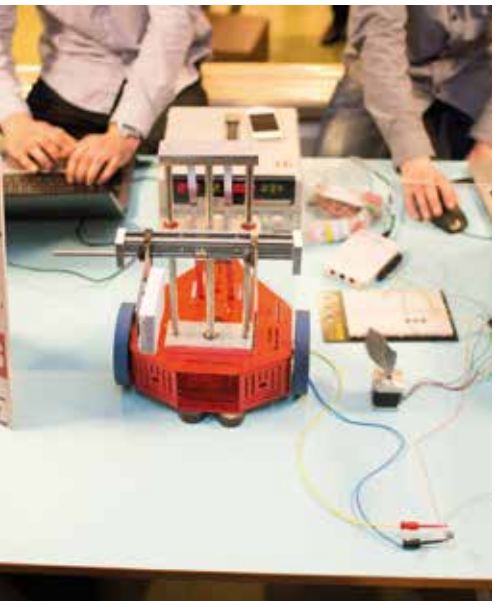
- ELECTRICAL & ELECTRONIC ENGINEERING
- MECHATRONICS ENGINEERING
- ENGINEERING PHYSICS
- MECHANICAL ENGINEERING
- INFORMATION & COMMUNICATION TECHNOLOGY
- INDUSTRIAL ENGINEERING & MANAGEMENT

CAMPUS EINDHOVEN - THE NETHERLANDS 2015 - 2016

Fontys University of Applied Sciences

Professional career after graduation:
This bachelor program leads to the international bachelor degree in Engineering. Our students are trained to become all-round experts in business engineering. With the knowledge and skills obtained at Fontys University students are likely to find work as managers or consultants in large production companies, but our graduates may also be found in the service industry, or working for local authorities. Alternatively, there is the possibility to do a master or MBA.



General information about Fontys Technology & Business Bachelor programs (campus Eindhoven)

In the first and second year you will study theoretical and practical subjects (including projects) in the study field of your choice. In the third year you will take part in the first internship period in an (inter) national company and the minor program is scheduled. You can choose freely what minor you want to do. It is even possible to do a pre-master program at University of Technology Eindhoven (TU/e). Students who have performed excellent during the first year of study at Fontys will be offered the opportunity to take part in EXCELLENCE-programs.

Industrial Engineering & Management

Program in brief
Industrial Engineering & Management is an English taught 4-years bachelor program teaching you everything about human resources, organizations, technology and economics in companies. "Brainport Eindhoven" region is a splendid environment for studying Industrial Engineering & Management. This is the place where the cleverest of companies design and improve state of the art industrial and consumer products for customers all over the world. Fontys Industrial Engineering & Management provides a varied bachelor programme. Together with your teachers, fellow students and managers of external companies, you will discover what you need to know and need to be able to do to gain a deep understanding of the people, the organisation, the technical know-how and the economic principles on which companies depend. You start building your cv with relevant experiences from the very first moment of your student career with us. The Industrial Engineering & Management bachelor program contains all aspects of managing a technology company in a coherent way. You will get hands-on experience by doing real projects in companies. In concrete the education focusses on problem solving in the areas of manufacturing, logistics and purchasing such as lowering costs, improving quality, delivering goods faster and increasing reliability.

Subjects you will study in the first year:
- Project Management
- Strategy, Marketing & sales
- Management & organisation
- Change Management
- Mathematics
- Ethics
- (Business) Economics
- Sociology
- Health safety at work

Information & Communication Technology

Program in brief
The bachelor program HBO-ICT English stream has the following specialisations: ICT & Software Engineering, ICT & Business and ICT & Technology. These 4-year English taught study programs are international programs, leading to the international Bachelor degree in Information & Communication Technology (ICT). With the knowledge and skills learned at Fontys University of Applied Sciences students can work as high-level engineers in the ICT sector.

ICT & Software engineering:
What is a computer without good software? Really nothing! In this bachelor program everything is about efficient and safe storage, exchange and processing of information. You learn how to analyse, what information is needed where and how this information is processed and dealt with. Of course, you need to take care of the client's requirements. They will have to work with the software you will develop for them! In your study program the focus will be on designing and building software. It's up to you whether you want to specialize on the technical software or on software for non-technical processes.

ICT & Business:
Nowadays business processes make use of ICT a lot. Business IT-specialists know how to apply ICT in organizations to achieve their objectives. A business IT-specialist knows how to analyze organizations and business processes but is also able to give advice on solutions and transfer these solutions into design and to implement their designs. Business IT is a wide study field focused on business processes and how to improve these processes by using ICT and also to make them quicker, cheaper and more client friendly. A business IT-specialist knows how to cooperate and communicate with management and the clients to find out what the organization is looking for.

ICT & Technology:

Nowadays you will find software in almost every device, from a television to a heart-defibrillator and from a watch to an elevator. Within our bachelor program ICT & Technology we focus on writing software for all these devices. You will learn about the complete software life cycle:

- Translate the requirements from future users into a software design
- Implement the software design with a program language (e.g. in C#)
- Test the code and write user manuals

We will train you to become an expert in software development, especially in the so-called Embedded software. In the first year of study you will do the following basic subjects which are equal for all 3 bachelor programs:

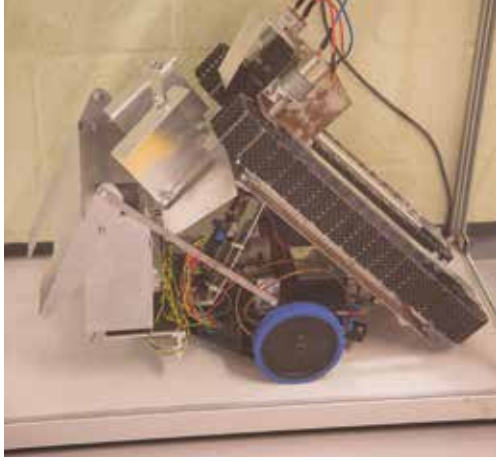
- Programming in C#
- Mathematics
- Computer systems
- Databases
- Internet applications
- Communication skills and project management

For the complete programs of the 3 ICT bachelor programs please go to our website.

From the second year you can choose to continue either in ICT & Software Engineering, ICT & Business or ICT & Technology. Projects and internships related to your bachelor choice will be an integrated part of the study program.

Possible related careers in ICT:

- Analyst Programmers
- Computer Network Professionals
- Database and Systems Administrators and ICT Security
- ICT Business and Systems Analysts
- ICT Managers
- ICT Support and Test Engineers
- Programmers
- Software and Application Programmers
- Systems Administrators
- Technicians (ICT Support)
- Web Developers



Professional career after graduation:

With your knowledge and skills learned at Fontys you will be able to find a job very easily in a technology-oriented company in the Netherlands or abroad. The ICT world is developing rapidly and new devices and systems are constantly being created to provide faster and more efficient methods for ICT. The available jobs in ICT are very different and depend on the chosen study routes. Professionals in ICT careers may work in commercial service sectors and ICT companies.

Mechatronics Engineering

Program in brief

Mechatronics Engineering offers you a 4-years English taught bachelor which is a combination of electrical and electronic engineering, mechanical engineering and software. In this bachelor program, you will be a designer and a creator. You will consider how you can create safer and more user friendly devices. From design to making a robot: the bachelor program Mechatronics Engineering has a focus on robotics and control technology. Mechatronics 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 chassis stabilizing systems, engine control units, disk drives, cameras, service and surgical robots. Very often mechatronics engineers are generalists rather than specialists.

Subjects you will study in the first year:

- Mechatronic design
- Electrical networks
- Mechanics
- Digital design
- C#-programming
- Mathematics
- Integrated design techniques
- General engineering skills
- Communication and presentation techniques

Professional career after graduation:

Future jobs for Mechatronics graduates are diverse. Today in the Netherlands the demand from industry for Mechatronics engineers exceeds the supply. Think of a job in research and development, industrial automation or service and maintenance. Examples of possible professions are:

- System Architect
- designer of machines or electronic products like mobile phones, MP4 players, robotics devices for people with disabilities
- designer for medical equipment (X-ray, laboratory equipment)

Electrical & Electronic Engineering

Program in brief

Electrical & Electronic Engineering is a 4-years English taught bachelor program with specialisations in semester 6 and 7 in Robotics, Telecommunications and Sound Engineering. Electronics is fundamental to many things we take for granted today. Everything from mobile phones to aircraft and medical equipment relies on electronics and it is difficult to think of any area of life that has not been affected by developments in electronics. With the knowledge and skills gained in this bachelor program you can work as high-level engineers in the wide field of Electronic Engineering, both in the Netherlands and abroad. This bachelor program leads to the international bachelor degree of Engineering.

Subjects you will study in the first year:

- Programming in C#
- Mathematics
- Analogue and digital design
- Control systems PLC
- Constructions & Mechanics
- Modelling, Measuring and Simulation
- Embedded systems
- Project management and communication skills

Professional career after graduation:

Your future career opportunities are excellent. You may think of careers in the (car) industry in companies like Philips and ASML but also engineering jobs in hospitals, the air force and army, lighting and audio companies and even the theater world.
Examples of possible professions are:

- electronic designer
- product engineer
- researcher in Electronics
- project leader
- home automation designer
- hardware specialist

Engineering Physics

Program in brief

Do you know what makes physics so exciting? Do you want to understand natural phenomenon? The 4-years English taught bachelor program in Engineering Physics offers you an education that combines physics with the latest developments and applications in technology. The program is based on the understanding and use of all kinds of physical laws in the field of light, sound, heat, magnetism and electricity.

Subjects you will study in the first year:

- Mathematics
- Optics
- Thermodynamics
- Control theory
- Physical chemistry
- Transport physics
- Quantum mechanics

Professional career after graduation:

Engineering Physics graduates work in research, a product development department, in laboratory automation, in medical technology or ICT. Also, process control and technical automation are possible fields of work. There are a number of opportunities for employment for bachelor graduates in Engineering Physics. The financial sector, for example, considers physics engineers for entry-level positions in quantitative research and developing models for financial analysis. In general positions in computer programming will be given to physics engineers if the programs being developed require technical knowledge in some areas of physics. Medical physics is a large field that includes radiation safety officers and physicists who calculate radiation doses for cancer treatment. Physics engineers also calibrate and test equipment for ultrasound, x-ray, magnetic resonance and radio-isotope imaging. Physicists also work in the manufacturing of medical diagnostic and therapeutic equipment, as well as high tech industries such as aerospace, telecommunications, semi-conductors and computer manufacturing.

Professional career after graduation:
Mechanical Engineering graduates can work in many sectors. Often you will work in the field of design and engineering or research and development. Also, production and automation of energy and environmental technology are interesting fields for you. Think of the following positions :

- Mechanical designer
- Researcher
- Maintenance Engineer
- Constructor
- Planner
- Product Engineer
- Process Engineer
- Entrepreneur

Mechanical Engineering

Program in brief

The English taught 4-years bachelor program in Mechanical Engineering has a strong focus on the design and construction of machines and devices. From oil rigs to the plastics industry, from pythons in amusement parks to devices and machines, everywhere you will meet mechanical engineers. He or she is an all-rounder with a technical background. A designer who also knows how processes work. Mechanical engineers focus on designing, making and placing of equipment, installations and machinery. They make things "better". Do you want to make for example a machine more energy efficient? Or ensure that a production process produces less waste? With mechanical Engineering you are going to make it! The bachelor program in Mechanical Engineering leads to the international degree of Bachelor of Engineering. Subjects you will study in the first year:

- Construction and mechanics
- Mathematics
- Physics
- Measurement
- Control and modelling
- Practical technical skills (like milling, welding and turning)
- CAD/CAM including working with 3D equipment
- Communication techniques and projects

How will you get lessons?

Hours that you will spend weekly:

Self study + projects + internships:	50%	20 hours for classes
Theory:	25%	20 hours for projects and self study
Practicals:	25%	

What can you expect from us?

The Fontys Technology & Business Bachelors have a focus on higher professional university training based on a strong theoretical foundation. Teaching is done by using different methods: theory and practical classes, lectures, laboratory assignments but also doing applied science projects and self-study activities. For all programs you can have an influence on your own content and planning of your study. A study counsellor will help you in making the right decisions.

What do we expect from you?

As a future engineer you are able to work in teams. In other words: you are a real team-player. Moreover you need to understand how to use high-tech knowledge in real-time situations. That's why theory classes are always supported by practical assignments. As a student you also search for additional knowledge and skills to improve your own development. This requires a high sense of responsibility, a high level of analytical thinking and leadership qualities. It goes without saying that your communication skills and level of English are excellent.

Fontys within top 5 in Dutch university rankings

The "Keuzegids"(Dutch Study selection guide) is an independent guide and ranking that aims at critically assessing and comparing the quality of Dutch universities. In general, Keuzegids is considered the most prestigious ranking in the Netherlands. With a score of 62.5 Fontys ranks among the best four large universities of applied sciences in the Netherlands. Additionally, all study programs itself were assessed. Here, Fontys managed to score above-average in the study fields of Engineering, ICT, Logistics, Business Administration and Management.

The Bachelor-Master structure

The Fontys Technology and Business bachelor programs are practical-based university programs (applied sciences). You develop excellent professional skills and you acquire the knowledge you need for your future profession. The majority of graduated bachelors join the labour market especially in the "Brainport region". However, further study in a master program – either in the Netherlands or abroad – is another possibility.

Scholarships

Fontys Technology and Business bachelor programs offer (partial) scholarships (for non-EU students) and loan options (for EU students). For more information and conditions please visit our website.

Application procedure

Please visit our website, choose your favourite study field and follow the application procedure.

Tuition fees

Tuition fees for students starting
Sept. 2014
EU: € 1906
Non-EU: € 6000

Study Costs

All-in insurance: € 442 (annually)
Housing: € 4000 (annually)
Visa & residence permit (for non-EU): € 300 (single)

10 reasons to study at Fontys Technology and Business bachelors

1. Smart Region

The South-East of the Netherlands is internationally known as Brainport Region; a centre of science and technology.
More information about Brainport Region is available on www.intelligentcommunity.org

2. We'll find you a home

Fontys will help you finding a place to live. Most of the international students live in a house together with other students, a so-called 'student house'. You rent your own room in the student house. Usually, you share a kitchen and a bathroom together with other students.

3. Perfect start for your career

Fontys is the only University of Applied Sciences which offers English taught bachelor programs in Technology in the Brainport region. There is a great choice of technology companies for doing internships and sufficient vacancies to start up your career.

4. Great accessibility

Eindhoven is the fifth largest city in The Netherlands. There are good transportation facilities by car, train and plane.

5. Live in attractive cities

Eindhoven has pleasant, friendly streets, beautiful parks, a lively and attractive centre and cultural and sporting activities of international standing.

6. Lots of sports facilities

Fontys Eindhoven offers its students a lot of sports facilities like swimming, fitness, squash etc. You can become a member at the Eindhoven University of Technology (TU/e) Sports campus for a student friendly fee.

7. Work everywhere you want

Fontys Eindhoven campus is equipped with computer rooms, library and a student restaurant. Wireless internet is available throughout the campus, enabling you to bring your laptop and work, study, search for information and check your email wherever you want.

8. Student Association

The Fontys Engineering Students' Association INNOVUM gives international students at Fontys important first-hand information about the dynamic organisation that Fontys is. The goal of INNOVUM is ensuring the social well-being and rights of the international students.

9. Best equipped

Fontys Eindhoven Campus has the best equipped laboratories from all universities of applied sciences in the Netherlands.

10. Prepares you for real life situations

At Fontys, teaching is geared towards developments in society and in the labour market. The Bachelor programs are highly practically orientated. During your programme, you will complete two internships, in which you must prove that you can adequately analyse, tackle and solve problems.

More information

Come and visit us: we offer you the opportunity to meet us for a personal consultation or Open Days. During this consultation you have the possibility to ask any kind of questions you might have. It is also possible to be a "student for a day" where you will have the chance to get a feeling of what is to be part of us. Feel free to contact us if you have any questions.

Visit our website for more information and for the complete program

www.fontys.edu/TechnologyandBusiness

Fontys Technology and Business bachelors

Postal address
P.O. Box 347
5600 AH Eindhoven

Tel +31 8850 78127
or +31 8850 78347

campuseindhoven@fontys.nl
www.fontys.edu/TechnologyandBusiness

Facebook.com/
fontystechnologyandbusinessbachelors

43.M.4641.01.14

Colophon **This is a publication of:** Fontys University of Applied Sciences, september 2014. **Layout:** Grafische Producties Fontys University of Applied Sciences. **Photography:** Hein Gijsbers, Ionut Andrei Coman.