



BACHELOR
CREATIVE TECHNOLOGIES & AI

YOUR FUTURE STARTS AT HOWEST

2024-2025

howest
hogeschool



BACHELOR CREATIVE TECHNOLOGIES & AI SOMETHING FOR YOU?



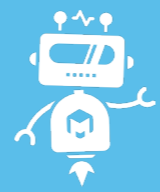
Welcome!

Are you ready to embark on a journey to master the art of building cutting-edge AI solutions from concept to completion? Curious about the inner workings of the latest AI breakthroughs, such as transformers, the magic behind DALL-E and ChatGPT? At Creative Tech and AI (CTAI), we invite you to explore the fascinating world of AI, where you will not only uncover the secrets of these innovative technologies but also learn how to apply them to solve real-world problems.

Be on the rAIght side of the revolution!

AI is undeniably becoming an integral component of our everyday lives, often in ways that go unnoticed. Whether it's the song suggestions from Spotify, or the car smoothly cruising past with its adaptive cruise control, AI plays a significant role. It's behind the scenes, tirelessly automating repetitive tasks, making our world more efficient and innovative. AI is incredibly useful in today's world; it even played a crucial role in composing this text and it generated one of the images featured in this booklet!

Creative Tech and AI (CTAI) is your gateway to understanding and actively participating in this AI revolution. you will not only discover how to harness ready-made AI tools but also gain the skills to craft your very own neural networks.



Hands-on, international & future-proof

AI extends well beyond algorithm creation. It encompasses efficient data management, seamless integration within a company, adaptability to changes, to name just a few of its multifaceted components.

This is why our study program is built upon five essential pillars:

• **AI Technologies:** In this first pillar, you will delve into the heart of AI. You will learn how to craft AI algorithms from scratch and efficiently prepare data. This comprehensive exploration covers everything from fundamental machine learning technologies to advanced techniques, including training reinforcement agents in virtual environments and mastering the latest breakthroughs in the course Applied & Generative AI.

- **Programming:** The second pillar focuses on developing your programming skills, specifically in Python and C#.
- **AI Cloud:** In the third pillar, you will discover how to operate AI algorithms in cloud environments and leverage existing cloud solutions effectively.
- **AI Data:** In the `AI Data` pillar you will develop the skills to effectively collect, process, visualize and leverage data for your AI projects. Learn how to explore optimal data storage techniques, utilizing tools such as Influx. Delve into data access through technologies like Elasticsearch.
- **AI Integration:** Finally, you will bring everything together by integrating your knowledge that you gained every semester into an AI project, providing you with hands-on, real-world experience in solving problems through the power of AI.

STUDY PROGRAMME

2024 - 2025

Thanks to this comprehensive program built upon the five pillars - AI technologies, programming, AI data, AI cloud & AI projects - , you will gain insight into the multifaceted world of AI.

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Data Science 6 SP	Machine Learning & AI 6 SP	Deep Learning 6 SP	Advanced AI 6 SP	Applied & Generative AI 6 SP	Internship
Basic Programming 6 SP	Advanced Software Engineering 6 SP	Reinforcement Learning 6 SP	Backend Development 6 SP	Robotics & Edge AI 6 SP	
AI Applied Maths 6 SP	Containers and Orchestration 6 SP	Cloud Services 6 SP	Unity 6 SP	MLOps 6 SP	
Data Management 6 SP	Sensors & Interfacing 6 SP	Big Data & AI 6 SP	Advanced Data Engineering & Visualisation 6 SP	Innovation & Research Project 6 SP	
AI Concepts 3 SP	Project One 6 SP	Team Project 6 SP	Industry Project 6 SP		
International Project 3 SP					Bachelors Thesis 6 SP
					24 SP

● AI Technologies ● Programming ● AI Data ● AI Cloud ● AI Projects

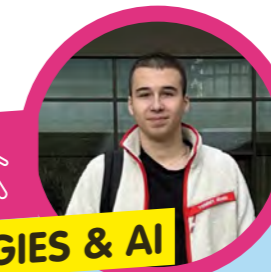
Programme is subject to change

THE MOST
UP-TO-DATE PROGRAMME?
CHECK THE WEBSITE!

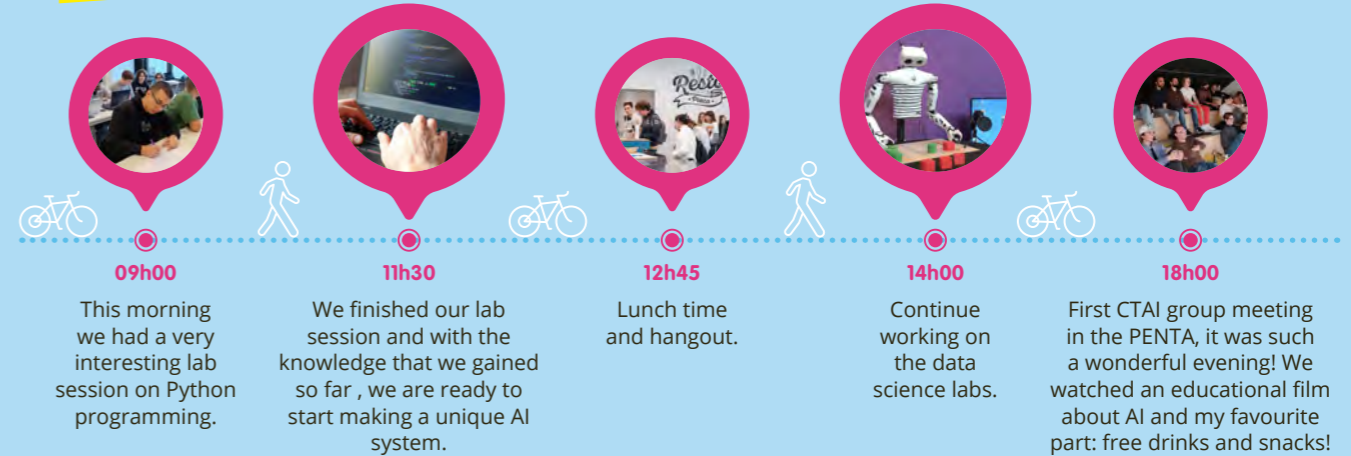


A DAY IN THE WAKE OF DANYLO

1ST YEAR CREATIVE TECHNOLOGIES & AI



“ I want to be better than chatGPT at coding ”



OUR ASSETS

- **Strong community:** Connect with an international community of like-minded individuals and expert instructors who will guide you on your journey to mastering this transformative technology.
- **Focus on practical experience:** In addition to lessons with a strong focus on labs, you will be prepared for the professional field by working on real-world use cases during projects.
- **Job security:** This study program is highly regarded by professionals worldwide.
- **Interpersonal contact:** We prioritize genuine interpersonal connections. With approachable teachers and special initiatives like study mornings, you have the opportunity to focus on your assignments on campus, and engage with your instructors, ensuring a personalized and enriching educational experience.

WHAT OPPORTUNITIES AWAIT YOU IN THE FUTURE?

Once you've developed the skills to identify, analyze, and solve real-world problems using AI, you can have a tangible impact on industries ranging from healthcare to finance.

You could join start-ups and spearhead the entire AI pipeline, work as a data engineer in organizations of varying sizes, or even establish yourself as an independent AI consultant. These possibilities represent just a fraction of the many job opportunities that await you.



SPEAKING



ALUMNUS
CARLOS SILVA
MEXICO

"I chose this program because I wanted to explore AI at a deeper level, and it was the perfect tool to complement my studies back home. The main advantage was the resources the school has. Applying concepts in a practical way and being able to work with the robot made a big difference. I appreciated the cultural aspect of personal development: meeting new people and being in an environment with a foreign language. I also enjoyed biking all around the city and how easy it was, because Kortrijk is very compact and safe."



TEACHER
WOUTER GEVAERT
TEACHER CREATIVE TECHNOLOGIES & AI

"Allow us to introduce Wouter Gevaert, an educator since 2002, who has been teaching AI since 2015. Sharing his knowledge and expertise with students and professionals alike."

In addition to his teaching role, Wouter is involved in several AI projects, with a particular focus on computer vision. His work has contributed to advancements in medical imaging and diagnosis.

Notably, Wouter is active in the international AI community. He has collaborated with peers in South Africa to establish a popular course on data analytics and machine learning."



ALUMNUS
JONAS BOECQUAERT
DATA ENGINEER AT ML6

"I work as a data engineer at ML6, a leader in artificial intelligence. At ML6, I have the opportunity to work with the latest technologies and collaborate with real experts in the field. My position here is a direct result of my education, where I learned to independently manage complete projects and gained extensive knowledge, perfectly preparing me for this role. Undertaking project work was one of the main reasons I chose this programme."

CAMPUS KORTRIJK WEIDE - GEBOUW A



Bursting with creativity

The campus is conveniently located within a short walking distance from the train station and near the city centre of Kortrijk. This prime location is complemented by our comfortable classrooms, the personalized support by our lectures, and our state-of-the-art facilities. At Howest in Kortrijk, we offer a range of innovative programmes, not only including MCT, but Digital Design & Development, Industrial Design, and Digital Arts & Entertainment as well. This energetic atmosphere, bursting with creativity and a drive for innovation, is felt across all our city campuses.

KORTRIJK, A CITY ON THE RISE

Kortrijk today presents everything you need to make your student years memorable. Beyond our modern campuses, you will find plenty of places to eat, many cozy cafes, abundant sports facilities, and a varied cultural offering. Kortrijk stands out as a hub for game development, as well as a dynamic area brimming with opportunities for creativity, innovation, design, and celebratory events.



**PREPARE YOUR
STUDY STAY IN BELGIUM**

WWW.HOWEST.BE/INTERNATIONAL



**ANY QUESTIONS
ABOUT THIS PROGRAMME?**

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8500 Kortrijk



www.mct.be

THE FOLLOWING PROGRAMMES COULD ALSO BE A MATCH FOR YOU!



Multimedia en Creatieve Technologie (bachelor)

Ben je gebeten door innovatie en wil je de applicaties van het internet van morgen ontwikkelen met cutting-edge technologie? In de bachelor Multimedia en Creatieve Technologie maak je uitgebreid kennis met IoT, artificial intelligence, user interfaces en augmented reality.

This programme is only available in Dutch.



Digital Arts and Entertainment (DAE) (bachelor)

Do you fantasise about 2D or 3D worlds which do not yet exist? Do you consider yourself to be creative, ambitious, resourceful and above all passionate about games, films and special effects? Do you wish to experiment and create content with state-of-the-art technology and software? Do you want to become a professional game developer, a game or VFX artist, a 3D animator or a sound designer for games, or maybe even start your own game company? If so, then Digital Arts & Entertainment is the programme for you!



Digital Design and Development (Devine) (bachelor)

Do you secretly dream of designing the next big app? Or do innovative technology and interactive digital experiences excite you? If so, come join the Digital Design and Development bachelor's programme (a.k.a Devine). Deviners are creative digital makers. They build a bridge between the code and design worlds and that makes them highly sought after professionals and industry favorites.



Applied Computer Science (bachelor)

Are you interested in becoming an ethical hacker and helping private and public sector organizations find their weak spots through penetration testing (system, web, and network)? All of this and more is covered in this program. Data Privacy and GDPR provide you the essential knowledge on your way to becoming a Data Protection Officer (DPO). You will also acquire expertise in Information Security Management and threat modelling and intelligence.



Bioinformatics (bachelor)

Bioinformatics will equip students and laboratory scientists with the necessary IT and programming skills to work in a future-proof manner. Do you have a bachelor's degree in biomedical laboratory science, or another programme in molecular biology? Then you can use the Advanced Bachelor of Bioinformatics to further specialise in IT and automation, which are becoming increasingly important in molecular biology. In this way, you allow yourself to keep up with new developments in your sector.