

TU Delft courses available in English to incoming exchange students



Academic year 2022-2023

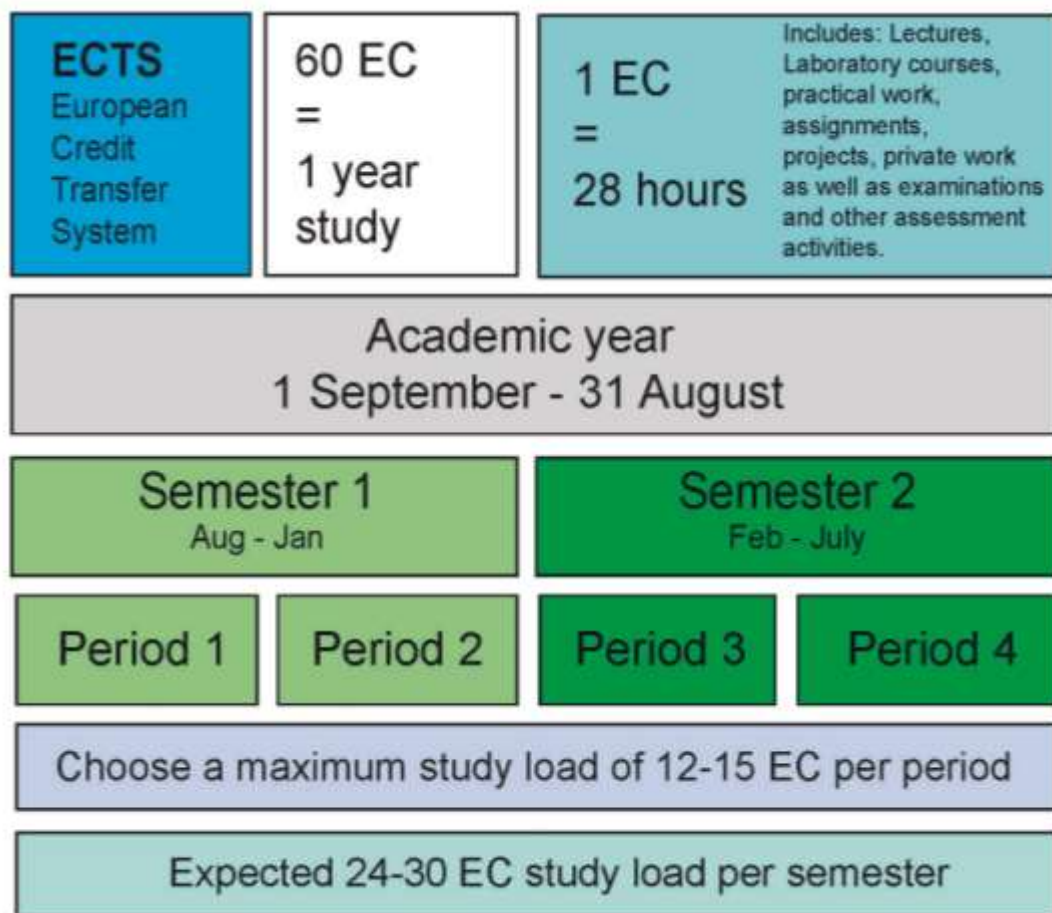
The following document contains courses taught in English for exchange students. The most recent course information can be found at www.studyguide.tudelft.nl. In the case of conflicting information, the study guide is leading. This document serves only as an indication; no rights can be derived from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

Table of Contents

Course Selection Guidelines	2
Things to consider when you choose your courses.....	2
Faculty of Aerospace Engineering	3
Faculty of Applied Sciences	9
Faculty of Architecture and the Built Environment.....	11
Faculty of Civil Engineering and Geosciences.....	12
Faculty of Electrical Engineering, Mathematics and Computer Sciences.....	17
Faculty of Industrial Design Engineering	20
Faculty of Mechanical, Maritime and Materials Engineering	21
Faculty of Technology, Policy and Management.....	22

Course Selection Guidelines

The table below shows how the academic year is divided and what is expected of you from each semester and/or period. With the details below of how many EC you are expected to obtain, you will be able to make a study plan that will need to be approved by your home university and TU Delft.



Things to consider when you choose your courses

1. Will you be staying for 1 or 2 semesters? This will affect the number of EC you need to choose.
2. You must take a course load equal to 24-30 EC per semester, 12-15 EC per period.
3. Most courses should be chosen at the faculty where you are nominated for as student.
4. All faculties have specific requirements and restrictions for course selection, more information can be found [here](#).
5. Check the course list of your selected faculty. Using this guideline, you can find the course list or links to the faculty's own course page.
6. More detailed information about the courses can be found via the [study guide](#). Guidelines on how to use it can be found [here](#).
7. Are you a BSc or MSc student? Not all BSc courses are taught in English and there are specific requirements to follow MSc courses.
8. Changes to your course plan after your arrival still need to meet the above requirements.
9. Carefully consider your course workload (minimum 24 EC), and the manageability of it. Students are not permitted to re-sit exams after the end of the official exchange period. Alternative course/s will need to be taken at your home university when you return home.

Faculty of Aerospace Engineering

English taught BSc and MSc courses available for exchange students. In the last table you will find the courses which are not open for exchange students.

Important: BSc students can only take MSc courses when they meet the pre-requisites as stated in the course description of the [TU Delft study guide](#).

The minor programmes Airport Development and Offshore Wind Energy consist of 30 ECTS and are offered in the Fall / 1st semester and consist of 3rd year level BSc courses. The Minors are only available to exchange students enrolled at the Faculty of Aerospace Engineering. We have limited places available, and if needed a selection will be made at the end of the application period (after 1 April). We recommend that you create an alternative course plan; in case you are not selected for the Minor programme.

REMARKS:

AE4xxxx This means that the course code is not known, but you can look for the course with the course name in the study guide

AE4S/-48 Courses from the MSc Spaceflight track (course starting with AE4S.... or AE48....) are only open to exchange students enrolled at the Faculty of Aerospace Engineering.

** This course can be taken in period 2 or 3; course only lasts 1 period.

*** MSc Aerospace Engineering Exchange students only

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
AE1130-I	Statics	BSc	4	1
AE1130-II	Dynamics	BSc	3	2
AE1205	Programming & Scientific Computing in Python	BSc	2	4
AE1241	Physics	BSc	6	3,4
WI1402LR	Calculus II	BSc	5	3
WI1403LR	Linear Algebra	BSc	5	4
WI1421LR	Calculus I	BSc	6	1,2
AE1111-II	Engineering Drawing	BSc	5	1,2

Bachelor 2nd year				
Course Code	Course Name	Cat.	EC	Period (Q)
AE2130-I	Aerodynamics I	BSc	3	1
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
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-II	Production of Aerospace Systems	BSc	3	3

Minor Offshore Wind Energy				
Limited places available for exchange students enrolled at the Faculty of Aerospace Engineering, please first contact exchange-ae@tudelft.nl				
Course Code	Course Name	Cat.	EC	Period (Q)
AE3512-20	Asset Management	Minor	5	2
AE3513*	Integration Assignment	Minor	6	2
CT3101*	Project Management Basics	Minor	5	1
AE3516	Basics of Aeroacoustics for Wind Energy	Minor	3	2
TBM024A	Introduction to Energy systems	Minor	5	1,2
AE3516A	Fundamentals of Wind Energy I	Minor	3	1
AE3516B	Fundamentals of Wind Energy II	Minor	3	2

*very limited places, course cannot be taken individually

Minor Airport Development				
Limited places available for exchange students enrolled at the Faculty of Aerospace Engineering, please first contact exchange- ae@tudelft.nl				
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
TB241TB	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

Minor Space Missions				
This minor and its related courses are not available for exchange students				

MSc Aerospace Engineering Profile courses (all tracks)				
Courses from the MSc Spaceflight (course starting with AE4S.... or AE48....) are only open to Exchange students enrolled at 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
AE4136-22	CFD 2: Discretization Techniques	MSc	3	2
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 Aero elasticity	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
AE4261	Internal Flows	MSc	3	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

AE4422-19	Agent-based Modelling and Simulation in Air Transport	MSc	4	1
AE4423-19	Airline Planning and Operations	MSc	4	2
AE4431	Aircraft Noise and Emissions	MSc	3	2
AE4441-16	Operations Optimisation	MSc	4	1
AE4462-17	Aircraft Emissions and Climate Effects	MSc	4	3
AE4463P	Advanced Aircraft Noise Modelling and Measurement	MSc	4	2
AE4465	Maintenance Modelling & Analysis	MSc	4	3
AE4874-I	Fundamental of Astrodynamics	MSc	4	1
AE4876-11	Planetary Sciences II	MSc	4	2
AE4880	Space Optics	MSc	4	3
AE4890-11	Planetary Sciences I	MSc	4	1
AE4ASM001	Design of lightweight structures I: Composites & Metals	MSc	3	1
AE4ASM002	Designing Materials with Aerospace Specific Properties	MSc	3	1
AE4ASM003	Linear Modelling incl. (F.E.M)	MSc	3	1
AE4ASM004	Manufacturing of Aerospace Structures & Materials	MSc	3	1
AE4ASM005	Fatigue of Structures & Materials	MSc	3	1
AE4ASM101TU-22	Polymer Science	MSc	4	2
AE4ASM103	Functional Coatings	MSc	3	2
AE4ASM104	Sensor Material	MSc	3	3
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
AE4ASM110-22	Polymer Composite Manufacturing	MSc	4	2
A4ASM506	Fundamentals of Aeroelasticity	MSc	3	3
WM0324LR**	Ethics and Engineering for Aerospace Engineering**	MSc	3	2,3
WI2056LR	Systems Theory	MSc	4	1
MSc Electives from all tracks				
Code	Course Name	Cat.	EC	Period
AE4117	Fluid-Structure Interaction	MSc	4	3
AE4139	CFD 3: Large Eddy Simulation	MSc	3	3
AE4138-18	CFD 4: Uncertainty Quantification			
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
AE4314-21	Helicopter Performance, Stability and Control	MSc	4	4

AE4315	Advanced Dynamics	MSc	3	4
AE4317	Autonomous Flight of Micro Air Vehicles	MSc	4	3
AE4318	Supervisory Control and Cognitive Systems	MSc	2	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
AE4352	Mathematical and human-inspired decision making	MSc	3	3
AE4446	Airport and Cargo Operations	MSc	4	3
AE4889	Special Topics in Astrodynamics	MSc	2	3
AE4S04	Introduction to Thermal Rocket Propulsion	MSc	1	1
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
AE4ASM515-22	Characterization of materials and components	MSc	4	4
AE4ASM516	Material Selection for Mechanical Design	MSc	3	3
AE4ASM520	Industrial Composite Manufacturing	MSc	3	4
AE4ASM521	Additive Manufacturing	MSc	3	3
AE4ASM522	Applied Aircraft Aeroelasticity	MSc	3	4
AE4ASM514TU	Continuum Mechanics	MSc	4	3
AE4185	Fluid Flow Data Processing & Visualization	MSc	3	4
AE4893	Physics of Planetary Interiors	MSc	4	4
AE4895	Measurement Strategies for Planetary Science Missions	MSc	3	3
AE4ASM116	Modelling and simulation for materials and manufacturing	MSc	3	2

MSc courses at another TU Delft faculty strongly related to Aerospace

Code	Course Name	Cat.	EC	Period
CS4240	Deep Learning	MSc	5	3
ET3604LR	Electronic Circuits	BSc	3	1
ET4117	Electrical Machines Drives	MSc	4	2
ME41025	Robotics Practical	MSc	3	4
ME45001	Advanced Heat Transfer	MSc	3	1
ME45025	Introduction to Multiphase Flow	MSc	5	3,4
ME45030	Turbulence	MSc	5	3,4
ME46060	Engineering Optimization 1: Concept and Application	MSc	3	4
MS43310	Materials at High Temperature	MSc	4	4
OE44120	Offshore Windfarm Design	MSc	4	3
WI4014TU	Numerical Analysis	MSc	6	1,2
WI4019	Non-linear Differential Equations	MSc	6	3,4
WI4210	Scientific Computing	MSc	6	1,2
WI4525TU	Monte Carlo Simulation of Stochastic Processes	MSc	5	1,2
WI3150TU	Partial Differential Equations A	MSc	3	1
WI4210	Partial Differential Equations and Functional Analysis	MSc	6	3,4

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

Course Code	Course Name
AE1110-II	Introduction to Aerospace Engineering II
AE1111-I	Exploring Aerospace Engineering
AE1222-I	Design and Construction
AE1222-II	Aerospace Design & Systems Engineering Elements
AE2111-I	Systems Design
AE2130-II	Low-Speed Wind tunnel Test
AE2130-III	Aerodynamics II
AE222x-I	Test, Analysis & Simulation
AE3212-II	Simulation, Verification & Validation
AE2230-I	Flight and Orbital Mechanics
AE2230-II	Propulsion and Power
AE2235-I	Aerospace Systems and Control Theory
AE2235-II	Instrumentation and Signals
AE222x-II	Artificial Intelligence for Aerospace Engineering
AE3211-I	Systems Engineering & Aerospace Design
AE3212-I	Aerospace Flight Dynamics and Simulation
AE3212-II	Simulation, Verification & Validation
AE3200	Design Synthesis
AE4140	Gas Dynamics
AE4143	Hypersonic Aerodynamics
AE4206	Turbomachinery
AE4238	Aero Engine Technology
AE4240	Advanced Aircraft Design I
AE4262	Combustion for propulsion and power technologies
AE4263	Modeling, Simulation and Application of Propulsion and Power Systems
AE4270	Control and Operations Project
AE4301	Automatic Flight Control Systems Design
AE4301P	Exercise Automatic Flight Control System Design
AE4313-20	Spacecraft Attitude Dynamics and Control
AE4320	System Identification of Aerospace Vehicles
AE4499	Space Project
AE4866(-1)	Propagation and Optimization in Astrodynamics
AE4868(-1)	Numerical Astrodynamics
AE4870A	Rocket Motion
AE4870B	Re-Entry Systems
AE4872	Satellite Orbit Determination
AE4ASM105	Trinity Exercise
AE4ASM505	Non-Linear Modelling (using F.E.M.)
AE4ASM512	Aerospace Structures and Materials Industry Best Practice
AE4ASM513	Forensic Engineering
AE4ASM517	Aircraft Manufacturing Laboratory

AE4ASM523	Design of Spacecraft and Launcher Structures
AE4ASM524	Spacecraft Structures Development
AE4ASM525	Materials for Space
AE4ASM526	Spacecraft Thermal Design
AE4S01	Thermal rocket propulsion
AE4S01P	Exercise Thermal Rocket Propulsion
AE4S07	Micropropulsion
AE4S10	Microsat Engineering
AE4S12	Space Systems Engineering
AE4S15	Space Embedded Systems
AES420	Satellite Thermal Control
AE4S52	Collaborative Space System Design Project
AE4W31	Floating Offshore Wind Energy
AE4010	Research Methodologies
TUD4040	Joint Interdisciplinary Project
AE5051	Internship
AE5122	Thesis Aerodynamics & Wind Energy
AE5222	Thesis Flight Performance & Propulsion
AE5322	Thesis Control & Operations
AE5722	Thesis Aerospace Structures & Materials
AE5822	Thesis Space
AE5922	Thesis Wind Energy Rotor Design
AE4894	Practical Astrodynamics
AE4351	Robust Flight Control

Faculty of Applied Sciences

The Faculty of Applied Sciences offers course proposals to incoming exchange students. For more information on the courses offered, please see our [Faculty website](#).

Master courses are open to Master students.

Master courses are open to Bachelor students under the following conditions:

- Bachelor students who have (almost) completed 3 years of study at the moment of application.
- Bachelor students who have completed 2 years of study, depending on their academic background.

These course proposals do not constitute compulsory sets of courses but are proposals to help you compose your exchange programme. Exchange students at the Faculty of Applied Sciences are strongly encouraged to finalise their course proposals in the application process of OSIRIS. The course choice will be confirmed during the admission process. Please carefully check the prerequisites of each course (including exchange research project) or minor programme. Also, please be aware that the course offering for the second semester will differ from the first semester.

It is strongly advised to choose the large majority of course credits (min. 51%) at the Faculty of Applied Sciences. This increases the chances of acceptance. We do not recommend mixing courses from various programmes and/or faculties since this will likely lead to scheduling conflicts and overlap. Such scheduling conflicts are the responsibility of the student.

Exchange research project

It is possible to combine an exchange research project (of at least 15 EC) at one of the research groups within the Faculty of Applied Sciences with courses. The larger the project, the more chance to be accepted by the department. A research project of 24 EC can be completed before Christmas. However, please be aware finishing before the end of your exchange enrolment does not allow you to terminate your TU Delft housing rental earlier.

The course codes of the research projects are the following per study programme:

- AP3991 for MSc Applied Physics
- LM3991 for MSc Life Science & Technology
- CH3991 for MSc Chemical Engineering

Please check the specific research requirements per study programme on our [Faculty website](#).

Note: It is not possible to do a research project in the BSc and MSc Nanobiology programme due to limited capacity in the research departments.

Students that intend to do a research project are strongly encouraged to take a proactive role in finding a supervisor and research project within the [research departments](#) of their choice at the Faculty of Applied Sciences. The first step is to find a scientific contact person within the Faculty of Applied Sciences (maybe someone you have already been in contact with or are planning to collaborate with) and get direct approval from the professor of the group where you wish to do your research. In most cases you will work under the supervision of a PhD student and his/her professor. Before applying to any of our two annual exchange periods, ideally you will already have arranged a project yourself or you are in the process of doing so. Please mention the actions you have taken in your application as well. In special cases, we may assist you in finding a supervisor for the research project after the application deadline, but as mentioned earlier, we expect you to take the lead.

When contacting our academic staff for the first time, we recommend including the following information in your e-mail:

- Why you have chosen TU Delft and the respective department
- That you are an exchange student from a TU Delft partner university, registered through the International Office Applied Sciences

- The research area/topic you are interested in and why
- A resume covering your experiences and personal details
- A transcript of records

For further questions and assistance with your course choice you are welcome to contact the International Office Applied Science: InternationalOffice-TNW@tudelft.nl

Faculty of Architecture and the Built Environment

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

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 can only apply for the autumn 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

Note: Students can only apply in Studielink for the Master *Civil Engineering and Geosciences*, the Master *Applied Earth Sciences* or the Master *Environmental Engineering*

Master Programme Redesign

Due to a Master programme redesign at the Faculty of Civil Engineering and Geosciences, the courses offered to incoming CITG exchange students will be different from the past few years. The available courses and modules listed below will be emailed to all partner institutions, and posted on the website, before the application period starts. Students will still have to meet all prerequisites.

Important note: BSc Students can take MSc courses as long as they meet the pre-requisites. MSc students have to choose from one of our fixed master module packages.

All module and course descriptions can be found on our [TU Delft study guide](#).

Bachelor Head Phase (3rd Year)				
Course Code	Course Name	Cat.	EC	Period (Q)
CTB3310	Surveying & Mapping	BSc	4	3
CTB3330	Structural Mechanics 4	BSc	4	3
CTB3335	Concrete Structures 2	BSc	4	3
CTB3420	Integral Design of Infrastructure	BSc	4	4
CTB3350	Open Channel Flow	BSc	4	3
CTB3355	Hydraulic Structures 1	BSc	4	3
CTB3360	Water Control	BSc	4	1,3
CTB3365-16	Introduction to Water Treatment	BSc	4	3
CTB3415	Water Management Research	BSc	4	4
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
CTB3370-18	Geometrical Design of Roads and Railways	BSc	4	3
CTB3311	Climate Impacts and Engineering	MSc	4	4

Master modules Civil Engineering (1st Year)

We offer six fixed course packages in our Master programme for incoming exchange students. Within these packages, students are free to combine one A module with one B module of choice.

Construction Materials

Combine module A with B1 or B2 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
CIEM1110	Module A: Measuring and modelling construction behavior	MSc	9	3
CIEM1210	Module B1: Construction materials research	MSc	15	4
CIEM1220	Module B2: Design and engineering of construction materials	MSc	15	4

Geotechnical Engineering

Combine module A with B1 or B2 or B3 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
CIEM2110	Module A: Geotechnical modelling	MSc	9	3
CIEM2210	Module B1: Geotechnical structures	MSc	15	4
CIEM2220	Module B2: Advanced Soil Mechanics	MSc	15	4
CIEM2230	Module B3: Delta Geotechnics	MSc	15	4

Hydraulic and Offshore Structures

Combine module A1 with module B1 or B2 or B3 (24 EC)

or

Combine module A2 with module B1 or B2 or B3 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
CIEM4110	Module A1: Hydraulic Structures (Soil-structure interaction)	MSc	9	3
CIEM4120	Module A2: Offshore Structures	MSc	9	3
CIEM4210	Module B1: Offshore Renewables	MSc	15	4
CIEM4220	Module B2: Dams, Dikes and Breakwaters	MSc	15	4
CIEM4230	Module B3: Floating and Submerged Structures	MSc	15	4

Hydraulic engineering

Combine module A1 with module B1 or B2 or B3 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
CIEM3110	Module A1: Hydraulic Engineering Fundamentals and Environments	MSc	9	3
CIEM3210	Module B1: Coastal Engineering	MSc	15	4
CIEM3220	Module B2: River Engineering	MSc	15	4
CIEM3230	Module B3: Advanced design of ports and waterways systems and interventions	MSc	15	4

Structural engineering

Combine module A1 with module B1 or B2 or B3 or B4 or B6 (24 EC)

or

Combine module A2 with module B1 or B2 or B3 or B4 or B6 (24 EC)

or

Combine module A3 with module B1 or B2 or B3 or B4 or B6 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
CIEM5110	Module A1: Structural Mechanics and Dynamics	MSc	9	3
CIEM5120	Module A2: Design of Structural Components	MSc	9	3
CIEM5130	Module A3: Design of Civil Structures and Infrastructures	MSc	9	3
CIEM5210	Module B1: Applied Mechanics of Structures	MSc	15	4
CIEM5220	Module B2: Applied Dynamics of Structures	MSc	15	4
CIEM5230	Module B3: Concrete Structures	MSc	15	4
CIEM5240	Module B4: Steel and Composite Structures	MSc	15	4
CIEM5250	Module B5: Building Engineering	MSc	15	4
CIEM5260	Module B6: Transportation Infrastructures	MSc	15	4

Traffic and Transport Engineering

Combine module A1 with module B1 or B2 or B3 or B4 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
CIEM6110	Module A1: Methods in Traffic and Transport Engineering	MSc	9	3
CIEM6210	Module B1: Transport Networks and Systems	MSc	15	4
CIEM6220	Module B2: Road Traffic Systems	MSc	15	4
CIEM6230	Module B3: Public Transport and Railway Systems	MSc	15	4
CIEM6240	Module B4: Road and Railway Engineering	MSc	15	4

Please read our [brochure](#) for more detailed information on the CIE modules.

Master modules Environmental Engineering (1st Year)

We offer fixed course packages in our Master programme for incoming exchange students. Within these packages, students are free to combine one A module with one B module of choice.

Combine module A1 with module B1 or B4 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
	Module A1: Water quality and principles	MSc	9	3
	Module B1: Water treatment technologies	MSc	15	4
	Module B4: Water resources engineering and management	MSc	15	4

Combine module A2 with module B2 or B4 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
	Module A2: Design & modelling of urban water infrastructure systems	MSc	9	3
	Module B2: Operation, control, management and adaption of urban water infrastructure systems	MSc	15	4
	Module B4: Water resources engineering and management	MSc	15	4

Combine module A3 with module B3 or B4 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
	Module A3: River basin hydrology and water management	MSc	9	3
	Module B3: Regional hydrology	MSc	15	4
	Module B4: Water resources engineering and management	MSc	15	4

Combine module A with module B1 or B2 (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
	Module A: Resource engineering	MSc	9	3
	Module B1: Waste processing technologies	MSc	15	4
	Module B2: Reactive resources and wastes	MSc	15	4

Combine module A with module B (24 EC)

Module Code	Module Name	Cat.	EC	Period (Q)
	Module A: Atmospheric measurements	MSc	9	3
	Module B: Grand challenges in AEE	MSc	15	4

Master modules Applied Earth Sciences (1st Year)				
In the third period/quarter, students have to combine one 6 EC module with one 9 EC module. In the fourth quarter, students have to follow a course at another faculty worth 9 EC.				
Module Code	Module Name	Cat.	EC	Period (Q)
AESM3001	Atmospheric and Climate Dynamics	MSc	6	3
AESM3002	Earth Observation Technologies	MSc	6	3
AESM3003	Geo-Energy Engineering Applications	MSc	6	3
AESM3004	Economic and Structural Geology	MSc	6	3
AESM301A	Atmospheric processes and modelling	MSc	9	3
AESM302A	Geo-data analysis and geodesy	MSc	9	3
AESM303A	Geo-data and geo-informatics	MSc	9	3
AESM304A	Flow and simulation of subsurface processes	MSc	9	3
AESM305A	Characterization of the subsurface	MSc	9	3
AESM306A	Extraction processes and consequences of raw materials	MSc	9	3
AESM307A	Earth deformation processes across scales	MSc	9	3
AESM308A	Climate modelling and remote sensing	MSc	9	3
AESM309A	Climate change and dynamic landforms	MSc	9	3

Please read our [brochure](#) for more detailed information on the AES modules.

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

Important note: These are the recommended module packages. If you want a modified package, it is negotiable.

Faculty of Electrical Engineering, Mathematics and Computer Sciences

Course selection; important things to consider

We advise students to take most of the courses at the faculty of EEMCS as it increases the chance of getting accepted and reduces the chance of schedule clashes.

Maximum 49% of the credits can be taken at other faculties (expect at the faculties of Industrial Design and Architecture and the Build environment). There are restrictions for courses from other faculties. You can read more information on the website: <https://www.tudelft.nl/en/education/admission-and-application/exchange-students/requirements/course-selection-restrictions>. Always check the study guide well in advance for the prerequisites.

BSc: Listed below are all English taught BSc courses at EEMCS available to exchange students. BSc courses not listed on this list are not available!

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 mentioned below. 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 enroll for one of the minors below through the international office of EEMCS.

MSc: You can follow MSc courses, if you are a MSc student or at least in the 4th year of your curriculum. 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 catalog that are taught at different universities are not open to exchange students.

English BSc courses available for exchange students

**BSc Minors Only available in the Fall semester (period 1 and 2)
You can only follow the complete minor, courses of the minor are not available separately**

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 for Electronics (depending on number of participants)

<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/>

BSc Applied Mathematics				
Course Code	Course Name	Cat.	EC	Period (Q)
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	Philosophy of Mathematics	BSc	6	1.2
AM2520-H	History of Mathematics	BSc	6	3
AM2530	Systems Theory	BSc	6	3
AM2550	Advanced Statistics	BSc	6	3
AM2560	Applied Algebra: Codes	BSc	6	3
AM2570	Markov Processes	BSc	6	3
Applied Mathematics: 3rd year				
AM3500	Mathematics seminar	BSc	6	1.2
AM3510	Mathematical Physical Models	BSc	6	3
AM3520	Logic	BSc	6	1.2
AM3530	Numerical Methods 2	BSc	6	3
AM3550	Graph Theory	BSc	6	3
AM3560	Advanced Probability	BSc	6	3
AM3570	Fourier Analysis	BSc	6	1.2
AM3580	Differential Geometry	BSc	6	3
AM3590	Topology	BSc	6	1.2

BSc Computer Science -				
Only available to BSc Computer Science Students coming to EEMCS				
Course Code	Course Name	Cat.	EC	Period (Q)
Computer science: 2nd year				
CSE1300	Reasoning & Logic	BSc	5	1
CSE1400	Computer Organisation	BSc	5	1
CSE1505	Information Data Management	BSc	5	3
CSE1110	Software Quality & Testing	BSc	5	4
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

CSE3xxx	Electives of the third year, several. As they are subject to change, please check the available 5 EC courses in the study guide (link below). The research project is not available.	BSc	5	3
CSE3xxx	https://studiegids.tudelft.nl/a101_displayProgram.do?program_tree_id=26478	BSc	5	3

BSc Electrical Engineering				
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 for 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

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](#).

Bachelor courses Faculty of Industrial Design Engineering

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

During the first semester (Fall):

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

During the second semester (Spring):

- For Bachelor exchange students in Spring there are many English electives available. Courses that are offered can be found [here](#). After students are admitted a list of possible courses with time slots will be sent, so that students can make their final choice.

Master exchange course packages

Students who have finished their bachelor or have finished at least 3 years of bachelor's education on the moment of application can apply for fixed course packages. See the [information](#) on the website. During the application students can indicate their first, second and third choice.

IMPORTANT

- Since we cannot guarantee enrolment in your first choice, it is obligatory to select a different second choice and a third choice.
- In case you apply for two semesters you only must choose a package for the first semester.
- 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 if 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.
- In exceptional cases, courses (not more than 30%) can be taken at other faculties.

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 taught BSc subjects for exchange students. Exchange students (also BSc) can follow any MSc courses from our faculty if 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 for exchange students

BSc students

You can follow MSc courses at our faculty as long as you have the pre-required knowledge. In addition, exchange students can take up to 49% of the courses at other faculties at BSc and or MSc level if offered in English and upon availability for exchange students.

Minor

BSc students who are nominated through faculty 3mE are not allowed to take a fixed minor at the faculty of 3mE or any other faculty at TU Delft.

MSc

You can follow MSc courses at our faculty as long as you have the pre-required knowledge. In addition, exchange students can take up to 49% of the courses at other faculties at BSc and or MSc level if offered in English and upon availability for exchange students.

General information

Please keep in mind that availability may change at the last moment, so we ask students to be flexible in the subject choices. In addition, the schedule will be known just before the start of the semester so this might mean that subjects and or exams will be at the same time so you may need to change at the last moment. 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.

Project

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. We only allow students to do a project if they stay a whole study year, students who stay one semester are not allowed to do a project. The main purpose of exchange is always following subjects. In case students only want to do a project or thesis then they cannot 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

Faculty of Technology, Policy and Management

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.

The first year of the MSc Engineering & Policy Analysis (EPA) is taught at Campus The Hague, located at the city centre. The second year of EPA will partly take place in The Hague, partly in Delft.

All first-year Master courses of the MSc Management of Technology (MOT) have a limited capacity and are only available to exchange students from the faculty TPM.

For all courses in the MSc Industrial Ecology (IE) a separate admission is required from the IE programme coordinator. Only Master level students can apply. Courses in IE take place either in Leiden or in Delft.

BSc

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](#).

MSc

At TPM all Master courses are given in English. You can follow MSc courses at our faculty as long as you have the pre-required knowledge.

Minor

Exchange students are not allowed to take separate minor courses, unless approved by the coordinator or module manager.

We offer 3 minors in Q1 and Q2 that can be chosen by exchange students.

- [Med-Tech Based Entrepreneurship](#)
- [Companies and innovation: economical, ethical, juridical and safety perspectives](#)
- [Security, Safety and Justice \(LDE minor\)](#)

If you are interested in taking one of those minors, please contact internationaloffice-tbm@tudelft.nl

Bachelor level courses				
Course code	Course title	Period (Q)	Credits	Prerequisites/ Expected prior knowledge
1st year				
TB133D	Introduction to Programming with Python	3	5	-
TB141IC	ICT System Engineering and Rapid Prototyping	3	5	-
TB141TB	Transport System Analysis	3	5	-
2nd year				
TB241IA	I and C-System Analysis	1	5	-
TB241TB	Logistics 2	1	5	see studyguide
TB243IA	Interconnected World	4	5	see studyguide
3rd year				
TB341IC	I and C Risk and Control	3	5	see studyguide
TB341TB	Quantitative Models for Transport	3	5	see studyguide
TBM007A	Critical Thinking in Engineering	4	3	-
TBM024A	Introduction to Energy Systems	1	5	-
TBM610A	Process Management and Decision-making in Project Environments	2	5	-

MSc Engineering and Policy Analysis (EPA)

The first year of the EPA programme is taught at Campus The Hague, in the city centre. The second year of EPA will partly take place in Delft, partly in The Hague

Course code	Course title	Period (Q)	Credits	Prerequisites/ Expected prior knowledge
EPA1102	Understanding International Grand Challenges	1	5	-
EPA1124	Policy Analysis of Multi-actor Systems	1	5	-
EPA1133	Ethics and Impacts of Global Interventions	4	5	-
EPA1144	Actor and Strategy Models	2	5	-
EPA1223	Macro-economics for Policy Analysis	4	5	-
EPA1316	Introduction to Data Science	1	5	see study guide
EPA1324	Introduction to TPM Modelling	2	5	see study guide
EPA1341	Advanced System Dynamics	3	5	see study guide
EPA1352	Advanced Simulation	3	5	see study guide
EPA1361	Model-based Decision-making	4	5	see study guide
EPA1424	Political Decision-making	3	5	Limited participation, Bachelor students are excluded from participation
EPA1434	Intercultural Relations and Project Management	2	5	This course is for EPA students only. Elective students should ask for permission to participate with the module manager
EPA1333	Computer Engineering for Scientific Computing	1	5	-
EPA2112	Societal Challenge Project	1	5	max 25 students

MSc Complex Systems Engineering and Management (CoSEM)

Course code	Course title	Period (Q)	Credits	Prerequisites/ Expected prior knowledge
SEN111A	Introduction to Design in Complex Systems	1	2	This course is open only to students who have been admitted to the CoSEM programme before the start of the course.
SEN1121	Complex Systems Engineering	1	5	-
SEN1131	Institutional Economics for Designing in Socio-technical Systems	1	3	-
SEN1141	Managing Multi-actor Decision-making	2	5	-
SEN115A	Law & Institutions	3	5	-
SEN1161	Design Project	4	5	SEN1121, SEN1131 en SEN1141 or similar
SEN131B	CoSEM Research Challenges	4	5	International visiting students are welcome to join, please contact the module manager to discuss the match between your interests and the course.
SEN1211	Agent-based Modelling	2	5	-
SEN1221	Statistical Analysis of Choice Behaviour	2	5	see study guide
SEN1231	Mixed Research Methods for Multi-actor Systems	3	5	see study guide
SEN124A	Design in Networked Systems	3	5	see study guide
SEN1511	Engineering Optimization and Integrating Renewables in Electricity Markets	1	5	see study guide
SEN1522	Electricity and Gas: Market Design and Policy Issues	2	5	see study guide
SEN1531	Design of Integrated Energy Systems	3	5	see study guide
SEN1541	Sociotechnology of Future Energy Systems	4	5	see study guide
SEN1611	I&C Architecture Design	1	5	see study guide
SEN1622	I&C Service Design	2	5	-
SEN163A	Fundamentals of Data Analytics	3	5	see study guide
SEN1641	Digital Platform Design	4	5	International visiting students are welcome to join too, please contact the module manager to discuss the match between your interests and the course.
SEN171A	Advanced Evaluation Methods for Transport Policy Decision-making	1	5	-
SEN1721	Travel Behaviour Research	2	5	see study guide

SEN173A	Analysis and Design of Freight and Logistic Systems	3	5	-
SEN1741	Innovations in Transport and Logistics	4	5	-
SEN9110	Simulation Masterclass	1	5	Master students only, see study guide
SEN9115	Participatory Systems	2	5	-
SEN9120	Advanced Agent Based Modeling	2	5	see study guide
SEN9235	Game Design Project	1	5	-
SEN9720	Logistics and Supply Chain Innovations	1	5	see study guide
SEN9725	Supply Chain Gaming	2	5	see study guide

MSc Electives				
Course code	Course title	Period (Q)	Credits	Prerequisites/ Expected prior knowledge
TPM001A	Sociotechnology of Future Energy Systems	1	4	see study guide
TPM002A	Water Ethics	4	3	-
TPM003A	Water Ethics	4	5	-
TPM004A	Transport Safety	4	1	Master students only
TPM005A	Scientific Writing for Applied Mathematics	1	3	-
TPM007A	Talk Like TED	1/2/3/4	3	-
TPM010A	Cyber Crime Science	3	5	-
TPM012A	Environmental Ethics	4	3	-
TPM013A	Environmental Ethics	4	5	-
TPM014A	Values in ICT	3	5	-
TPM015A	Values in ICT	3	3	-
TPM016A	Robots and Society	3	3	-
TPM020A	Economics of Cybersecurity	1	5	-
TPM021A	Economics and Finance	2	6	see study guide
TPM022A	Intermediate Economics	1	5	see study guide
TPM023A	Cost-Benefit Analysis: Theory and Application	1	4	-
TPM024A	Methods for Risk Analysis and Management	4	5	-
TPM025A	User-Centred Security	4	5	-
TPM026A	System Reliability in Quantitative Risk Assessment	2	4	-
TPM027A	Cyber Risk Management	1	5	-
TPM028A	Decision Making in Multimodal Transport Systems	2	5	see study guide
TPM029A	Responsible Innovation	1	3	-
TPM030A	Introduction to Cloud as Infrastructure: The effects of the new business of computing on practice	2	5	-
TPM031A	Design of Safety and Security Systems	2	4	-
TPM032A	Multi-criteria Decision Analysis	1	5	see study guide
TPM121A	Economics, Technology and Finance	2	5	see study guide
TPM301A	Intermediate Spoken English for Group Work	1/2/3/4	2	-
TPM302A	Advanced Spoken English for Group Work	1/2/3/4	2	-
TPM303A	Intermediate Writing in English for the University	1/2/3/4	2	-
TPM304A	Advanced Writing in English for the University	1/2/3/4	2	-
TPM305A	Writing a Master's Thesis in English	1/2/3/4	2	The course will only run if enrolment numbers are sufficient

Delft Centre for Entrepreneurship (DCE)

[More information about the courses](#)

TPM401A	Technology Entrepreneurship and Innovation	1/2/3	5	-
TPM402A	Technology Entrepreneurship and Health	1	5	-
TPM403SET	Technology Entrepreneurship and Sustainability	4	4	-
TPM404A	Technology Entrepreneurship and Global Development	1	4	-
TPM405A	Patent Law and Patent Policy	1	5	-
TPM406A	Corporate Entrepreneurship and Start-ups	2	6	-
TPM407A	Advanced Marketing for High-tech Entrepreneurs	3	5	see study guide
TPM408A	Financing Technology Ventures	2	5	-
TPM411A	Idea to Start-up – IT & AI	2/3	5	-
TPM412A	Idea to Start-up – Health & Life Sciences	2/4	5	-
TPM413A	Idea to Start-up – Energy & Sustainability	1/3	5	Master students only
TPM414A	Idea to Start-up – Deep Tech	1	5	-
TPM415A	Idea to Start-up - Global Food	4	5	-
TPM416A	Turning Technology into Business	2	6	Master students only, limited capacity
TPM420A	Ready to Start-up	1/3	6	-
TPM421A	Technology Scout 1	1/3	5	limited capacity In case the number of applicants exceeds the capacity, a selection process will take place at the beginning.
TPM422A	Technology Scout 2	2/4	5	Technology Scout 1 (TPM421), you must get approval to participate
TPM425A	Experience Entrepreneurship	1/2/3/4	3	This course is open to students who agree with the module managers on the content of the project. See study guide for further details.
TPM426A	Extended Experience Entrepreneurship	1/2/3/4	5	Send an e-mail to both Victor Scholten and Esther Blom to inquire about the possibilities/ available topics or projects. The acceptance of students in this course depends upon the availability of DCE lecturers.
TPM959A	Technology Battles	1	3	-
SPM9730	Sustainable Innovation and Transitions	1	3	Master students only

Courses ITAV*

<https://www.tudelft.nl/en/tpm/about-the-faculty/departments/staff-departments/centre-for-languages-and-academic-skills>

Course code	Course title	Period (Q)	Credits	Prerequisites/ Expected prior knowledge
WM-ITAV-4010	Scientific Writing	1/2	2	see study guide
WM-ITAV-4020	Presenting for Large Audiences	2/4	2	see study guide
WM0201TU-Eng	Technical Writing	1/2/3/4	2	-
WM0203TU-Eng	Oral Presentations	1/2/3/4	2	-
WM1135TU	Advanced English for the University	1/2/3/4	3	-

Courses Ethics and Philosophy*

Course code	Course title	Period (Q)	Credits	Prerequisites/ Expected prior knowledge
WM0312CIE	Philosophy, Technology Assessment and Ethics for CIE	4	2	see study guide
WM0320TU	Ethics and Engineering	1/3	3	The course is identical to the initial part of the course wm0329tu (6 ects).

WM0329TU	Ethics and Engineering	1/3	6	The first part of this course (concluded with the written test) coincides with the course WM0320TU.
WM0324LR	Technical Writing	2/3	3	see study guide
WM0342TU	Introduction to the Philosophy of Technology	3	5	-
WM0348TU	Christian Philosophy: Recent Developments	1	3	-
WM0349WB	Philosophy of Engineering Science and Design	4	3	-
WM0353TU	Climate Ethics	2	3	-

*All courses starting with WM are regular Electives. Please ignore the commentary "UNUSED - WM look at TPM Electives"; this is a technical error in the study guide.

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

Course code	Course title
MOT1003*	Integration Moment
MOT2004*	Preparation for Master Thesis
MOT9611*	Project Entrepreneurship Thesis related
SEN2321	Master Thesis Preparation
SEN2331	CoSEM Master Thesis
EPA2934	Preparation Master Thesis
EPA2942	Master Thesis EPA
TPM424A	The Journey
Courses starting with UDxxxx	These are Honours courses.

*Other first year MOT courses are only available to exchange students of the faculty TPM. There are a limited number of places available. Please contact internationaloffice-tbm@tudelft.nl.

We offer alternative courses in the DCE department. If you are interested in Entrepreneurship, please take a look at this [website](#) and the [year planner](#).