# Exchange Programs Spring semester 2021/2022 in Engineering 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 programs 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, Oce, 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/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 program 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 7 or 10. An extra amount of about 150 Euro needs to be reserved for books, readers.

**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
# SPRING SEMESTER
# January/February 2022 – July 2022

| | | | Required background |
|---|---|---|---|

| **Electrical and Electronic Engineering S4** | **Code S4** | **EC** | 2 years study Elec Engineering |
|---|---|---|---|
| Mandatory part of the program[1] | | | |
| Telecommunications 1 | TEL1 | **3** | |
| Digital Design 3 | DD2 | **5** | |
| Embedded Connectivity | EMBC | **5** | |
| Analog Electronics 4 | AEN4 | **3** | |
| Signal Processing | SP1 | **4** | |
| EXPO: industrial projects (2) | PROJ6 & PROJ7 | **6** | |
| Optional subject to complete the program (select one of the following three courses): | | | |
| Electromagnetic Compatibility | EMC | **4** | |
| Business Economics | HE4 | **4** | |
| Customer Oriented Innovation | HE20 | **4** | |

| **Mechanical Engineering General** | **Code S4** | **EC** | 2 years study Mechanical Engineering |
|---|---|---|---|
| Mandatory part of the program | | | |
| Customer Oriented Innovation (S6) | EXHE20 | **5** | |
| Machine Elements (S4) | EXMEACM4 | **5** | |
| Applied Thermodynamics (S4) | EXMEAEP3 | **5** | |
| Forming, DoE and AM (S4) | EXMEAPM3 | **5** | |
| Project Integrated Product Development (S6) | EXMEAHE6P (IPD) | **10** | |

| **Mechatronics Engineering S4** | **Code S4** | **EC** | 2 years study Mechatronics Engineering |
|---|---|---|---|
| Motion Control: | | | |
| Dynamic Design | | | |
| Motion Design for Optimal Dynamic Behaviour | MDB4 | **5** | |
| Dynamic Design Criteria 4 | DDC4 | **3** | |
| Electrical Drive Systems 4 | EDS4 | **3** | |
| | | | |
| Applied Control Design | | | |
| Dynamic Feedback Control | DFC4 | **3** | |
| Real Time Systems 4 | RTS4 | **4** | |
| Graphical Software Engineering 2 | GIS2 | **3** | |
| | | **3** | |
| Mathematics options between: | ALA4 | | |
| Applied Linear Algebra 4 | AST4 | | |
| Applied Statistics 4 | AMA4 | | |
| Applied Mathematical Algorithms 4 | | | |
| | | | |
| Mandatory part of the program | | | |
| EXPO3: industrial project | EXPO3 | **3** | |
| | | | |
| EXPO 4: industrial project | EXPO4 | **3** | |

| Engineering minor | Code S6 | EC | 3 years study Elec Engineering |
|---|---|---|---|
| **Mandatory part of the program** | | | |
| Project Integrated Product Development | IPD | **10** | |
| **Optional subjects:** | | | |
| System Identification | SI | **4** | |
| Small Signal Audio Design | SSD | **4** | |
| Electromagnetic Compatibility | EMC | **4** | |
| Vision | VSN6 | **4** | |
| Customer Oriented Innovation | HE20 | **4** | |
| Business Economics | HE4 | **4** | |
| Lean | PM10 | **4** | |

| EmbraceTEC Minor | Code S6 | EC | 2 years study bachelor level |
|---|---|---|---|
| **Mandatory part of the program** | | | |
| Integrated programme of workshops (on 3D Printing and related topics), group work, coaching, and assessment | | 30 | |

| Be Creative Minor | Code S6 | EC | 3 years study bachelor level |
|---|---|---|---|
| **Mandatory part of the program** | | | |
| Integrated programme of workshops (on request based on topic or skill), group work, coaching, and assessment | | 30 | |

| Adaptive Robotics Minor | Code S6 | EC | 3 years study bachelor level |
|---|---|---|---|
| **Mandatory part of the program** | | | |
| Integrated programme of workshops (on request based on topic or skill), group work, coaching, and assessment | | 30 | |

[1] The (mandatory part of the) program consists of 30 ECTS. It is allowed to compose an individual program with less courses (and hence less ECTS) if your home university allows you to have less credits. The only exception holds for EXPO: Industrial Projects and Project Integrated Product Development in the Mechanical Engineering General program and Engineering Minor as it is mandatory for all exchange students to participate in this project. It is not possible to combine courses of different programs.