalization can be performed and start-up this process well in advance! https://www.ugent.be/prospect/en/administration/application/application-degree/legalisation.htm.

## LANGUAGE REQUIREMENTS

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| Language requirements | Dutch: no language requirements<br>English: CEFR level B2 |

## PRACTICAL INFORMATION

**Study programme**
studiekiezer.ugent.be/international-master-of-science-in-sustainable-drug-discovery-en/programma

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FACULTY OF PHARMACEUTICAL SCIENCES

2026-27

**Information sessions**

**EVOLV**

evolv.gent/en/students/further-studies

**Enrolling institution**

Ghent University, Medical University of Gdańsk, Université de Lille, University of Groningen

Information on enrolment at Ghent University.

**Application Deadline (for International degree students)**

More information on programme specific application procedures and deadlines.

**Tuition fee**

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

**Contact**

Prof. Serge Van Calenbergh

sdisco@ugent.be

**Contact (for international degree students)**

S-DISCO Coordination Office:

sdisco@ugent.be

www.sustainabledrugdiscovery.eu

GHENT UNIVERSITY

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