

# TU Delft courses available in English to incoming exchange students

## Academic year 2021-2022

The following document contains the courses taught in English for exchange students. The most recent course information can be found at [www.studyguide.tudelft.nl](http://www.studyguide.tudelft.nl). In the case of conflicting information, the study guide is leading. The document serves only as an indication; no rights can be derived from this list. This list is subject to change without notice.

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# Course Selection Guidelines

You must take the majority of your courses at the faculty you apply to for an exchange. The minimum course load is 24 ECTS for a semester or 48 ECTS for a full year.

A typical course load is 30 ECTS per semester or 60 ECTS for a full year. Divide the selected credits evenly over the 2 or 4 periods of your exchange.

Less than 24 EC is not acceptable, even if allowed by your home university. Further instructions on course selection be found [here](#).

At TU Delft the academic year has been divided into four periods.

Periods 1 and 2 correspond to the fall semester, periods 3 and 4 correspond to the spring semester.

The section "period" will be followed by Q (quarter). Some faculties divide the year in 8 periods of education.

In this case, "period" will be joined by an O (octal), which is half of a quarter.

It is highly recommended to choose from amongst courses that evenly distribute the workload over one semester. The advisable study load is 12-15 EC per quarter.

We expect students to carefully prepare a study plan according to our guidelines and have it approved by the home institution as soon as possible to make sure the choices are available in the semester desired. The study plan is a crucial factor whether students will be accepted or not.

A few faculties offer fixed course packages and have course restrictions which students need to consider when selecting their courses. The restrictions are outlined on the requirement tab of the [exchange webpage](#) under **faculty specific**.

## **Minor**

A minor is a well-rounded package of courses on one main topic.

In the first semester of the 3rd year all TU Delft BSc students choose a Minor.

BSc students who come to TU Delft in the Autumn semester during their BSc phase or third year of their studies can choose a minor package. The advantage is that they will not encounter scheduling problems and will work together with other (Dutch) students in a group. Some of the courses in the minor programmes can be taken separately.

# Faculty of Aerospace Engineering

## English BSc and MSc courses available for exchange students

| Bachelor 1st year |  |      |    |            |
|-------------------|--|------|----|------------|
| Course Code       | Course Name                                  | Cat. | EC | Period (Q) |
| AE1108-I          | Aerospace Materials                          | BSc  | 3  | 2          |
| AE1108-II         | Aerospace Mechanics of Materials             | BSc  | 3  | 3          |
| AE1110-I          | Introduction to Aerospace Engineering I      | BSc  | 5  | 1          |
| AE1110-II         | Introduction to Aerospace Engineering II     | BSc  | 4  | 2          |
| AE1130-I          | Statics                                      | BSc  | 4  | 1          |
| AE1130-II         | Dynamics                                     | BSc  | 3  | 2          |
| AE1205            | Programming & Scientific Computing in Python | BSc  | 2  | 4          |
| AE1240-I          | Thermodynamics                               | BSc  | 3  | 3          |
| AE1240-II         | Waves and Electromagnetism                   | BSc  | 3  | 4          |
| WI1402LR          | Calculus II                                  | BSc  | 5  | 3          |
| WI1403LR          | Linear Algebra                               | BSc  | 5  | 4          |
| WI1421LR          | Calculus I                                   | BSc  | 6  | 1,2        |

| Bachelor 2nd year |   |      |    |            |
|-------------------|---|------|----|------------|
| Course Code       | Course Name                             | Cat. | EC | Period (Q) |
| AE2130-I          | Aerodynamics I                          | BSc  | 3  | 1          |
| AE2130-III        | Aerodynamics II                         | BSc  | 3  | 2          |
| AE2135-I          | Structural Analysis and Design          | BSc  | 5  | 2          |
| AE2135-II         | Vibrations                              | BSc  | 3  | 2          |
| AE2220-I          | Applied Numerical Analysis              | BSc  | 3  | 3          |
| AE2220-II         | Computational Modelling                 | BSc  | 3  | 4          |
| AE2223-II         | Experimental Research and Data Analysis | BSc  | 3  | 3          |
| AE2230-I          | Flight and Orbital Mechanics            | BSc  | 4  | 3          |
| AE2230-II         | Propulsion and Power                    | BSc  | 4  | 3          |
| AE2235-I          | Aerospace Systems and Control Theory    | BSc  | 4  | 4          |
| AE2235-II         | Instrumentation and Signals             | BSc  | 3  | 4          |
| WI2180LR-I        | Differential Equations                  | BSc  | 4  | 1          |
| WI2180LR-II       | Probability and Statistics              | BSc  | 4  | 1          |

| Bachelor 3rd year major |  |      |    |            |
|-------------------------|--|------|----|------------|
| Course Code             | Course Name  | Cat. | EC | Period (Q) |
| AE3211-I                | Systems Engineering & Aerospace Design   | Bsc  | 3  | 3          |
| AE3211-II               | Production of Aerospace Systems  | BSc  | 3  | 3          |
| AE3212-I                | Aerospace Flight Dynamics and Simulation <b>EXCL.</b><br>Test Flight for Exchange students | Bsc  | 5  | 3          |

| Minor Offshore Wind Energy  |   |       |    |            |
|---|---|-------|----|------------|
| Limited places available, please first contact <a href="mailto:exchange-ae@tudelft.nl">exchange-ae@tudelft.nl</a> |   |       |    |            |
| Course Code   | Course Name                             | Cat.  | EC | Period (Q) |
| AE3516A   | Fundamentals of Wind Energy I           | Minor | 3  | 1          |
| AE3516B   | Fundamentals of Wind Energy II          | Minor | 3  | 2          |
| AE3512-20   | Asset Management                        | Minor | 5  | 2          |
| AE3513  | Integration Assignment                  | Minor | 6  | 2          |
| CT3101  | Project Management Basics               | Minor | 5  | 1          |
| TBM024A   | Introduction to Energy systems          | Minor | 5  | 1          |
| AE3515  | Basics of Aeroacoustics for Wind Energy | Minor | 3  | 2          |

| <b>Minor Airport Development</b>  |   |       |    |            |
|---|---|-------|----|------------|
| Limited places available, please first contact <a href="mailto:exchange-ae@tudelft.nl">exchange-ae@tudelft.nl</a> |   |       |    |            |
| Course Code   | Course Name                             | Cat.  | EC | Period (Q) |
| AE3501-19   | Air Transportation                      | Minor | 3  | 1          |
| AE3502-14   | Airport Planning, Design and Operations | Minor | 4  | 1          |
| AE3503*   | Strategic Planning for Airport Systems  | Minor | 6  | 2          |
| TB241TA   | Logistics 2                             | Minor | 5  | 1          |
| CT3080LR  | Landside Accessibility of Airports      | Minor | 6  | 1          |
| IO3818  | Designing an Airport                    | Minor | 6  | 2          |

\*very limited places, course cannot be taken individually

| <b>MSc Aerospace Engineering Profile courses (all tracks)</b>   |   |      |    |            |
|---|---|------|----|------------|
| Courses from the MSc Spaceflight ( <b>AE48XX and AE4SXX</b> ) are only open to Exchange students from the faculty of Aerospace Engineering! |   |      |    |            |
| Course Code   | Course Name   | Cat. | EC | Period (Q) |
| AE4115  | Experimental Simulations                              | MSc  | 3  | 2          |
| AE4120  | Viscous Flows   | MSc  | 3  | 2          |
| AE4130  | Aircraft Aerodynamics                                 | MSc  | 3  | 1,2        |
| AE4135  | Rotor/wake Aerodynamics                               | MSc  | 4  | 3,4        |
| AE4136  | CFD 2: Discretization Techniques                      | MSc  | 2  | 2          |
| AE4140  | Gas Dynamics  | MSc  | 3  | 1          |
| AE4180  | Flow Measurement Techniques                           | MSc  | 3  | 3,4        |
| AE4202  | CFD for Aerospace Engineers                           | MSc  | 3  | 1          |
| AE4W02TU  | Introduction to Wind Turbines: Physics and Technology | MSc  | 4  | 2          |
| AE4W21-14   | Wind Turbine Aeroelasticity                           | MSc  | 2  | 4          |
| AE4T40  | Airborne Wind Energy                                  | MSc  | 3  | 1,2        |
| AE4W09  | Wind Turbine Design                                   | MSc  | 5  | 3,4        |
| AE4W13  | Site Conditions for Wind Turbine Design               | MSc  | 3  | 3,4        |
| AE4204  | Knowledge Based Engineering                           | MSc  | 4  | 3          |
| AE4205  | MDO for Aerospace Applications                        | MSc  | 4  | 1          |
| AE4206  | Turbomachinery  | MSc  | 3  | 3          |
| AE4238  | Aero Engine Technology                                | MSc  | 4  | 1,2        |
| AE4240  | Advanced Aircraft Design I                            | MSc  | 4  | 1          |
| AE4261  | Internal Flows  | MSc  | 3  | 2          |
| AE4262  | Combustion for Propulsion and Power Technologies      | MSc  | 4  | 3          |
| AE4263  | Modelling, Simulation and Applications of P&P Systems | MSc  | 5  | 2,3        |
| AE4301  | Automatic Flight Control Systems Design               | MSc  | 3  | 1          |
| AE4301P   | Exercise Automatic Flight Control System Design       | MSc  | 1  | 2          |
| AE4302  | Avionics and Operations                               | MSc  | 3  | 2          |
| AE4304  | Stochastic Aerospace Systems                          | MSc  | 3  | 2          |
| AE4304P   | Stochastic Aerospace Systems Practical                | MSc  | 1  | 3          |
| AE4316  | Aerospace Human-Machine Systems                       | MSc  | 4  | 2          |
| AE4322  | Piloted Flight Simulation                             | MSc  | 4  | 3          |
| AE4422-20   | Agent-based Modelling and Simulation in Air Transport | MSc  | 4  | 1          |
| AE4423-20   | Airline Planning and Operations                       | MSc  | 4  | 2          |
| AE4426-19   | Stochastic Processes and Simulations                  | MSc  | 4  | 2          |
| AE4431  | Aircraft Noise and Emissions                          | MSc  | 3  | 1          |
| AE4441-16   | Operations Optimisation                               | MSc  | 4  | 1,2        |
| AE4462-17   | Aircraft Emissions and Climate Effects                | MSc  | 4  | 3          |
| AE4463P   | Advanced Aircraft Noise Modelling and Measurement     | MSc  | 3  | 2          |
| AE4465  | Maintenance Modelling & Analysis                      | MSc  | 4  | 3          |

|                                      |  |             |           |               |
|--------------------------------------|--|-------------|-----------|---------------|
| AE4866-1                             | Propagation and Optimization in Astrodynamics                    | MSc         | 5         | 3             |
| AE4868-1                             | Numerical Astrodynamics  | MSc         | 4         | 2             |
| AE4870A                              | Rocket Motion  | MSc         | 3         | 1             |
| AE4870B                              | Re-Entry Systems   | MSc         | 3         | 1             |
| AE4872                               | Satellite Orbit Determination                                    | MSc         | 6         | 1,2           |
| AE4874 I                             | Fundamental of Astrodynamics                                     | MSc         | 4         | 1             |
| AE4876-11                            | Planetary Sciences II  | MSc         | 4         | 3             |
| AE4880                               | Space Instrumentation  | MSc         | 4         | 3             |
| AE4890-11                            | Planetary Sciences I   | MSc         | 4         | 2             |
| AE4S10                               | Microsat Engineering   | MSc         | 4         | 3             |
| AE4S12                               | Space Systems Engineering  | MSc         | 3         | 1,2           |
| AE4S15                               | Space Embedded Systems   | MSc         | 3         | 3             |
| AE4ASM001                            | Design of lightweight structures I: Composites & Metals          | MSc         | 3         | 1             |
| AE4ASM002                            | Designing Materials with Aerospace Specific Properties           | MSc         | 3         | 1             |
| AE4ASM004                            | Manufacturing of Aerospace Structures & Materials                | MSc         | 3         | 1             |
| AE4ASM005                            | Fatigue of Structures & Materials                                | MSc         | 3         | 1             |
| AE4ASM101TU                          | Polymer Science  | MSc         | 5         | 2             |
| AE4ASM103                            | Functional Coatings  | MSc         | 3         | 2             |
| AE4ASM106                            | Stability & Analysis of Structures I                             | MSc         | 3         | 2             |
| AE4ASM108                            | Experimental Techniques & NDT                                    | MSc         | 3         | 2             |
| AE4ASM109                            | Design & Analysis of Composite Structures I                      | MSc         | 5         | 3             |
| AE4ASM110                            | Polymer Composite Manufacturing                                  | MSc         | 3         | 2             |
| AE4ASM506                            | Fundamentals of Aeroelasticity                                   | MSc         | 3         | 3             |
| WM0324LR**                           | Ethics and Engineering for Aerospace Engineering**               | MSc         | 3         | 2 or 3        |
| WI2056LR                             | Systems Theory   | MSc         | 4         | 1             |
| <b>MSc Electives from all tracks</b> |  |             |           |               |
| <b>Code</b>                          | <b>Course Name</b>   | <b>Cat.</b> | <b>EC</b> | <b>Period</b> |
| AE4117                               | Fluid-Structure Interaction                                      | MSc         | 4         | 3             |
| AE4139                               | CFD 3: Large Eddy Simulation                                     | MSc         | 3         | 3             |
| AE4138-18                            | CFD 4: Uncertainty Quantification                                | MSc         | 3         | 4             |
| AE4143                               | Hypersonic Aerodynamics  | MSc         | 3         | 2,3           |
| AE4260A                              | Fundamentals of Aeroacoustics                                    | MSc         | 2         | 2             |
| AE4260B                              | Experimental Applications of Aeroacoustics                       | MSc         | 2         | 2             |
| AE4W30                               | Wind Resource and Wind Farm Yield                                | MSc         | 4         | 1,2           |
| AE4245                               | Advanced Aircraft Design II                                      | MSc         | 4         | 3             |
| AE4270                               | Control and Operations Project (track 2 elective)                | MSc         | 4         | 1             |
| AE4311                               | Nonlinear and Adaptive Flight Control                            | MSc         | 4         | 4             |
| AE4311                               | Nonlinear and Adaptive Flight Control                            | MSc         | 4         | 4             |
| AE4314-21                            | Helicopter Performance, Stability and Control                    | MSc         | 4         | 3             |
| AE4317                               | Autonomous Flight of Micro Air Vehicles                          | MSc         | 4         | 3             |
| AE4320                               | System Identification of Aerospace Vehicles                      | MSc         | 4         | 3             |
| AE4321-15                            | Air Traffic Management   | MSc         | 4         | 2,3           |
| AE4323                               | Real-time Distributed Flight and Space Simulation                | MSc         | 3         | 4             |
| AE4350                               | Bio-inspired Intelligence and learning for Aerospace Application | MSc         | 3         | 4             |
| AE4446                               | Airport Operations   | MSc         | 4         | 3             |
| AE4889                               | Special Topics in Astrodynamics                                  | MSc         | 2         | 3             |
| AE4S07                               | Micropropulsion  | MSc         | 4         | 1,2,3,4       |
| AE4ASM503                            | Sheet Metal Forming  | MSc         | 3         | 3             |
| AE4ASM504                            | Structural Integrity and Maintenance                             | MSc         | 3         | 3             |
| AE4ASM508                            | Design of Self-healing materials                                 | MSc         | 3         | 3             |

|  |   |             |           |               |
|--|---|-------------|-----------|---------------|
| AE4ASM510  | Design & Analysis of Composite Structures II      | MSc         | 3         | 4             |
| AE4ASM511  | Stability & Analysis of Structures II             | MSc         | 3         | 3             |
| AE4ASM515  | Materials Characterization                        | MSc         | 3         | 4             |
| AE4ASM516  | Material Selection for Mechanical Design          | MSc         | 3         | 4             |
| AE4ASM520  | Industrial Composite Manufacturing                | MSc         | 3         | 4             |
| AE4ASM521  | Additive Manufacturing                            | MSc         | 3         | 3             |
| AE4ASM522  | Applied Aircraft Aeroelasticity                   | MSc         | 3         | 4             |
| AE4ASM523  | Design of Spacecraft and Launcher Structures      | MSc         | 3         | 3             |
| AE4ASM514TU  | Continuum Mechanics                               | MSc         | 4         | 3             |
| AE4313-20  | Spacecraft attitude Dynamics and control          | MSc         | 4         | 3             |
| AE4323   | Real-time Distributed Flight and Space Simulation | MSc         | 3         | 4             |
| AE4462-17  | Aircraft Emissions and Climate Effects            | MSc         | 4         | 3             |
| <b>MSc courses at another TU Delft faculty strongly related to Aerospace</b> |   |             |           |               |
| <b>Code</b>  | <b>Course Name</b>                                | <b>Cat.</b> | <b>EC</b> | <b>Period</b> |
| CIE4601  | Physics of the Earth and Atmosphere               | MSc         | 5         | 1             |
| CS4240   | Deep Learning                                     | MSc         | 5         | 3             |
| ET3604LR   | Electronic Circuits                               | BSc         | 3         | 1             |
| ET4117   | Electrical Machines Drives                        | MSc         | 4         | 2             |
| ME45001  | Advanced Heat Transfer                            | MSc         | 4         | 1             |
| ME45025  | Introduction to Multiphase Flow                   | MSc         | 5         | 3,4           |
| ME45030  | Turbulence  | MSc         | 5         | 3,4           |
| ME46060  | Engineering Optimization: Concept and Application | MSc         | 3         | 4             |
| MS43310  | Materials at High Temperature                     | MSc         | 4         | 4             |
| OE44120  | Offshore Windfarm Design                          | MSc         | 4         | 3             |
| WI4007TU   | Fourier and Laplace Transform                     | MSc         | 4         | 3             |
| WI4014TU   | Numerical Analysis                                | MSc         | 6         | 1,2           |
| WI4019   | Non-linear Differential Equations                 | MSc         | 6         | 3,4           |
| WI3150TU   | Partial Differential Equations A                  | MSc         | 3         | 1             |
| WI4011-17  | Computational Fluid Dynamics                      | MSc         | 6         | 1,2           |
| WI4771TU   | Object oriented scientific programming with C++   | MSc         | 3         | 2             |
| AP3032G  | Continuum Physics                                 | MSc         | 6         | 1,2           |
| IN4049TU   | Introduction to High Performance Computing        | MSc         | 6         | 1,2           |
| WI3151TU   | Partial Differential Equation B                   | MSc         | 3         | 2             |
| WI4201   | Scientific Computing                              | MSc         | 6         | 1,2           |
| WI4212   | Advanced Numerical Methods                        | MSc         | 6         | 3,4           |
| IN4393   | Computer Vision                                   | MSc         | 5         | 3             |
| SC42035  | Integration Project Systems and Control           | MSc         | 5         | 4             |
| SC42050  | Knowledge-Based Control Systems                   | MSc         | 4         | 3             |
| SET3085  | Hydrogen Technology                               | MSc         | 4         | 4             |

**REMARKS:**

- \* Please inform us at [exchange-ae@tudelft.nl](mailto:exchange-ae@tudelft.nl) if you are taking this course
- \*\* This course can be taken in period 2 or 3, course only lasts 1 period.
- \*\*\* MSc Aerospace Engineering Exchange students only

**Important:**

BSc students can take MSc courses as long as they meet the pre-requisites as stated in the course description of the TU Delft study guide.

Please note that the following courses (projects) are **NOT** available for Exchange Students:

| Course Code | Course Name   |
|-------------|---|
| AE1111-I    | Exploring Aerospace Engineering   |
| AE1111-II   | Engineering Drawing   |
| AE1222-I    | Design and Construction   |
| AE1222-II   | Aerospace Design & Systems Engineering Elements                                     |
| AE2111-I    | Systems Design  |
| AE2130-II   | Low-Speed Wind tunnel Test  |
| AE2223-I    | Test, Analysis & Simulation   |
| AE3212-II   | Simulation, Verification & Validation   |
| AE3200      | Design Synthesis  |
| AE4ASM003   | Linear Modelling incl. (F.E.M)  |
| AE4ASM105   | Trinity Exercise  |
| AE4ASM505   | Non-Linear Modelling (using F.E.M.)   |
| AE4ASM513   | Forensic Engineering  |
| AE4ASM517   | Aircraft Manufacturing Laboratory   |
| AE4ASM524   | Advanced Design, Development and Verification of Spacecraft and Launcher structures |
| AE4010      | Research Methodologies  |
| AE4020      | Literature Study  |
| AE5050      | Internship  |
| AE5110      | Thesis Aerodynamics & Wind Energy   |
| AE5310      | Thesis Control & Operations   |
| AE5810      | Thesis Space  |
| AE5711      | Thesis Aerospace Structures & Materials   |
| AE5211      | Thesis Flight Performance & Propulsion  |
| AE5912      | Thesis Wind Energy Rotor Design   |
| AE4S01      | Thermal rocket propulsion   |
| AE4S01P     | Exercise Thermal Rocket Propulsion  |
| AE4S20      | Satellite thermal control   |
| AE4S52-21   | Collaborative Space System Design Project   |
| AE4ASM525   | Materials for Space   |
| AE4W31      | Floating Offshore Wind Energy   |

# Faculty of Applied Sciences

Courses in English offered to BSc and MSc exchange students are available on the following webpage:

<https://www.tudelft.nl/en/faculty-of-applied-sciences/education/exchange-students/course-information>

Master's courses are open to Master's students and to Bachelor's students who have completed or almost completed 3 years of study at the moment of application. This figure can be 2 years for Bachelor's students, depending on their academic background.



# Faculty of Architecture and the Built Environment

## Course packages 2021-2022 for EXCHANGE STUDENTS

Within the study exchange programme, the Faculty of Architecture and the Built Environment offers [fixed course packages](#) and [Minor Programmes](#) to incoming exchange students.

During the first semester (autumn), they offer:

- For Master level students complete 'MSc 1' [fixed course packages](#).
- For Bachelor level students English taught [Minor Programmes](#).

During the second semester (spring), they offer:

- For Master Level students a 15 EC MSc2 design course + a course package of 3 elective courses (5 EC each).
- For Bachelor Level students there are NO minor packages offered. BSc/undergraduate students cannot apply for the spring semester.

Please be aware:

- It is not possible to combine courses of different packages or to choose electives, it is, however, possible to do part of a course package as long as you meet the 24 EC requirement.
- It is not allowed to complete Thesis Projects.
- Exchange students at the faculty of Architecture and the Built Environment can only take courses at the Faculty of Architecture and the Built Environment.
- Exchange students from other faculties cannot obtain credits at the Faculty of Architecture and the Built Environment.
- Before the start of the exchange period, the final fixed course package will be confirmed. After the fixed course package is confirmed, it is no longer possible to change or add courses

# Faculty of Civil Engineering and Geosciences

## BSc courses CIE in English available for exchange students

| Head Phase (2nd Year), Specialization Geosciences |                |      |    |            |
|---|----------------|------|----|------------|
| Course Code                                       | Course Name    | Cat. | EC | Period (Q) |
| CTB2310   | Soil Mechanics | BSc  | 5  | 3          |

| Head Phase (3rd Year), All specializations |                     |      |    |            |
|--|---------------------|------|----|------------|
| Course Code                                | Course Name         | Cat. | EC | Period (Q) |
| CTB3310                                    | Surveying & Mapping | BSc  | 4  | 3          |

| Head Phase (3rd Year), Specialization Structural Mechanics |                                   |      |    |            |
|--|-----------------------------------|------|----|------------|
| Course Code  | Course Name                       | Cat. | EC | Period (Q) |
| CTB3330  | Structural Mechanics 4            | BSc  | 4  | 3          |
| CTB3335  | Concrete Structures 2             | BSc  | 4  | 3          |
| CTB3420  | Integral Design of Infrastructure | BSc  | 4  | 4          |

| Head Phase (3rd Year), Specialization Hydraulic Engineering |                        |      |    |            |
|---|------------------------|------|----|------------|
| Course Code   | Course Name            | Cat. | EC | Period (Q) |
| CTB3350   | Open Channel Flow      | BSc  | 4  | 3          |
| CTB3355   | Hydraulic Structures 1 | BSc  | 4  | 3          |

| Head Phase (3rd Year), Specialization Water Management |                                 |      |    |            |
|--|---------------------------------|------|----|------------|
| Course Code  | Course Name                     | Cat. | EC | Period (Q) |
| CTB3360  | Water Control                   | BSc  | 4  | 1,3        |
| CTB3365-16   | Introduction to Water Treatment | BSc  | 4  | 3          |
| CTB3415  | Water Management Research       | BSc  | 4  | 4          |

| Head Phase (3rd Year), Specialization Geosciences |   |      |    |            |
|---|---|------|----|------------|
| Course Code                                       | Course Name                                       | Cat. | EC | Period (Q) |
| CTB3385   | Use of Underground Space                          | BSc  | 4  | 3          |
| CTB3390   | Mechanics and Flow in Pore Media                  | BSc  | 4  | 3          |
| CTB3425-17  | Monitoring and Stability of Dikes and Embankments | BSc  | 4  | 4          |

| Head Phase (3rd Year), Specialization Transport & Planning |  |      |    |            |
|--|--|------|----|------------|
| Course Code  | Course Name                              | Cat. | EC | Period (Q) |
| CTB3370  | Geometrical Design of Roads and Railways | BSc  | 4  | 3          |
| Optional Courses, all specialization                       |  |      |    |            |
| Course Code  | Course Name                              | Cat. | EC | Period (Q) |
| CTB3311  | Climate Impacts and Engineering          | MSc  | 4  | 4          |

\*Very limited place available for exchange students

\*\*Participation depending on student's prior knowledge

Students need to meet the prerequisites of the course as described in the [TU Delft study guide](#).

Faculty specific requirements & restrictions can be found [here](#).

# Faculty of Electrical Engineering, Mathematics and Computer Sciences (EEMCS)

## **BSc: Listed below are all English taught BSc courses at EEMCS available to exchange students.**

All students who come to TU Delft during their BSc level, or are in the first 3 years of their academic career, can only follow BSc courses. You can either choose courses from the regular curriculum or follow a complete minor. A minor is a well-rounded package of courses on one main topic. Individual courses from a minor cannot be followed separately, unless they are mentioned in the normal subject list. Exchange students can only enrol for one of the minors below through the international office of EEMCS.

## **MSc: All MSc courses at TU Delft are offered in English.**

You can find an overview of all MSc courses in the course catalog. Almost all MSc courses are open to exchange students. If there is a limit to the number of students who can follow the course this is indicated in the course catalog. You are responsible to check if you have the pre-required knowledge for the course. Courses in the course catalogue that are taught at different universities are not open to exchange students. You can follow MSc courses, if you are a MSc student or at least in the 4th year of your curriculum.

## **English taught BSc courses available for exchange students**

### **BSc Minors**

#### **Minor Electronics for Robotics (Electrical Engineering)**

<https://www.tudelft.nl/en/eemcs/study/minors/electronics-for-robotics/>

#### **Minor Electrical Sustainable Energy Systems**

<https://www.tudelft.nl/en/eemcs/study/minors/electrical-sustainable-energy-systems/>

#### **Minor Finance**

<https://www.tudelft.nl/en/eemcs/study/minors/finance/>

#### **Minor Physics of Electronics**

<https://www.tudelft.nl/en/eemcs/study/minors/physics-for-electronics/>

#### **Minor Computational Science and Engineering (Applied Mathematics)**

<https://www.tudelft.nl/en/eemcs/study/minors/computational-science-and-engineering/>

| <b>BSc Applied Mathematics</b> |  |             |           |                   |
|--------------------------------|--|-------------|-----------|-------------------|
| <b>Course Code</b>             | <b>Course Name</b>                           | <b>Cat.</b> | <b>EC</b> | <b>Period (Q)</b> |
| Applied Mathematics: 1st year  |  |             |           |                   |
| AM1010                         | Mathematical Structures                      | BSc         | 6         | 1.2               |
| AM1050-A                       | Modelling-A                                  | BSc         | 5         | 3                 |
| AM1050-B                       | Modelling-B                                  | BSc         | 5         | 4                 |
| Applied Mathematics: 2nd year  |  |             |           |                   |
| AM2020                         | Optimization                                 | BSc         | 6         | 2                 |
| AM2050-A                       | Modelling 2A                                 | BSc         | 3         | 3                 |
| AM2050-B                       | Modelling 2B                                 | BSc         | 3         | 4                 |
| AM2080                         | Introduction to Statistics                   | BSc         | 6         | 1                 |
| AM2510                         | Decision Theory                              | BSc         | 6         | 3                 |
| AM2520-P                       | History and philosophy of Mathematics        | BSc         | 6         | 3                 |
| AM2520-H                       | History and philosophy of Mathematics        | BSc         | 6         | 3                 |
| AM2530                         | Systems Theory                               | BSc         | 6         | 3                 |
| AM2550                         | Advanced Statistics                          | BSc         | 6         | 3                 |
| AM2560                         | Applied Mathematics: Codes and Cryptosystems | BSc         | 6         | 3                 |
| AM2570                         | Markov Processes                             | BSc         | 6         | 3                 |

| Applied Mathematics: 3rd year |                              |     |   |   |
|-------------------------------|------------------------------|-----|---|---|
| AM3510                        | Mathematical Physical Models | BSc | 6 | 3 |
| AM3520                        | Logic                        | BSc | 6 | 3 |
| AM3530                        | Numerical Methods 2          | BSc | 6 | 3 |
| AM3550                        | Combinatorial Optimization   | BSc | 6 | 3 |
| AM3560                        | Advanced Probability         | BSc | 6 | 3 |
| AM3570                        | Fourier Analysis             | BSc | 6 | 3 |
| AM3580                        | Differential Geometry        | BSc | 6 | 3 |
| AM3590                        | Topology                     | BSc | 6 | 3 |
| AM3500                        | Mathematics seminar          | BSc | 6 | 3 |

| <b>BSc Computer Science - Only available to BSc Computer Science Students coming to EEMCS</b> |   |      |    |            |
|---|---|------|----|------------|
| Course Code   | Course Name   | Cat. | EC | Period (Q) |
| Computer science: 2nd year  |   |      |    |            |
| CSE2510   | Machine Learning  | BSc  | 5  | 1          |
| CSE2215   | Computer Graphics   | BSc  | 5  | 1          |
| CSE2520   | Big Data Processing   | BSc  | 5  | 1          |
| CSE2310   | Algorithm Design  | BSc  | 5  | 2          |
| CSE2525   | Data Mining   | BSc  | 5  | 2          |
| CSE2120   | Concepts of Programming Languages   | BSc  | 5  | 3          |
| CSE2315   | Automata, Languages and Computability   | BSc  | 5  | 3          |
| CSE2530   | Computational Intelligence  | BSc  | 5  | 3          |
| CSExxxx   | Electives of the third year, several. As they are subject to change, please check the available 5 EC courses in the study guide | BSc  | 5  | 3          |

[https://studiegids.tudelft.nl/a101\\_displayProgram.do?program\\_tree\\_id=25124](https://studiegids.tudelft.nl/a101_displayProgram.do?program_tree_id=25124)

| <b>BSc Electrical Engineering</b> |  |      |    |            |
|-----------------------------------|--|------|----|------------|
| Course Code                       | Course Name                                  | Cat. | EC | Period (Q) |
| Electrical engineering: 2nd year  |  |      |    |            |
| EE2M11                            | Complex Analysis                             | BSc  | 5  | 1          |
| EE2E11                            | Electrical Energy Conversion                 | BSc  | 5  | 1          |
| EE2C11                            | Integrated Circuits                          | BSc  | 5  | 1          |
| EE2M21                            | Linear Algebra and Differential Equations    | BSc  | 5  | 2          |
| EE2S11                            | Signals and Systems                          | BSc  | 5  | 2          |
| EE2S21                            | Systems and Control                          | BSc  | 5  | 3          |
| EE2T11-BP                         | Telecommunications A voor Bridging Programme | BSc  | 3  | 3          |
| EE2E21                            | Sustainable Energy Supply                    | BSc  | 5  | 3          |
| EE2S31                            | Signal Processing                            | BSc  | 5  | 4          |
| EE2T21                            | Telecommunications B                         | BSc  | 5  | 4          |
| Electrical Engineering: 3rd year  |  |      |    |            |
| EE3P11                            | Electromagnetics                             | BSc  | 5  | 3          |
| EE3D11                            | Computer Architecture and Organisation       | BSc  | 5  | 3          |
| EE3C11                            | Electronics                                  | BSc  | 5  | 3          |

REMARKS \* All Courses ending with the same letter (A/B) are taught at the same time

# Faculty of Industrial Design Engineering

## Bachelor courses Faculty of Industrial Design Engineering -

(only available for exchange students enrolled at the faculty of Industrial Design Engineering)

The Faculty of **Industrial Design Engineering** offers fixed course packages. During the application students can indicate their first, second and third choice. Information is available [here](#).

Since we cannot guarantee enrolment in your first choice, it is obligatory to mention a different second choice and a third choice in OSIRIS.

In case you apply for two semesters you only have to choose a package for the first semester.

During the first semester (Fall), :

- For Bachelor level students English taught [Minor Programmes](#).

During the second semester (Spring):

- The programme for Semester 2 exchange students will consist of Design Project 4 – Designing for Society, and 4 electives (2 electives in Q3 and 2 electives in Q4). See full [programme description](#) for the Spring semester.

## Master courses Faculty of Industrial Design Engineering

Within the Faculty of Industrial Design Engineering there are [fixed course packages](#) for incoming master students (or for students who have finished 3 years of education on the moment of application)

### IMPORTANT

- It is not possible to combine courses of different packages or to choose electives, it is, however, possible to do part of a course package as long as you meet the 24 EC requirement.
- It is not allowed to complete Thesis Projects.
- Exchange students from other faculties cannot obtain credits at the Faculty of Industrial Design Engineering.
- Before the start of the exchange period, the final fixed course package will be confirmed. After the fixed course package is confirmed, it is no longer possible to change or add courses and the place in the course package is guaranteed.

# Faculty of Mechanical, Maritime and Materials Engineering

## English taught courses available for exchange students

At the faculty of Mechanical, Maritime and Materials Engineering (3mE) we do not offer English BSc subjects for exchange students. Exchange students (also BSc) can follow any MSc courses from our faculty as long as you have the pre-required background knowledge. In addition exchange students can take up to 49% of the courses at other faculties within TU Delft at BSc and or MSc level if offered in English and upon availability.

Exchange students can enroll in any MSc course within the faculty even if they are electives offered at other faculties within TU Delft. Students can choose from any master from 3mE and are not limited within one master track.

The option of taking a project is very limited at the faculty of Mechanical, Maritime and Materials Engineering. In case students want to do a project they have to contact the department themselves to make the arrangements before they arrive for the exchange and inform the International Office 3mE of the agreed work plan. Students interested in doing a project/thesis work need to be aware that the maximum workload (ECTS) cannot exceed half of the total ECTS. The main purpose of exchange is always following subjects. In case students only want to do a project or thesis than they can't be admitted as exchange student but as unpaid guest researcher (internship student). In this case they will not receive a grade for the project work

and cannot follow any subjects.

For further questions and help with finding the best subjects for your case please email our international office: [internationaloffice-3me@tudelft.nl](mailto:internationaloffice-3me@tudelft.nl)

# Faculty of Technology, Policy and Management

## English taught BSc courses available for exchange students\*

| BSc Courses |  |         |    |            |
|-------------|--|---------|----|------------|
| Course Code | Course Name  | Cat.    | EC | Period (Q) |
| TB241TA     | Logistic 2   | BSc     | 5  | 1          |
| TB341IB:    | I&C risk and control   | BSc     | 5  | 3          |
| TB243IA     | Interconnected World   | BSc     | 5  | 4          |
| SPM6102     | Process management and decision making                               | BSc     | 5  | 2          |
| TBM007A     | Critical thinking in engineering                                     | BSc     | 3  | 4          |
| WM0376TU    | Ethics of Technological Risks  | MSc     | 5  | 3          |
| WM1110TU    | English for Academic Purposes-2                                      | BSc     | 3  | 1,3        |
| WM1113TU    | English for Academic Purpose-1                                       | BSc     | 3  | 1,3        |
| WM1137TU    | Spoken English for Technologists-1                                   | BSc/MSc | 2  | 1,3        |
| WM0903      | Technological Entrepreneurship and Global Development (Otto Kroesen) | MSc     | 4  | 1,2        |
| WM1137TU    | Spoken English for Technologists-1                                   | BSc/MSc | 2  | 1,3        |
| WM1136TU    | Written English for Technologists 1                                  | BSc/MSc | 3  | 1,3        |
| WM1102TU    | Written English for Technologists 2                                  | BSc/MSc | 3  | 1,3        |
| WM1101TU    | English for Academic Purposes 3                                      | BSc/MSc | 3  | 1,3        |
| WM1135TU    | English for Academic Purposes 4                                      | BSc/MSc | 3  | 1,3        |
| WM1112TU    | Spoken English for Technologists 2                                   | BSc/MSc | 2  | 1,3        |
| SPM9448     | Methods for Risk Analysis and Management                             | MSc     | 5  | 3          |

\*At TPM all Master courses are given in English.

BSc exchange students are allowed to choose Master courses provided they meet the course prerequisites.

### Faculty specific requirements & restrictions

The Faculty of Technology, Policy and Management accepts students following courses. The Faculty TPM does not facilitate any (research) projects; these are only allowed if specifically agreed upon in the bilateral agreement.

<https://www.tudelft.nl/en/education/admission-and-application/exchange-students/requirements/course-selection-restrictions#c430534>