Exchange Programmes <u>Fall semester 2021/2022</u> in <u>Engineering</u> offered by

Fontys University of Applied Sciences

Eindhoven, The Netherlands

Fontys University of Applied Sciences is a conglomerate of institutes of higher university education. It has more than 36,000 students. Fontys stands for craftsmanship, the ultimate combination of theory and practical experience. Fontys offers more than 200 bachelor and master programmes at higher professional education level, in various sectors.

Location Eindhoven
The English courses Engineering are situated within the modern education complex in Eindhoven, a suburban city in the South of the Netherlands and gateway to Europe. Eindhoven can easily be reached by car, has its own airport and of course a railway system.
Eindhoven Brainport with its High Tech Campus is developing into an international paradise for innovative research. High tech companies like Philips, ASML, VanderLande, NXP,DAF and many more are home-based in the region of Eindhoven, the Silicon Valley of the Netherlands.

Information on the Programs
• Exchange semester has a maximum study load of 30 credits (EC).
1 credit has a workload of 28 hours.
• It is possible to choose less credits in consultation with the home university
• Some programs are scheduled with reservation of sufficient applications
• **It is NOT possible to mix modules from different programs.**

Application procedure
Please visit our website
http://fontys.edu/Short-term-programmes/Exchange-programmes/Exchange-programmes/Engineering.htm

Accommodation
Fontys University will support international Exchange students who need help in finding accommodation.

Admission requirements
We rely on our partner institutions and academic programme directors to ensure that students coming to study at Fontys have a sufficient level of English to cope in an academic environment. If any students level of English is considered (by their host tutors) to be inadequate, they may be asked to return home. We would like to be sure that students spending time at Fontys will derive genuine academic benefits from their study abroad period, so a reasonable competency in English is imperative for this very reason. Students from non-EER countries need to supply us with an IELTS 6.0 or TOEFL 550 document.

Study costs
Erasmus Exchange students are exempted from paying tuition fees.
For accommodation (approximately) 2.250 euro needs to be reserved. Students are expected to have a laptop running Windows 10. An extra amount of about 150 Euro needs to be reserved for books, readers and possibly supporting equipment.

Erasmus
For students from Europe Erasmus grants could be available. Students should apply for these grants at the university in their own country.

Exchange Programmes Engineering
FALL SEMESTER
August 2020 – February 2021

			Required background
Electrical and Electronic Engineering S3	Code	EC	2 years study Elec Engineering
Mandatory part of the program			
Analog Design 3	EXEEAAD3 (S3)	4	
Embedded Systems	EXEEAES (S3)	5	
Control Theory 1	EXEEACT1 (S3)	5	
Fields, Energy & Conversion	EXEEAFEC (S3)	5	
System Engineering 3	EXEEASEN3 (S3)	2	
Communication 3	EXEEACOM3 (S3)	2	
EXPO: industrial projects (2)	EXEEAPROJ4 &	4	
	EXEEAPROJ5 (S3)	3	

			Required background
Electrical and Electronic Engineering S7 – Embedded Systems	Code	EC	3 years study Electrical & Electronic Engineering
Mandatory part of the program[1]			
Advanced Telecom / IoT	EBATEL/IoT (S7)	**4**	
Advanced Embedded Systems	EBAES (S7)	**4**	
Advanced Control Systems (1) or	EBACS (S7) or	**4**	
Sensor Technology (1)	EBST (S7)	**4**	
Digital System Design (2) or	EADSD (S7) or	**4**	
Advanced Power Electronics (2)	EAAPE (S7)	**4**	
Model-Based System Engineering	EBMBSE	**2**	
Electromagnetic Compatibility 7	MAEMC7	**2**	
Project S7	EAPRS7	**10**	

[1] This program consists of 30 ECTS. As the project is integrated with the courses provided in this program, the student must follow all mandatory courses (EBATEL/IoT, EBAES, EBMBSE and MAEMC7) and choose two elective courses. Please note that for the elective courses, EBACS and EBST are given simultaneously and you can only choose one. Similarly, EADSD and EAAPE are given simultaneously and you can only choose one.

			Required background
Electrical and Electronic Engineering S7 – Electronic Systems	Code	EC	3 years study Electrical & Electronic Engineering
Mandatory part of the program[2]			
Sensor Technology	EBST (S7)	**4**	
Advanced Power Electronics	EAAPE (S7)	**4**	
Advanced Control Systems (1) or	EBACS (S7)	**4**	
Advanced Embedded Systems (1)	EBAES (S7)	**4**	
Digital System Design (2) or	EADSD (S7)	**4**	
Advanced Telecom / IoT (2)	EBATEL/IoT (S7)	**4**	
Model-Based System Engineering	EBMBSE	**2**	
Electromagnetic Compatibility 7	MAEMC7	**2**	
Project S7	EAPRS7	**10**	

[2] This program consists of 30 ECTS. As the project is integrated with the courses provided in this program, the student must follow all mandatory courses (EBST, EAAPE, EBMBSE and MAEMC7) and choose two elective

courses. Please note that for the elective courses, EBACS and EBAES are given simultaneously and you can only choose one. Similarly, EADSD and EBATEL/IoT are given simultaneously and you can only choose one.

Required background

Mechatronics Engineering S7 – Advanced Motion Control	Code	EC	3 years study Mechatronis Engineering
Mandatory part of the program[1]			
Advanced Control Engineering 7	MAACE7 (S7)	4	
Dynamic Modelling & Design 7	MADMD7 (S7)	4	
Observers 7	MAOBS7 (S7)	4	
Electromagnetic Compatibility 7	MAEMC7 (S7)	2	
Advanced Embedded Systems 7	MBAES7 (S7)	4	
System Engineering 7	MBSYE7 (S7)	2	
Project S7	MAPRS7	10	

Mechatronics Engineering S7 – Adaptive Automation Systems	Code	EC	3 years study Mechatronis Engineering
Mandatory part of the program[1]			
Mechatronic Systems 7	MBMSY7 (S7)	4	
Design for Adaptive Manufacturing 7	MBDAM7 (S7)	4	
Autonomous and Intelligent Systems 7	MBAIS7 (S7)	4	
Electromagnetic Compatibility 7	MAEMC7 (S7)	2	
Advanced Embedded Systems 7	MBAES7 (S7)	4	
System Engineering 7	MBSYE7 (S7)	2	
Project S7	MAPRS7	10	

Mechanical Engineering S3	Code	EC	2 years study Elec Engineering
Mandatory part of the program			
Selection of Engineering Materials	MEAPM2 (S3)	5	
Introduction Energy Theory & Fluid Mechanics	EXMEBEP1 (S3)	5	
Dynamics	EXMEACM3 (S3)	4	
Modelling & Simulation	EXMEAMS (S3)	5	
Dynamic Behaviour of Systems	EXMEADG1 (S3)	5	
Project and Professionalization	PP4P (S3)	6	

Mechanical Engineering S7 – Precision Engineering	Code	EC	3 years study Elec Engineering
Mandatory part of the program			
Design Principles for Precision	WACM5 (S7)	4	
Production and Materials for Precision	WAPM13 (S7)	4	
Dynamic Behaviour of High-Tech System	WADG2 (S7)	4	
Finite Element Methods (FEM)	WACM10 (S7)	4	
System Engineering	WASYE7 (S7)	2	
Design for Excellence	WADFX (S7)	2	
Project S7	WAPRS7	10	

Minor EmbraceTEC	EC	2 years study bachelor level
Mandatory part of the program		
Integrated programme of workshops, group work, coaching, and assessment	30	