

# Master of Digital Business Engineering

2024-2025



Engineer innovation in  
today's digital economy



University  
of Antwerp

| Let's shape the future

## Table of contents

<b>In brief</b>	04
<b>In detail</b>	05
<b>Double degree</b>	06
<b>Programme structure</b>	07
<b>Job opportunities</b>	15
<b>Why choose UAntwerp</b>	17
<b>Testimonial</b>	18
<b>Admission criteria</b>	20
<b>Application procedure</b>	22
<b>ECTS credits</b>	23



**As a digital business engineer, you learn to combine technology and computer science with economic and management skills. It is no secret that this combination is highly sought-after in the job market.**



## **In brief**

Nowadays, digital technologies continuously transform and revolutionise the way businesses operate, presenting exciting opportunities but new challenges at the same time. From disruptive business models to ethical considerations and sustainable practices, the digital landscape is ever-evolving.

So are you curious to unravel the connections between economics, business, and information technology? And always the one to come up with innovative solutions to complex problems? If so, a master's in Digital Business Engineering might just be perfect for you.

As an international student, you will be part of an inclusive, multi-accredited university that scores well in academic rankings, and is praised for its high value for money.

## In detail

With this degree, you will embody the ever-growing synergy between IT and business economics, allowing you to be at the forefront of digital innovation and drive the growth of emerging enterprises that are shaping the world around us.

In this two-year Master's programme Master's programme, **you will:**

acquire a **solid foundation** in economics, business administration and information technology and

combine **knowledge** of development and management of information systems with the study of important digital innovation domains, such as artificial intelligence, data mining and data engineering.

### **Innovative business city**

As a student in Antwerp, you find yourself in the only Belgian city on the Financial Times's list of most innovative business cities in Europe. In 2022, the Financial Times placed Antwerp in the top 10 of the 'Global Cities and Regions of the Future 2022/2023' rankings. The city was rewarded for its business-friendliness, connectivity and economic potential. And for good reason. As a smart city and an ecosystem for digital innovation, Antwerp actively stimulates entrepreneurial talent and technological start-ups. The city is home to Europe's second largest port, the global diamond trade, a thriving fashion industry, etc. All this only 45 minutes away from Brussels, the heart of the European Union. You can easily travel to Amsterdam, Paris, Berlin, London, etc. It's up to you to explore Europe, one step at a time!

### **Rankings and accreditations**

The faculty's AACSB, EQUIS and EFMD programme accreditations illustrate our high-quality teaching and research, placing us among a select group of global leaders in business education. In the Financial Times European Business Schools Ranking 2022, the University of Antwerp is ranked 92nd.



## Programme structure

The Faculty of Business and Economics is known for its one-on-one approach, providing each student with individual follow-up. Our professors and academic staff are very accessible and will help you with any questions you may have. They do everything they can to make you feel right at home in our international classroom.

Throughout the programme, you will find yourself in close interaction with academics, seasoned industry experts and alumni from a wide variety of disciplines. Theoretical knowledge combined with research and real-life cases from the corporate world will enrich your understanding of today's digital world, ultimately helping you become a critical-thinking, global-minded citizen.

### Modules

The programme consists of four modules. The hybrid character of these modules enables you to combine business economics and information technology. You can explore specific areas of your interest in greater depth by choosing from a wide range of electives.

#### **Digital business fundamentals:**

This module gives you a solid foundation in business economics, with an explicit focus on innovation. During the courses, you will be trained to create added value in our digital economy.

#### **Digital engineering fundamentals:**

Find out what role IT innovations play in the daily functioning of organisations and learn how to build complex software. Work with databases, data mining and data engineering to find answers to



*Thanks to the comprehensive nature of the Master of Digital Business Engineering, the students become highly-skilled professionals with an ethical and sustainable mindset.*

**Prof. Koen Vandenbempt,**  
Dean

complex business questions. Learn to identify the risks and opportunities for global information and communication technology within an organisation.

**Major and electives:**

Tailor the programme to your own interests by choosing a major and electives. You can focus on business-oriented electives such as European and International Entrepreneurship, Finance and Marketing, or Strategy and Organisation, or more IT-oriented topics such as Digital Agility.

**Master's thesis portfolio and research methodology:**

The courses in research methodology prepare you to conduct academic research in the field of management information systems. You'll gain a thorough understanding and knowledge of empirical research methods and its applications.

Your Master's thesis and the Integration Project are the crowning pieces of your two-year study. The Integration Project is a capstone course in collaboration with leading companies such as Accenture and Baloise Insurance, where knowledge from all the courses is integrated to solve a complex and real-world case study. During this module, you will learn to conduct academic and practical research independently.



*For me, the absolute highlight of my studies was the International Consulting Bootcamp in India. I learned how to work in an international culture and it was just a fantastic experience.*

**Lien Brusselaers,**  
Product lead at  
The Master Channel

## Learning outcomes

Your Master of Digital Business Engineering will kickstart your (international) career, as you will have obtained indispensable and multidisciplinary skills.

All learning outcomes and competences are listed on [www.uantwerpen.be/digital-business-engineering](http://www.uantwerpen.be/digital-business-engineering), and at the end of the programme, **you'll be able to:**

- a** **distinguish** and **define** concepts of specific areas of business economics and information technology, and you are aware of the latest national and international developments in these areas;
- b** **conduct** research and critically evaluate the results in a scientifically correct manner, based on your analytical insights and methodological training;
- c** **recognise** the ethical and sustainable aspects of business operations in a globalising world, and contribute to the quality improvement of business processes in a socially responsible manner;
- d** **identify** the interaction between scientific and technological changes on a global scale, and subsequently estimate their impact on business decisions;
- e** **work and communicate** efficiently in multicultural and/or international teams.



## Internationalisation

Employers value young professionals who are used to working in multicultural settings. Hence, in addition to a solid theoretical basis, you will get plenty of opportunities to gain international experience during your studies. Not only will you meet fellow students from all over the world in our international classroom, **but you can also:**

- take part in the **Erasmus+ exchange programme** of our 140 partner universities,
- participate in a **summer school or bootcamp**,
- do an **internship** or a **consulting** project or
- obtain a **double degree**.



## Curriculum

### Digital Business

#### Fundamentals

Semester ECTS credits

#### Compulsory common part

18

— Digital Strategy and Governance	SEM 1	6
— Strategic Management	SEM 1	6
— Digital Innovation	SEM 3	6

#### Compulsory common part

#### 1 to choose in part 1 of the Master

3

— Data Science and Ethics	SEM 1	3
— Ethical and Sustainable Business	SEM 2	3

#### Electives

9/12

Choose 9/12 ECTS credits

in part 1 or in part 2 of the Master

— Entrepreneurial Finance	SEM 2 or 4	6
— Omnichannel and Digital Marketing	SEM 1 or 3	6
— Organisational Development and Change Management	SEM 1 or 3	6
— Supply Chain Management	SEM 1 or 3	3
— Sustainability Management	SEM 2 or 4	6
— Trends in Finance and Finance Technology	SEM 2 or 4	3
— Transport Innovation, Digitalisation and Entrepreneurship	SEM 1	6
— Blended intensive programme on Leadership Development	SEM 1	3
— Innovation Management and Business Modeling	SEM 1	6

## Digital Engineering Fundamentals

	Semester	ECTS credits
<b>Compulsory common part</b>		<b>21</b>
— Machine Learning for Business	SEM 1	6
— Digital Risk & Security	SEM 2	6
— Software Engineering and Architecture	SEM 1 & 2	9

## Electives

Choose 9/6 ECTS credits  
in part 1 of part 2 of the Master

		ECTS credits
		<b>9/6</b>
— Current Topics in Data Science and Artificial Intelligence	SEM 2 or 4	3
— Data Engineering	SEM 2 or 4	6
— Data Science and Ethics	SEM 1 or 3	3
— Digital Auditing	SEM 2 or 4	6
— Database Systems	SEM 1 or 3	6
— Reinforcement Learning	SEM 2 or 4	6
— Software Testing	SEM 2 or 4	6
— Topics in Computer Networks	SEM 2 or 4	6
— Deep Learning for Business	SEM 2	3

## Research Methodology

	Semester	ECTS credits
<b>Compulsory in part 1 of the Master</b>		
— Empirical Research in MIS	SEM 2	3
— Engineering and Design Science Methodologies	SEM 1	3

## Master's Thesis Portfolio Semester ECTS credits 24

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Compulsory in part 2 of the Master

└─ Integration Project Digital Business Engineering	SEM 3	9
└─ Master's Thesis	SEM 4	15

## 1 Major Semester ECTS credits 18

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18 ECTS credits to be spread over the 2 parts of the Master

- └─ Major Accounting \*
- └─ Major Digital Agility, Data Science and Artificial Intelligence \*
- └─ Major Finance \*
- └─ Major Innovation Management and Entrepreneurship \*
- └─ Major Marketing \*
- └─ Major Organisation, Strategy and International Business \*
- └─ Major Transport and Logistics \*
- └─ Major International Exchange \*

**18 ECTS credits** at a foreign university/institute to be taken in the framework of an exchange programme

\* If you want to know which specific courses you can follow in each major, please consult the full study the programme's website: [www.uantwerpen.be/digital-business-engineering](http://www.uantwerpen.be/digital-business-engineering).

## Choose 12 ECTS

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- └─ From the rest of the Master of Digital Business Engineering
- └─ From the Master of Business Engineering:
  - Financial Engineering
- └─ From the offer of summer schools, winter schools and the blended intensive programmes of the Antwerp Summer Winter University, the faculty of Business and Economics or a partner institution (after approval and selection)

- At a foreign university in the framework of exchange
- From a selection of courses from the YUFE Student Journey (after approval)
- Previously obtained credits from a Master's programme offered by the Faculty of Business and Economics (upon request submitted through the Helpdesk)

**From the list below:**

		<b>ECTS credits</b>
— Internship Project		6
— Internship	SEM 1	3
— Internship	SEM 2	3



## Job opportunities

If you choose to study the Master of Digital Business Engineering at the University of Antwerp, you will be fully prepared to take your first steps towards the job market. During your studies, you are in frequent contact with the business world through guest lectures, corporate visits, a career development track and job fairs. Students and alumni get unlimited access to the Career Center, our go-to platform for vacancies, internships and career-related events from hundreds of national and international companies.

Our graduates have a unique combination of skills and take up key roles in shaping digital innovation and managing business transformation. Their profiles are highly sought-after in the job market and in most cases, our final-year students have already signed a contract before they even graduated. Over the past ten years, 98.5% of our students from the Dutch equivalent programme found a job within six months after graduation.

### **An exciting career awaits**

As a digital business engineer, you stand out because of your unique set of skills, combining in-depth knowledge of IT with a fully-fledged business education. This makes you eligible for a wide range of positions in several industries.

Our alumni take up positions as CEOs, directors, managers, IT consultants, technology advisors and software engineers in numerous national and international organisations. Others have founded their own companies or became researchers at top universities. The possibilities are endless. Where you end up working, depends to a large extent on your personal interests and ambitions.

### **Orientation year**

As of 2021, non-European students in Belgium can make use of the orientation year. This gives them 12 months to find work or start a company in Belgium, following the completion of their studies.



*On the one hand, Master of Digital Business Engineering is very analytical and based on theoretical courses like economics, mathematics, statistics, etc. On the other hand, it also focuses on the human part of economics. This profile is very useful for companies specialising in digital transformation and IT projects.*

**Vincent Willemse**

## 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. The city of 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.

**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](http://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 programming, sports facilities and many other available student services.

The University of Antwerp scores extremely well in Young University Rankings







## Testimonial

After obtaining my degree in Digital Business Engineering I started working at Microsoft as a Management Trainee. In 2015, I packed up and moved to New York to work as a consultant at the Gartland and Mellina Group (GMG), a management consulting firm specialising in financial services. I worked with several financial institutions such as banks, hedge funds or insurance agencies, and gave clients advice on key challenges and strategic projects in order to help them achieve a competitive advantage.

In August 2017, I enrolled at Harvard Business School in Boston to obtain a Master of Business Administration. I am convinced that the education I received at the University of Antwerp played an important role in my admission into the programme. Once I obtained my MBA, I accepted a job offer at Evercore, an independent investment bank. Both consultants and investment bankers change projects regularly, which requires a broad set of skills and competencies. Luckily, my degree in Digital Business Engineering prepared me to quickly adapt to new topics in changing environments.



In my day-to-day tasks, I still fall back on knowledge I acquired in several management courses such as micro- and macroeconomics, econometrics and financial management. But in my opinion, my biggest competitive advantage comes from my management information system courses, which, thanks to my knowledge of technology and finance, allow me to bridge an increasingly important gap between technology and C-suite problems.

So why should you choose the University of Antwerp? Mainly because of the quality and flexibility of the curriculum, the smaller classes and personal connections with professors, and the many destinations for foreign exchange programmes and projects.

**Noémie Renaerts, Investment Banking Associate at Evercore**

## Admission criteria

### You are eligible if you have:

- an academic Bachelor's degree from a recognised university in business economics with a substantial quantitative, technological and IT component or
- an academic Bachelor's degree from a recognised university with a strong quantitative and technological focus and with sufficient knowledge of business economics and management science.

You will need to provide evidence of your acquired

### competences in:

- economics,
- business management,
- research methodology and mathematics and
- information systems and science.

The following academic degree, obtained in Belgium, will give direct access to the programme:

### **Bachelor handelsingenieur in de beleidsinformatica**

### **Preparatory programme**

If you have an academic degree with a limited economic, management or information systems and science component, you might be eligible to start the Master of Digital Business Engineering by following a preparatory programme. The preparatory programme will be individually assigned by the Board of Admission, depending on the credits obtained in your prior degree(s).

Students who are still completing their Bachelor's degree are also encouraged to apply. Applicants that are enrolled in their final year should, instead of the degree, submit a copy of an original and signed letter from their college or university

confirming that they are expected to complete the programme at the end of the current academic year.

### Language proficiency

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 by submitting a **language certificate** showing their TOEFL, IELTS or ITACE results (the level required can be checked on [www.uantwerpen.be/admission](http://www.uantwerpen.be/admission)). Students with a degree from the United Kingdom, Ireland, United States, Canada, Australia and New Zealand are exempt from providing a language certificate.

The Board of Admission may still wish to verify your command of English in this case, for example through an (online) interview.

### Additional requirements

A GMAT or GRE test result is required.

- **GMAT**: an overall score of 600 + 50 on quantitative part
- **GRE**: a minimum score of 162 on quantitative reasoning and 152 on verbal reasoning

Students are exempt from submitting a GMAT/GRE test result if they have obtained their (business) economics degree at one of the following institutions:

- A Belgian university;
- A university ranked in the global top 400 in the most recent edition of THE or QS World Ranking;
- One of FBE's exchange partners;
- A university with an AACSB, EFMD or EQUIS accreditation



*What makes this programme truly unique, is the way our students are trained to understand the business and economic aspects related to disruptive innovation in an ethical and sustainable way.*

**Prof. Jan Verelst,**  
Programme director

## Application procedure

If you have a Bachelor's or Master's degree from a higher education institution in Belgium, the Netherlands or Luxembourg and you don't need a visa, you can apply through a simplified online form on the programme's website: [www.uantwerpen.be/digital-business-engineering](http://www.uantwerpen.be/digital-business-engineering).

Candidates who do not fulfil this condition or who need a student visa must submit an online application through the **Mobility Online** tool. Application files for the academic year 2024-2025 can be uploaded in Mobility Online as from 9 November 2023 onwards.

### Application deadlines

To submit an application through Mobility Online

For non-EEA \* nationals and for students who need to apply for a visa: **before 1 March 2024**

For EEA nationals: **before 1 June 2024**

\*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, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden

### Enrolment deadline

4 October 2024

Enrolments start on 1 July 2024.

The academic year 2024-2025 starts on Monday 23 September 2024.

## ECTS credits

The University of Antwerp applies the '**European Credit Transfer and Accumulation System**' (ECTS) in all its degree programmes. All study programmes are measured in terms of ECTS credits.

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.



## Quick facts

### Level

Master

### Language

English

### Credits

120 ECTS credits

### Number of years

2

### Tuition fee per year \*

EUR 1092.10 for EEA nationals

EUR 5800 for non-EEA nationals

### Campus

Stadscampus

### Faculty

Business and Economics

### More information

[www.uantwerpen.be/  
digital-business-engineering](http://www.uantwerpen.be/digital-business-engineering)



\* subject to yearly revision

## Contact

### Master of Digital Business Engineering

Kim Van Overvelt, Programme manager

[master.fbe@uantwerp.be](mailto:master.fbe@uantwerp.be)

T.: +32 3 265 50 31

### International Students Office

[internationalstudents@uantwerp.be](mailto:internationalstudents@uantwerp.be)

T.: +32 3 265 31 89

[www.uantwerp.be](http://www.uantwerp.be)

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This brochure was published in September 2023.

As all information is subject to change,  
please check our website for the latest updates.