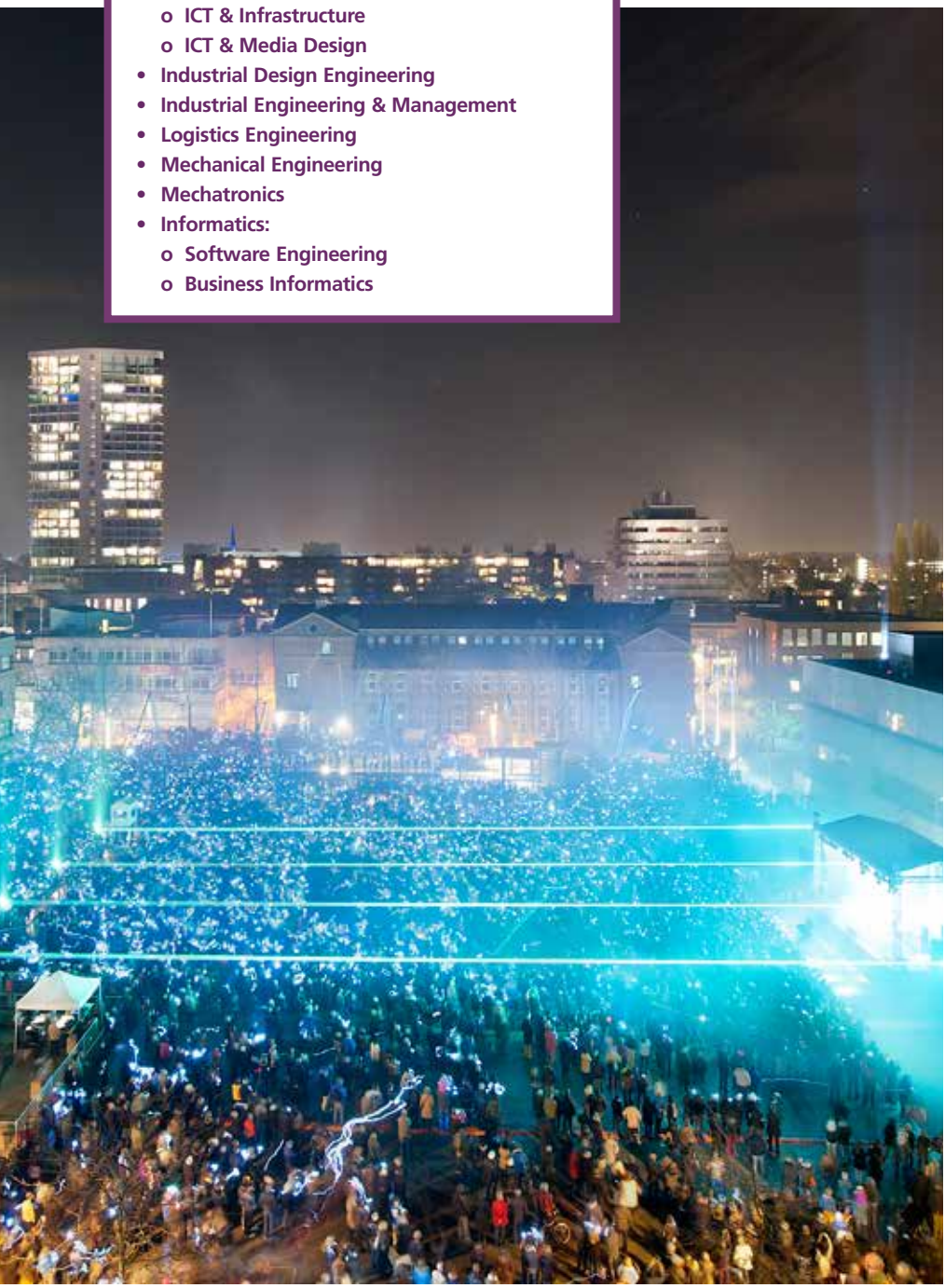
- Electrical & Electronic Engineering
- Information and Communication Technology:
  - ICT & Software Engineering
  - ICT & Technology
  - ICT & Business
  - ICT & Infrastructure
  - ICT & Media Design
- Industrial Design Engineering
- Industrial Engineering & Management
- Logistics Engineering
- Mechanical Engineering
- Mechatronics
- Informatics:
  - Software Engineering
  - Business Informatics

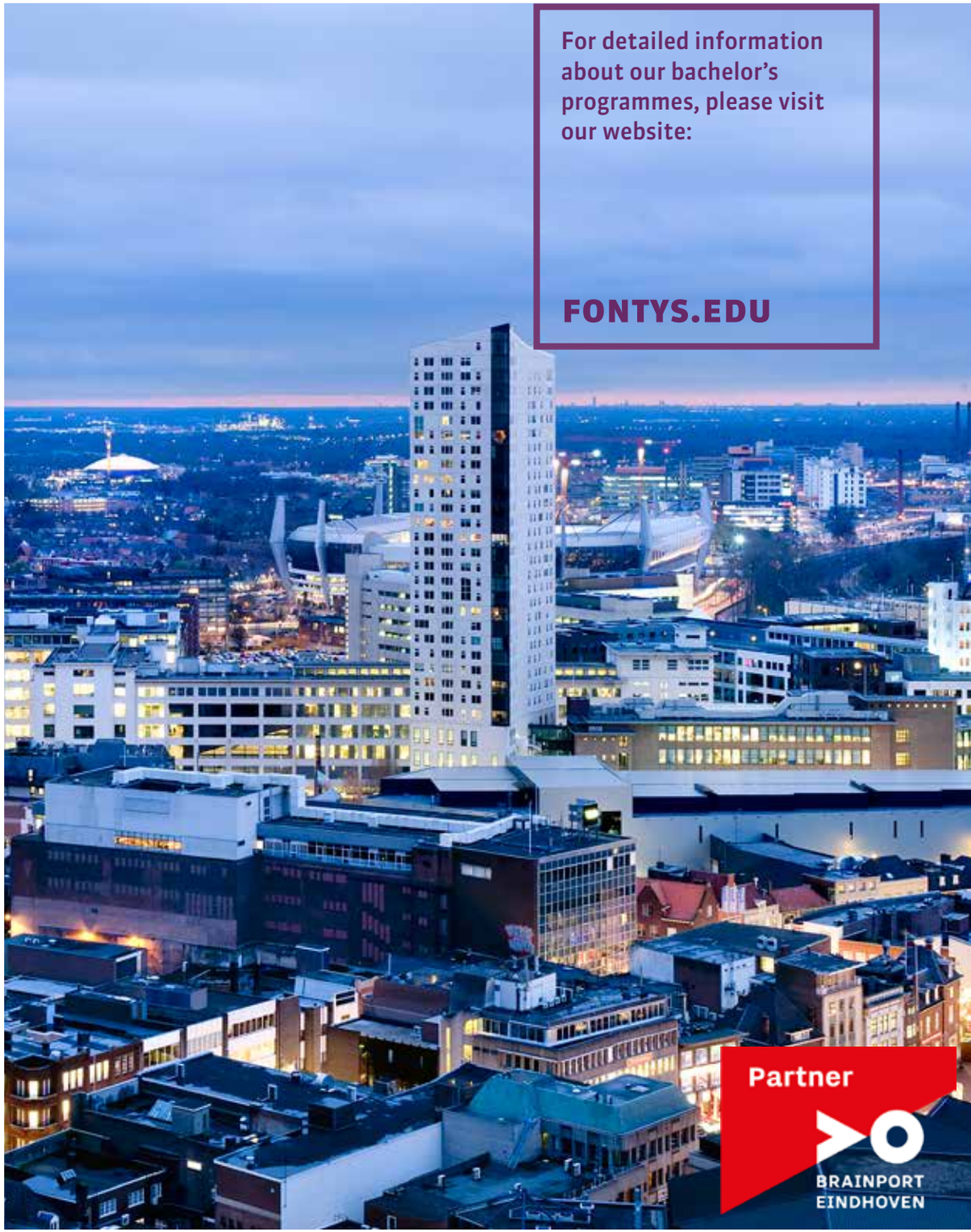


BRAINPORT REGION

Fontys Eindhoven and Venlo are both located in the Southeastern Netherlands in a world-class top technology region known as the 'Brainport'. Here, high-tech and design are combined with advanced high-end manufacturing industry and entrepreneurship. Close collaboration and knowledge sharing are part of the region's DNA, and typical of the open innovation culture that makes Brainport both smart and strong. By quickly anticipating and responding to rapid global changes, and by constantly connecting to new students, Brainport creates new opportunities. Those opportunities in turn attract students, talent and enterprises from all over the world. Entrepreneurs, schools, universities and government come together to create a unique business climate in the Brainport region. The partners within the Brainport region are working together to identify solutions for the challenges facing today's society in the fields of health, mobility, energy, education and safety. As the high-tech growth accelerator for the Dutch economy and an integral part of the technological backbone of Europe, Brainport is a global frontrunner in innovation.

Fontys has been collaborating with more than 100 companies in the fields of ICT and engineering (our partners in education) right across the Brainport region, for many years. For an indication of those partners, check out: **piefontysict.nl**

With the knowledge and skills they acquire, graduates from Fontys are qualified for employment as high-level engineers right across the ICT and engineering sector. The range of jobs is highly varied and depends on the specialisation selected by individual students.



ELECTRICAL & ELECTRONIC ENGINEERING

Electronical and electronic engineers design and develop the consumer goods and the systems used by machines and equipment in industrial applications, from mobile communication and computing through to aerospace.

The curriculum of the EEE Bachelor's programme is offered in the context of 4 themes: Sound Engineering, Care & Cure, Smart & Sustainable and Connected World. The knowledge and skills acquired within this programme qualifies graduates for employment as high-level electronic engineers, in particular in the field of electronic design and development.

For graduates from Fontys, future career opportunities are excellent. Possibilities include a career in the (automotive) industry, industrial companies such as Philips and ASML, and engineering positions in hospitals, the armed forces, at lighting and audio companies, or even in the world of theatre.

EINDHOVEN
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INFORMATION & COMMUNICATION TECHNOLOGY

ICT is the term that refers to technologies related to the Internet, wireless networks and cell phones, as well as the latest software developments. The Fontys ICT Bachelor of science in Eindhoven offers 5 study programmes: ICT & Software Engineering, ICT & Technology, ICT & Business, ICT & Infrastructure and ICT & Media Design.

The first semester is identical for all five Bachelor's programmes, giving all students an opportunity to identify which programme suits them best. From semester two onwards, they can choose to continue either in ICT & Software Engineering, ICT & Technology, ICT & Business, ICT & Infrastructure or ICT & Media Design. Additional specialisation modules are also available, such as Applied Data Science, Cyber Security, Game Design and Technology, Management and Security, Open Innovation and Smart Mobile.

ICT & SOFTWARE ENGINEERING

This study field teaches students about designing, developing and maintaining software for all kinds of applications. They will learn to translate the requirements identified by clients into a software design that is then implemented via a number of programming languages (C#, Java).

ICT & TECHNOLOGY

Software can be found today in practically every device, from a television to a heart defibrillator, and from a watch to a lift. This study programme focuses on writing software for all these devices. Students are trained to become experts in software development, in particular in so-called embedded software and industrial automation.

ICT & BUSINESS

Business IT specialists understand the use of ICT in organisations, to help businesses achieve their objectives. A Business IT specialist not only understands how to analyse organisations and business processes but is also able to offer advice on solutions and to translate those solutions into actual designs. The ICT & Business graduate understands the technology involved and is able to discuss and solve complex IT problems, while at the same time speaking the language of management.

ICT & INFRASTRUCTURE

In the ICT & Infrastructure bachelor study programme you will be trained as an infra-structure specialist. You will be the engineer who ensures that all information and communication systems work optimally and continue to work on the infrastructure that has been created. Infrastructure specialists also know how to manage, monitor and secure all IT-resources. You will be capable of advising on a new infrastructure, designing, testing and realizing it from a set of requirements and new technology.

ICT & MEDIA DESIGN

Students of ICT and Media Design are responsible for inventing and creating valuable ICT-based applications for new media. They will learn to critically assess the role of media in society, and identify their personal talents. As part of this study programme, they will learn to understand concepts that enable them to become creative thinkers and designers, based on thorough knowledge of and expertise in ICT issues. These students are taught to elaborate ICT-based media concepts aimed at a particular target group. They learn to build useful applications and will have the opportunity to experiment and develop their technical and artistic talents.

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INDUSTRIAL DESIGN ENGINEERING

Industrial Design Engineering is a study programme that combines the beauty of design with the elegance of engineering and technology. The industrial design engineer is best described as the person responsible for joining the dots in the development of a new product or new system. In addition to their own competences, industrial design engineers understand the skills of fellow engineers and are capable of combining those skills in collaboration, to create intelligent solutions to design problems.

The industrial design engineer is involved in the entire process, from a new product idea right through its (mass) production. The products in question range from simple objects like a coffee mug or a toy through to the interior of an aircraft or a ground-breaking car design. Constantly taking account of the needs of the (future) user, although the engineer's work involves 'design and finesse', their products also function in the real world, and in most cases are intended for mass production.

As an industrial design engineer, you will be able to work anywhere in the world, wherever new ideas are needed for the creation of innovative products. Equipped with both technical skills and design thinking capabilities, you are qualified to become an innovator at a major international company, a user interface designer for a start-up, or perhaps to start your own business, or anything in between. The opportunities are endless. No matter what career path you choose, you will employ a unique blend of art and science to achieve your goal, because that is in your DNA.

VENLO
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Fontys.edu/IDE

INDUSTRIAL ENGINEERING & MANAGEMENT

Industrial Engineering & Management is a study programme that teaches a broad variety of topics, ranging from technology to economics and from strategy to human resources. The goal of the study programme is to prepare students for a management position in a 'technology' company. This could be a company that develops and manufactures high-tech products, or a company focused more on manufacturing or logistics.

With hundreds of companies within 50 kilometres of the university, Eindhoven's Brainport region is the ideal environment for studying Industrial Engineering & Management. The proximity of so many industrial companies is essential for this study programme, since much of the time will be spent at one or more of these companies.

Right from day one of the study programme our students will start building a relevant CV, and by the time they graduate they have all the knowledge, skills and experience they need to immediately take on significant responsibility within the company of their choice. The central focus of this study programme is problem solving in the fields of development, manufacturing and logistics, with the aim of lowering costs, improving quality, delivering goods faster, and increasing reliability.

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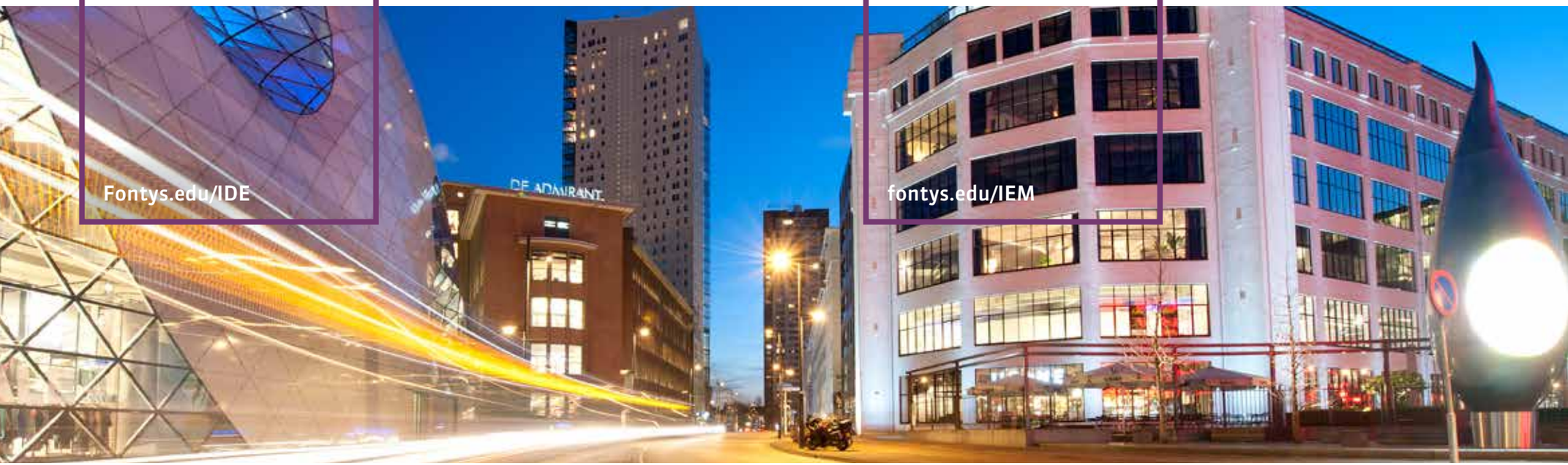
fontys.edu/IEM



LOGISTICS ENGINEERING

Buying an iPhone or car may sound simple, but all products are preceded by major logistical processes. Just think of the various components that have to be collected from all over the world. The production and delivery of goods must always be of good quality, and must take place at the right time, in the right quantity and at the right place. The study of logistics teaches students how to manage and improve the logistical flow of goods. This study field trains its graduates for related jobs in many different companies, from automotive and pharmaceutical through to wholesale and retail companies.

The first eighteen months focus on warehousing, distribution and production logistics on an operational, tactical and strategic level. Students then specialise in either Logistics Management or Logistics Engineering.

Logistics Engineering deals with operational management and the engineering aspects of logistics, for example setting up new smart warehouse layouts, advising customers on the introduction of new IT systems for stock management or analysing and re-engineering the goods and information flow from supplier to customer. A graduate in Logistics Engineering, as the name suggests, is an engineer. Employment opportunities include positions as logistics consultant, distribution network designer or process manager at companies such as Amazon, Lufthansa or Samsung, all requiring a thorough understanding of the needs of people, processes and systems.

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fontys.edu/
logistics-engineering

MECHANICAL ENGINEERING

This study programme focuses strongly on the design and construction of machines and devices. From oil rigs to the plastics industry and from rollercoasters in amusement parks through to handheld devices and industrial machinery, mechanical engineers are to be found everywhere. As designers who also understand how underlying processes work, mechanical engineers focus on the design, manufacture and placement of equipment, installations and machinery.
In short, they make things better.

Are you interested in making a machine more energy-efficient? Or ensuring that a production process generates less waste? As a mechanical engineer, you can make these things happen! Mechanical Engineering graduates find employment in a variety of sectors. Many are employed in the field of design and engineering or research and development while others are attracted by production and automation or energy and environmental technology.

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fontys.edu/mechanical

MECHATRONICS

This programme is a combination of electrical and electronic engineering, mechanical engineering, control systems and software. You will be a designer and a creator. Mechatronics is about making simpler, more economical and reliable systems that can do something independently. From design to making a robot: the bachelor programme Mechatronics has a focus on robotics and control technology.

Mechatronic engineers design or select sensors and actuators, develop control algorithms and use or develop advanced functional materials for the design of mechanical systems such as welding robots in a production line, surgical robots but also cruise control systems in cars and many more.

Future jobs for Mechatronics graduates are diverse and it is anticipated that mechatronics engineers will have excellent career opportunities. Nowadays the demand from the industry for Mechatronics engineers exceeds the supply. Think of a job in research and development, industrial automation or service and maintenance.

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fontys.edu/mechatronics

INFORMATICS:
▪ SOFTWARE ENGINEERING
▪ BUSINESS INFORMATICS

Today we live in a 'connected world'. People are connected by social media, and devices are connected to each other. Our lives are becoming increasingly dependent on computers. Take for example apps on mobile devices, web applications and cars; all are examples of software-based products. Smart people with technical skills are needed to develop those systems. The necessary technical skills can be learned in the study programmes Software Engineering and Business Informatics.

The first three semesters of the study programmes are identical for both Software Engineering and Business Informatics, and deal with such subjects as computer basics and security, databases and programming concepts.

From semester four onwards, students will specialise in Software Engineering or Business Informatics and may choose from a variety of subjects including machine learning, virtual/augmented reality and enterprise software development. Small, multinational classes guarantee personal attention for every student, and a rich cultural exchange environment for all our international students.

SOFTWARE ENGINEERING

Software Engineering relates to the complete process surrounding the development and improvement of computer applications; from initial idea, via implementation through to going live, and maintenance. Both from a technical perspective and from a user perspective, these are challenging processes. To be usable and acceptable, applications must fit the needs of the user. As a software engineer, you will learn to develop and implement state-of-the-art computer applications that are truly usable in practice.

BUSINESS INFORMATICS

Business Informatics professionals bridge the gap between users and developers of computer systems. They are the 'missing link' between business and IT. First and foremost this requires extensive basic technical knowledge, but that also calls for an understanding of key business processes, and how they can be supported by information technology. Students will acquire an analytical work approach that will enable them to embed IT in a whole range of different environments.

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FONTYS ICT PROGRAMMES WERE RANKED '**EXCELLENT**' IN 2018, BY **THE DUTCH ACCREDITATION AUTHORITY**

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