



OUR RESEARCH: INNOVATING AND STATE-OF-THE-ART!

Over the years, Howest has built a solid reputation in application-oriented scientific research, services and education, partnering with universities and work-field organisations in Belgium, Europe, and all over the world. Almost all of our research projects are either demand-driven or in close collaboration with enterprises. They are organised around topnotch, highly skilled and innovative research teams.

BRUGES

Bruges is an inspiring city that will capture your heart. Retaining the mysteries of the Middle Ages and unashamedly exuberant, Bruges has been an international metropolis for centuries. Nowadays it is a Unesco World Heritage City, which became especially popular after the movie "In Bruges". Bruges is easily accessible from many major cities. Within a few of hours by train or car you can be in Paris, London, Amsterdam, Cologne or Luxembourg.



GET IN TOUCH

Admission questions:
admissions@howest.be

Programme Information:
Programme Coordinator
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HOWEST IN A NUTSHELL



24 bachelor programmes
12 associate degrees
1 European master



multiple student startups

800 employees



#howestvibe



member of
Ghent University
Association



international students coming from
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HOWEST UNIVERSITY OF APPLIED SCIENCES

BIOINFORMATICS

ANTICIPATING THE FUTURE

howest
university of applied sciences



INDUSTRY-DRIVEN EDUCATION AND FUTURE-PROOF SKILLS

Howest University of Applied Sciences is known for its innovative and interdisciplinary approach to education and research, and its close collaboration with industry, business and the social profit sector. Howest is a member of Ghent University Association and is fully accredited by NVAO, the Dutch-Flemish Accreditation Organisation. Our campuses are located in the historical cities of Bruges and Kortrijk in Belgium.

We offer 24 Bachelors, 12 Associate Degrees and many Postgraduate Certificate programmes, all with a strong practical focus, in the areas of Business & Management, Industrial Sciences & Technology, Digital Design, Architecture, Healthcare, Education and Social Sciences. Field-driven assignments, on-the-job training and internships are the key components of each programme. That is how we meet the changing needs of today's society and arm our students with future-proof skills.

RENOWNED TECH PROGRAMMES

Howest is renowned for its Tech programmes, such as Cybersecurity, Digital Design and Development and Digital Arts and Entertainment. According to The Princeton Review® Howest University of Applied Sciences is one of the top undergraduate schools at which you can study game design. With its Bachelor programme in Digital Arts and Entertainment (DAE), Howest ranked #21 on the undergraduate programmes list for 2020. Howest and DAE programme also got the first place in The Rookies Award as Best Game Design and Development School in the world in 2017 and 2018, and the fifth place in 2019.

ADVANCED BACHELOR OF BIOINFORMATICS

The advanced bachelor's degree in Bioinformatics will arm students and laboratory scientists with the necessary IT and programming skills to be able to work in a future-proof manner. This education will literally make you the **laboratory scientist of the future**.

Do you have a Bachelor's degree in Biomedical Laboratory Science, or did you graduate from another programme in molecular biology? Then you can use the Advanced bachelor of Bioinformatics to further specialise in the **IT and automation fields**, which are becoming increasingly important in molecular biology. In this way, you allow yourself to truly keep up with the new developments in your professional sector.

In the **first part, Informatics**, you will learn everything about storing, organising and processing large quantities of biological data in (relational) database systems. In the **second part of Bioinformatics**, we discuss the processing and analysis of this data using bioinformatic tools and (web) applications. Finally, in the **third part, Programming** is all about storing and processing this data, integrated in the form of programming, with scripting and automating the individual tools into a bioinformatics pipeline.

As the programme focuses on students and professionals who want to deepen their **know-how as a laboratory scientist or other scientific researcher**, a two-year @home programme is available.

As a bioinformatician, you will have a wide range of applications in scientific research and you will constitute the perfect **mix of IT expert and molecular biologist**.



OUR ASSETS

- **Strongly favours practical training:** This advanced bachelor includes an eight-week traineeship, in which foreign countries are certainly an option (and even encouraged).
- **Real specialisation:** You learn programming languages such as PHP, Python and R and you will use the most relevant databases from which you will learn how to process and interpret the data.
- **Job security:** This training was set up at the request of the professional field, thus it creates a lot of professional opportunities.
- **Very affordable:** The cost of the @home course is around 700 euros per academic year - a very competitive rate.
- **Hot topic:** This training is simply necessary to prepare scientific staff for the latest developments.
- **Sound follow-up:** All contact moments are recorded, so they can be reviewed afterwards.
- **English-language study programme:** The international nature of the advanced bachelor's programme ensures that your professional opportunities are literally limitless.

STUDY PROGRAMME

2021 - 2022

	SEMESTER 1A	SEMESTER 1B	SEMESTER 2A	SEMESTER 2B
PROGRAMMING	Webtechnologies (5 ECTS)	Data analysis, visualization and biostatistics using R (5 ECTS)	Scripting (5 ECTS)	
INFORMATICS	Linux operatingsystems (5 ECTS)	Databases and data management (5 ECTS)	Data mining (5 ECTS)	
BIOINFORMATICS	Comparative genomic analysis (5 ECTS)	Structural bioinformatics (5 ECTS)	High throughput analysis (5 ECTS)	
			Systems biology (5 ECTS)	
TRAINEESHIP				Traineeship in Belgium or abroad (10 ECTS)

The semesters are divided into two periods (A and B) of lessons (6 weeks), each of these periods is succeeded by exams.

The distance learning track will be organized every two years, the next edition will start in September 2022.

Programme subject to change



TESTIMONIAL

STEVE BAEYEN

CHIEF EXPERT AND LAB MANAGER ILVO

ALUMNUS

In the molecular lab where I work as a lab manager, we started working on Next-Generation Sequencing techniques around 2008. I wanted to deepen and improve my know-how in this area, especially as this domain is developing rapidly. Hence, I made this advanced bachelor my choice, which moreover allowed me to combine studying with work and a family of four children. Initially, some subjects did not seem immediately usable to me for my job, but in the end, I was able to practically apply all the knowledge I had acquired in my work. I also got to know a lot about updates, insights and new methods for areas I already had a lot of experience with. This means that, today, I can work much faster and be more focused.