Master of Biology

2025-2026

University of Antwerp

Let's shape the future

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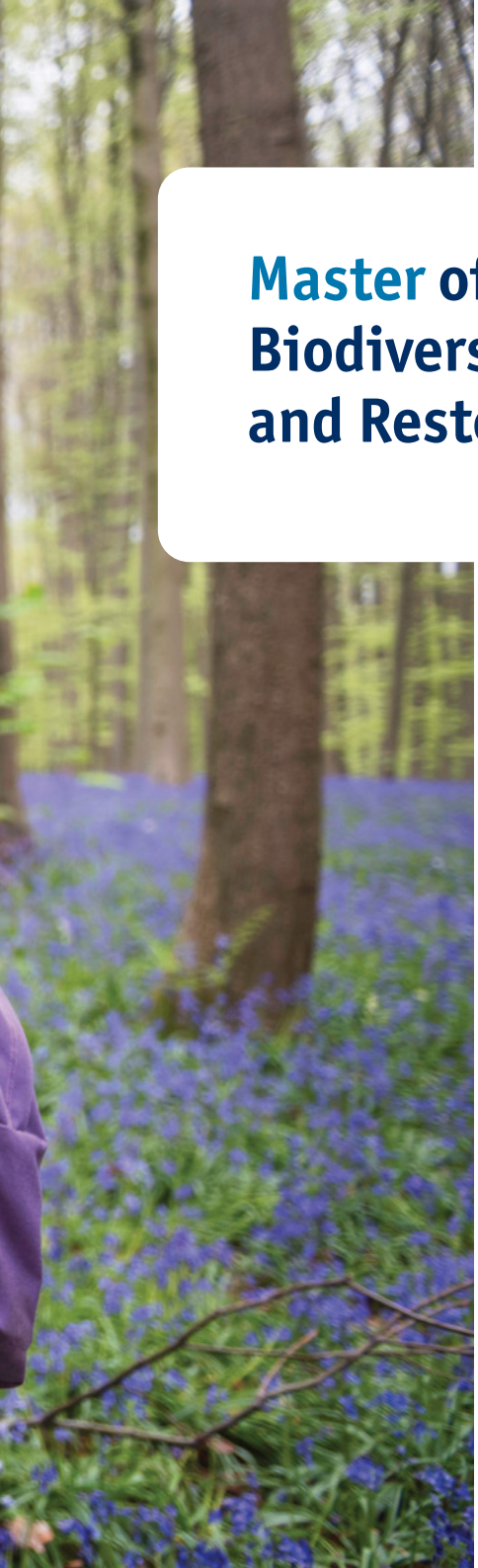
Heukels'
Flora
van
Nederland



Master of Biology: Biodiversity: Conservation and Restoration

Benefit from the Department of Biology's strong links with the national and worldwide nature conservation sector.

In brief

Biology is a fundamental scientific discipline focusing on formulating and testing hypotheses through observations and experiments in the lab or the field. As a Biology student, you will actively participate in state-of-the-art research performed at the Department of Biology.

Teaching is conducted by professors and supported by the expertise of research groups. In the Master of Biology: Biodiversity: Conservation and Restoration, the emphasis lies on the global biodiversity crisis, one of the key elements of global climate change.

In detail

You **acquire insight** into the causes and consequences of the current worldwide loss of plants, animals and other species, as well as the theory and practice of managing endangered species and the conservation and restoration of habitats. Links with society, for example, biodiversity policy, legislation and international treaties, will also be highlighted. Students will undertake an internship with an external organisation involved in conservation and/or restoration.

The Master of Biology: Biodiversity: Conservation and Restoration comprises 120 ECTS credits, to be acquired over a two-year period. Per year you register for 60 ECTS credits (deviations between 54 and 66 ECTS credits are possible). **English** is the teaching language for all courses in the Master. In the first year, the entire first semester, and also the main part of the second semester, consists of compulsory courses. During the first semester students decide which optional courses they will take, and they also decide their Master's project topic and Conservation internship. These components of the programme are largely undertaken in the second year.

I like the practical aspect

Solange Ashu, Cameroon

Programme structure

Learning outcomes
General

1. The graduate is able to **independently** situate and evaluate a scientific problem and formulate the hypothesis. They have the knowledge and skills required to test the hypothesis within the context of the contemporary scientific understanding and the (international) literature.

2. Moreover this scientific training allows the graduate to set up a **problem-solving strategy** of experiments and observations. The graduate has the skills required to carry out these activities, as an individual or in team.

3. **Through data analysis**, using appropriate advanced techniques, the Master of Biology: Biodiversity: Conservation and Restoration graduate can provide a relevant answer to a question and propose solutions, in both an academic and applied context.

4. With the **acquired skills** the graduate can summarise, communicate and interpret their findings at different levels: to peers, to a broad public or to policy makers, both orally and in writing.

A European view on my field of study will make me a better biologist

Blake Alexander Simmons, USA

Curriculum

Year 1

Compulsory courses **ECTS credits 52**

Module Fundamentals and Skills

Biostatistics	7
Ecology of Populations and Communities	6
Freshwater Ecosystem Functioning	3
Geographic Information Systems (GIS)	4
Biodiversity Restoration	6
Plant and Soil Ecology	6

Module Conservation and Restoration in Practice

Conservation and Society	5
Conservation Genetics	6
Drivers of Global Change	4
Biodiversity Conservation	4

Year 2

Compulsory courses **ECTS credits 6**

Module Conservation and Restoration in Practice

Species Conservation and Management 6

Conservation Internship **ECTS credits 10**

To choose in year 1 or 2 of the Master.

Master's project Biodiversity, Conservation and Restoration **ECTS credits 30**

The Master's project is the mandatory closing course of the programme for all students. It is submitted at the end of the second Master's year.

Optional courses **ECTS credits 22**

Complementary so that 120 ECTS credits are acquired at the end of the Master's programme.

Total **ECTS credits 120**

Job opportunities

Biology is related to the **broader society** in many ways, and biologists' employment is consequently much broader than generally thought.

Fundamental and applied scientific research (> 40% of graduates) at universities and institutes (in Flanders for example KBIN, INBO, VIB, KMDA,etc.) is a first major job opportunity. A research career usually starts with a PhD, through an appointment as university assistant, PhD grantee or project collaborator.

The private sector offers many possibilities in **Research & Development** (often after having acquired a PhD) and in marketing, among others in the medical, pharmaceutical and biotechnology sectors and in industrial labs.

In Belgium, biologists are also **much sought-after** by government bodies (at a federal, regional, provincial and communal level), by nature associations, and by consultancies, especially in the environmental sector.

Approximately one fifth of graduates becomes a **teacher** in secondary schools or in higher education.

The value of biodiversity to society means that **expertise** and **specialist knowledge** in conservation and restoration is a much sought-after asset. As a specialist in conservation and restoration, you will analyse policy and influence decision-making in the field of biodiversity protection. Research offers another career opportunity, in Belgium and also abroad.

Graduates in the Master of Biology: Biodiversity: Conservation and Restoration are **specifically prepared** for positions that require them to **analyse policy** and **influence decision-making** in the field of biodiversity protection. Graduates are often employed by non-governmental organisations (NGOs), consulting agencies and governmental bodies at both national and international levels.

Research offers another career opportunity, both abroad and in Belgium with its well-developed research landscape in the field of biodiversity. The recognition of the value of biodiversity for ecosystem services to society means that a specialisation in conservation and restoration is a much sought asset.

Orientation year
After completing your studies you can choose to look for work opportunities in Belgium. You can apply for an orientation year and extend your stay in Belgium by 12 months. Guidance and administrative assistance with this process is available through the university.

Why choose UAntwerp

Our university is located in the **city of Antwerp**, in the heart of Belgium and Europe. The port of Antwerp is one of the biggest in the world. Antwerp is not just an ancient medieval and baroque city, full of history. It is also a bustling metropolis with a vibrant social scene, impressive architecture and cultural contrasts. Over 170 nationalities live here, more than in New York! This cosmopolitan vibe is also reflected at the University of Antwerp. English is widely spoken in Antwerp, though if you learn Dutch during your stay here you will become a local in no time.

First-rate research and education make the University of Antwerp a wonderful place to study and to work. We foster the nexus between research and education. Internationalisation is key to our mission. It is no coincidence that the University of Antwerp is a partner in a highly promising European university network, the Young Universities for the Future of Europe www.YUFE.eu.

As home away from home to over **20,000 students**, the University of Antwerp prides itself on operating on a human scale. Our faculty and staff will welcome you into top-notch infrastructure on one of our four campuses. While you're here you are also invited to enjoy our vibrant cultural programme, sports facilities and many student services.

The University of Antwerp **scores extremely well** in Young University Rankings

Testimonial

I want to get involved in what is happening in our world and make a difference to improve our way of living and the environment. Since I was a child I love plants, because when you take care of them they give you a nice surprise: a flower. In fact, saving the planet starts with little actions like that. Arriving in Antwerp, one of the first things I did was buy a bike (environmentally friendly!), which takes me to the campus in ten minutes, and not much longer into the city.

I chose this Master's programme to learn about global change and its consequences for biodiversity. What I did not know is that it's not just about science. To have impact you also have to connect and work with other actors in society. Another reason for choosing this Master is that it provides many options to go abroad, and to visit a wide variety of ecosystems from the tropics to the Arctic. I look forward to go to French Guyana for my Master's project, and understand the human impact on tropical forests there. Meanwhile, I have integrated and I am enjoying the mixed group of local and foreign students. We visit the city and its surroundings, it's intriguing to see how in some places like Middelheim Park, culture and nature are mixed. I might stay in Belgium later, as Brussels is nearby, where organisations dealing with nature protection are located and political decisions are taken.

Anaïs, France

Admission criteria

To be eligible for the Master of Biology: Biodiversity: Conservation and Restoration, a student should have a strong scientific background, including knowledge of mathematics, physics, and inorganic and organic chemistry. **Knowledge of the main principles of statistics is crucial.** Candidates should also be acquainted with plants, animals and other organisms (diversity, evolution, cell biology, biochemistry, physiology, genetics, etc.). Familiarity with ecology in particular is a necessity. In addition, an understanding of the physical environment (land, oceans, atmosphere, the deep Earth and the biosphere) is useful. Students also need to have basic computer skills (word processing, spreadsheets). If basic computer skills are lacking, to take tutoring before coming to Belgium is strongly recommended.
Holders of the Flemish diploma of Bachelor in Biology have **direct admission**. Holders of a Flemish academic Bachelor or Master in exact, medical, engineering or industrial sciences have **admission after permission**.

Since the programme is taught in **English**, candidates with a prior degree issued outside Belgium, the Netherlands or Luxembourg are required to demonstrate their proficiency in English. They can do so in **two ways**:

- Either by submitting a **language certificate** showing their TOEFL, IELTS, ITACE or Cambrigde English test results (the level required can be checked on www.uantwerpen.be/admission)
- Or by submitting **proof** they have studied at least one academic year (or 60-ECTS credits) in an English-language Bachelor's or Master's programme.

Please note that the Board of Admission may still ask for additional proof of proficiency in English.

Application procedure

Candidates with a **Bachelor's** or **Master's** degree from a higher education institution in Belgium, the Netherlands or Luxembourg can enrol directly. Candidates who do not fulfil this condition or who need a visa must submit an online application through the online application tool **Mobility Online**. Applications for the academic year 2025-2026 can be started in Mobility Online from early November 2024 onwards.

Application deadlines
To submit an application through Mobility Online

- For non-EEA * nationals and for students who need a visa: **before 1 March 2025**
- For EEA nationals: **before 1 June 2025**

Enrolment deadline
Early October
Enrolments start on 1 July 2025.

The academic year 2025-2026 starts on Monday 22 September 2025.

* **EEA** = European Economic Area
Member states: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxemburg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden

ECTS credits

The University of Antwerp applies the '**European Credit Transfer and Accumulation System**' (ECTS) in all its degree programmes.

A full-time one-year study programme amounts to **60 ECTS credits** (30 ECTS credits per semester), which implies a student workload of about 1500 to 1800 hours. One ECTS credit stands for 25 to 30 hours of work including contact hours, preparatory work, study and assessment.

Master of Biology: Global Change Biology

Global change refers to planetary-scale changes in the Earth system, but also to large-scale changes in society and how these drive global change. Therefore, our students not only learn how terrestrial and marine ecosystems function, but also how society influences these ecosystems.

In brief

The Master of Biology: Global Change Biology focuses on the underlying drivers and the far-reaching consequences of global change. You will learn about the multifaceted nature of global change, encompassing changes in climate, land use and biogeochemical cycles; how human activities influence ecosystems and biodiversity, and how such changes impact all levels of biological organisation, from molecules to ecosystems.

In detail

Within the Master's programme specific attention is given to the **development of nature-based solutions**, where fundamental knowledge on ecosystems is translated into applied ecosystem management that addresses the negative impacts of global change. For example, you can conduct your Master's thesis research on:

- **Negative CO_2-emission** technologies
- **Novel techniques** for wetland restoration
- Management of **invasive species**
- Management of **vector-based diseases**

The Master of Biology: Global Change Biology programme benefits from state-of-the-art research performed within the University of Antwerp's Department of Biology, which is at the international forefront of nature-based solutions and global change biology. The department houses some of the most **highly-cited researchers** on the topic at ternational level, and explores novel research horizons, including e use of advanced data analysis techniques in ecology (such as achine learning) and vector-based disease management from a ıe-health perspective. The department is also a leading partner in ultiple large-scale research infrastructures, such as the Mesodrome ıd ICOS. Fundamental biology is directly coupled to technological novation, economical implementation and societal valorisation.

Programme structure

The Master's programme comprises of **120 ECTS credits**, to be acquired over a two-year period. Each year you register for 60 ECTS credits (deviations between 54 and 66 ECTS credits are possible).

English is the teaching language for all courses in the Master of Biology: Global Change Biology.
In the first year the entire first semester, and also the main part of the second semester, consists of compulsory courses. During the first semester students decide the optional courses they will take, and they also choose a subject for their Master's project. These two components of the programme are largely undertaken in the second year of the programme.

You will be trained in a **variety of research methods**, both via the practical and theoretical courses and via specific courses on skills relevant for global change biology. Laboratory skills are sharpened during a 12 ECTS credits worth, integrated practical class. Field work skills are also acquired during a two-week field course on ecohydrology in a pristine ecosystem in Poland.

The Master's project is the final part of the Master's programme, where you conduct a **scientific study** under supervision. You demonstrate your:

- Scientific background
- Capacity to understand/apply **primary literature**
- Capacity to correctly and adequately **communicate the results** in a succinct manner via a written document

As a student in the Global Change Biology programme, you are likely to conduct your Master's project in one of the department's research groups.

The pressing climate challenge bothered me, so I wanted to fully explore if and how I could contribute to tackling it. This required that I had to expand my scientific understanding of how the Earth system functions.

Stien van de Wandel

Curriculum

Year 1
Compulsory courses — ECTS credits 60

Fundamentals and skills

Biostatistics	7
Ecology of Populations and Communities	6
Environmental Biophysics	5
Freshwater Ecosystem Functioning	3
Terrestrial Ecosystem Functioning	4

Global Change

Drivers of Global Change	4
Environmental Stress and Ecotoxicology	5
Evolutionary Responses to Global Change	4
Global Change Physiology	5
Experimental Biology Lab	12
Omics in a Changing Environment	5

Year 1 or Year 2
Compulsory courses **ECTS credits 3**
Marine Ecosystem Functioning

Year 2
Compulsory courses **ECTS credits 10**

Fundamentals and skills
- Coping with Global Change 4
- Eco-system Based Adaptation to Global Change 6

Master's project Global Change Biology including Internship **ECTS credits 30**

Optional courses Global Change **ECTS credits 17**

At least 17 ECTS credits of courses to be chosen from a list of 28 electives so that 120 ECTS credits are acquired at the end of the Master's programme (consult the course catalogue on www.uantwerpen.be/global-change-biology)

Total **ECTS credits 120**

Job opportunities

Biology is related to the broader society in many ways, and biologists' employment is consequently much broader than generally thought.

The increasing recognition that global change poses a clear challenge to society, makes expertise on the subject a widely sought asset for any future professional career. As a specialist in global change biology, you will develop the skills to analyse policy, influence decision-making and implement novel solutions for a sustainable economy.

Graduates in Biology specialised in Global Change Biology are specifically prepared for positions which require them to analyse policy and influence decision-making in the field of global change mitigation. Graduates are often employed by non-governmental organisations (NGOs), consulting agencies and government bodies at both national and international levels.

Classes are held on Campus Drie Eiken, the life sciences campus of the university. This campus has very modern education and research infrastructure, and is surrounded by greenery.

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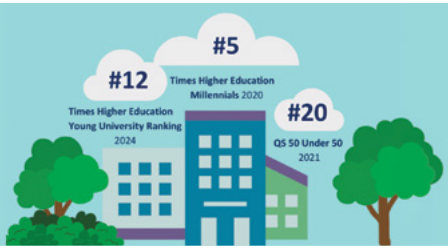

Testimonial

It's important for me to be connected with the real world, and to be able to make a difference. Just like many other young people, I am concerned about climate change and how the world evolves, but I hate the doom and gloom that surrounds the subject. Therefore, it was good to hear about a study programme where one actually looks forward and teaches about nature-based solutions to the climate challenge. From the projects and guest lectures, it was clear that the professors really knew what they were talking about; you could sense that they were internationally at the forefront of the topic. Another good thing was the diversity of the Master's thesis topics that were offered, with many options to go abroad and perform research, from forest research in Guyana to marine ecology in Greenland.

Tess, Ireland

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Quick facts

Level
Master

Language
English

Credits
120 ECTS credits

Number of years
2

Tuition fee per year *
EUR 1157 for EEA nationals
EUR 5800 for non-EEA nationals

Campus
Campus Drie Eiken

Faculty
Science

More information
www.uantwerpen.be/biodiversity-conservation-restoration

More information
www.uantwerpen.be/global-change-biology

*subject to yearly revision

Master of Biology

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please check our website for the latest updates.