

## TU Delft English courses available to incoming BSc exchange students

## Academic year 2019-2020

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

#### **Course selection guidelines**

You must take the majority of your courses at the faculty of your 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. The number of EC should not exceed 30. The majority of these courses (51%) should be chosen from one faculty only, with the exception of Civil Engineering and Geosciences and the faculty of Industrial Design Engineering which require minimum 70% of courses chosen within their own faculty. Courses chosen outside the selected faculty will only be considered with the approval of the exchange coordinator.

Each student is expected to attend classes, submit assessments and sit final exams for all courses in which he/she is enrolled at TU Delft.

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

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

If this is the case, 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 are half of a quarter.

It is highly recommended to choose between courses that evenly distribute the workload within 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 discuss it with 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 <u>exchange webpage</u>.

#### <u>Minor</u>

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 and Scientific Computing in Python for Aerospace I	BSc	2	4
AE1222-II	Aerospace Design and Systems Engineering Elements	BSc	4	3,4
AE1240-I	Thermodynamics	BSc	3	3
AE1240-II	Waves and Electromagnetism	BSc	3	4
WI1403LR	Linear Algebra	BSc	5	4
WI1421LR	Calculus I	BSc	6	1,2
WI1402LR	Calculus II	BSc	5	3

Bachelor 2nd year				
Course Code	Course Name	Cat.	EC	Period (Q)
AE2111-II*	Aerospace Design and Systems Engineering Elements	BSc	3	1
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
AE2220-11	Computational Modelling	BSc	3	4
AE2223-11	Experimental Research and Data Analysis	BSc	3	3
AE2230-I	Flight and Orbital Mechanics	BSc	4	3
AE2230-11	Propulsion and Power	BSc	4	3
AE2235-I	Aerospace Systems and Control Theory	BSc	4	4
AE2235-11	Instrumentation and Signals	BSc	3	4
WI2180LR-I	Differential Equations	BSc	4	1
WI2180LR-II	Probability and Statistics	BSc	4	1

\* Only open to AE exchange students

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> . Test Flight for Exchange students	Bsc	5	3

Minor Offshore Wind Energy Limited places available, please first contact exchange-ae@tudelft.nl						
Course Code Course Name Cat. EC Period (						
AE3514	Introduction to Wind Energy	Minor	3	1		
AE3511*	Operations Maintenance	Minor	4	1,2		
AE3512	Asset Management	Minor	4	2		
AE3513	Integration Assignment	Minor	6	2		
CT3101	Project Management Basics	Minor	5	1		
AExxxx	Basics of Aeroacoustics for Wind Energy	Minor	3	2		
TBMxxxx	Introduction to Energy systems	Minor	5	1,2		
*very limited plac	es, course cannot be taken individually					

\*very limited places, course cannot be taken individually

NEW Minor Airport of the Future Only full minor, limited places available, please first contact exchange-ae@tudelft.nl						
	urse Code Course Name Cat. EC Period (Q)					

MSc Aerospace Engineering Profile courses (all tracks)				
Course Code	Course Name	Cat.	EC	Period (Q)
AE4115	Experimental Simulations	MSc	3	3,4
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	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	1
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
AE4422-16	Agent-based Modelling and Simulation in Air Transport	MSc	4	1
AE4426	Stochastic Processes and Simulations	MSc	4	2
AE4431	Aircraft Noise and Emissions	MSc	3	2
AE4441-16	Operations Optimisation	MSc	4	1
AE4447	Aircraft Performance Optimization	MSc	3	3

AE4462-17	Aircraft Emissions and Climate Effects	MSc	4	3
AE4463-17	Advanced Aircraft Noise Modelling and Measurement	MSc	4	3
AE4465	Maintenance Modelling & Analysis	MSc	4	2
AE4866	Propagation and Optimization in Astrodynamics	MSc	4	3
AE4868	Numerical Astrodynamics	MSc	3	2
AE4870A	Rocket Motion	MSc	3	1
AE4870B	Re-Entry Systems	MSc	3	1
AE4872	Satellite Orbit Determination	MSc	6	1,2
AE4874-I	Astrodynamics I	MSc	4	1
AE4876-11	Planetary Sciences II	MSc	4	3
AE4878	Mission Geometry and Orbit Design	MSc	4	2,3
AE4880	Space Instrumentation	MSc	4	3
AE4890-11	Planetary Sciences I	MSc	4	2
AE4S06	Spacecraft Mechatronics	MSc	4	1
AE4S06P	Spacecraft Mechatronics Exercise	MSc	1	2
AE4S10	Microsat Engineering	MSc	4	3
AE4S12	Space Systems Engineering	MSc	3	1,2
AE4S15	Space Embedded Systems	MSc	3	3,4
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
AE4ASM104	Sensor Material	MSc	3	3
AE4ASM106	Stability & Analysis of Structures I	MSc	3	2
AE4ASM107	Joining Methods	MSc	3	2
AE4ASM108	Experimental Techniques & NDT	MSc	3	2
AE4ASM109	Design & Analysis of Composite Structures I	MSc	5	3
		MCa	3	3
A4ASM506	Aeroelasticity	MSc	3	3
A4ASM506 WM0324LR**	5	MSC	3	-
	Aeroelasticity Ethics and Engineering for Aerospace Engineering** Systems Theory			3 2,3 1
WM0324LR** WI2056LR	Ethics and Engineering for Aerospace Engineering** Systems Theory MSc Electives from all tracks	MSc MSc	3 4	2,3
WM0324LR** WI2056LR Code	Ethics and Engineering for Aerospace Engineering** Systems Theory MSc Electives from all tracks Course Name	MSc MSc	3	2,3
WM0324LR** WI2056LR Code AE4117	Ethics and Engineering for Aerospace Engineering** Systems Theory  MSc Electives from all tracks Course Name Fluid-Structure Interaction	MSc MSc Cat. MSc	3 4 EC 4	2,3 1 Period
WM0324LR** WI2056LR <b>Code</b> AE4117 AE4138-18	Ethics and Engineering for Aerospace Engineering** Systems Theory  MSc Electives from all tracks  Course Name  Fluid-Structure Interaction  CFD 4: Uncertainty Quantification	MSc MSc Cat. MSc MSc	3 4 EC 4 2	2,3 1 Period 3 4
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139	Ethics and Engineering for Aerospace Engineering** Systems Theory  MSc Electives from all tracks  Course Name  Fluid-Structure Interaction  CFD 4: Uncertainty Quantification  CFD 3: Large Eddy Simulation	MSc MSc Cat. MSc MSc MSc	3 4 EC 4 2 3	2,3 1 Period 3 4 3
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4143	Ethics and Engineering for Aerospace Engineering** Systems Theory  MSc Electives from all tracks  Course Name Fluid-Structure Interaction CFD 4: Uncertainty Quantification CFD 3: Large Eddy Simulation Hypersonic Aerodynamics	MSc MSc Cat. MSc MSc MSc MSc	3 4 EC 4 2 3 3 3	2,3 1 Period 3 4 3 2,3
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4143 AE4143 AE4260A	Ethics and Engineering for Aerospace Engineering** Systems Theory  MSc Electives from all tracks  Course Name Fluid-Structure Interaction CFD 4: Uncertainty Quantification CFD 3: Large Eddy Simulation Hypersonic Aerodynamics Fundamentals of Aeroacoustics	MSc MSc Cat. MSc MSc MSc MSc MSc MSc	3 4 EC 4 2 3 3 3 2	2,3 1 Period 3 4 3 2,3 1
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4143 AE4260A AE4260B	Ethics and Engineering for Aerospace Engineering** Systems Theory MSc Electives from all tracks Course Name Fluid-Structure Interaction CFD 4: Uncertainty Quantification CFD 3: Large Eddy Simulation Hypersonic Aerodynamics Fundamentals of Aeroacoustics Experimental Applications of Aeroacoustics	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc	3 4 <b>EC</b> 4 2 3 3 2 2	2,3 1 Period 3 4 3 2,3 1 2,3
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4143 AE4260A AE4260B AE4260B AE4W30	Ethics and Engineering for Aerospace Engineering** Systems Theory MSc Electives from all tracks Course Name Fluid-Structure Interaction CFD 4: Uncertainty Quantification CFD 3: Large Eddy Simulation Hypersonic Aerodynamics Fundamentals of Aeroacoustics Experimental Applications of Aeroacoustics Wind Resource and Wind Farm Yield	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc	3 4 <b>EC</b> 4 2 3 3 2 2 2 4	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4139 AE4143 AE4260A AE4260B AE4W30 AE4245	Ethics and Engineering for Aerospace Engineering** Systems Theory MSc Electives from all tracks Course Name Fluid-Structure Interaction CFD 4: Uncertainty Quantification CFD 3: Large Eddy Simulation Hypersonic Aerodynamics Fundamentals of Aeroacoustics Experimental Applications of Aeroacoustics Wind Resource and Wind Farm Yield Advanced Aircraft Design II	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 EC 4 2 3 3 2 2 2 4 4	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2 3
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4138-18 AE4139 AE4143 AE4260A AE4260A AE4260B AE4245 AE4270	Ethics and Engineering for Aerospace Engineering** Systems Theory MSc Electives from all tracks Course Name Fluid-Structure Interaction CFD 4: Uncertainty Quantification CFD 3: Large Eddy Simulation Hypersonic Aerodynamics Fundamentals of Aeroacoustics Experimental Applications of Aeroacoustics Wind Resource and Wind Farm Yield Advanced Aircraft Design II Control and Operations Project (track 2 elective)	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 EC 4 2 3 3 2 2 4 4 4 4	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2 3 1
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4143 AE4260A AE4260B AE4260B AE4245 AE4270 AE4270 AE4311	Ethics and Engineering for Aerospace Engineering**         Systems Theory         MSc Electives from all tracks         Course Name         Fluid-Structure Interaction         CFD 4: Uncertainty Quantification         CFD 3: Large Eddy Simulation         Hypersonic Aerodynamics         Fundamentals of Aeroacoustics         Experimental Applications of Aeroacoustics         Wind Resource and Wind Farm Yield         Advanced Aircraft Design II         Control and Operations Project (track 2 elective)         Nonlinear and Adaptive Flight Control	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 <b>EC</b> 4 2 3 3 2 2 2 4 4 4 4	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2 3 1 4
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4139 AE4143 AE4260A AE4260A AE4260B AE4260B AE4245 AE4270 AE4211 AE4311	Ethics and Engineering for Aerospace Engineering**         Systems Theory         MSc Electives from all tracks         Course Name         Fluid-Structure Interaction         CFD 4: Uncertainty Quantification         CFD 3: Large Eddy Simulation         Hypersonic Aerodynamics         Fundamentals of Aeroacoustics         Experimental Applications of Aeroacoustics         Wind Resource and Wind Farm Yield         Advanced Aircraft Design II         Control and Operations Project (track 2 elective)         Nonlinear and Adaptive Flight Control         Helicopter Performance, Stability and Control	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 EC 4 2 3 3 2 2 4 4 4 4 4 3	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2 3 1 4 4 4
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4139 AE4143 AE4143 AE4260A AE4260B AE4260B AE4245 AE4245 AE4270 AE4311 AE4314 AE4314	Ethics and Engineering for Aerospace Engineering**         Systems Theory         MSc Electives from all tracks         Course Name         Fluid-Structure Interaction         CFD 4: Uncertainty Quantification         CFD 3: Large Eddy Simulation         Hypersonic Aerodynamics         Fundamentals of Aeroacoustics         Experimental Applications of Aeroacoustics         Wind Resource and Wind Farm Yield         Advanced Aircraft Design II         Control and Operations Project (track 2 elective)         Nonlinear and Adaptive Flight Control         Helicopter Performance, Stability and Control         Spacecraft Attitude Dynamics & Control	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 <b>EC</b> 4 2 3 3 2 2 2 4 4 4 4	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2 3 1 4 4 4 3
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4139 AE4143 AE4260A AE4260A AE4260B AE4260B AE4245 AE4270 AE4211 AE4311	Ethics and Engineering for Aerospace Engineering**         Systems Theory         MSc Electives from all tracks         Course Name         Fluid-Structure Interaction         CFD 4: Uncertainty Quantification         CFD 3: Large Eddy Simulation         Hypersonic Aerodynamics         Fundamentals of Aeroacoustics         Experimental Applications of Aeroacoustics         Wind Resource and Wind Farm Yield         Advanced Aircraft Design II         Control and Operations Project (track 2 elective)         Nonlinear and Adaptive Flight Control         Helicopter Performance, Stability and Control         Spacecraft Attitude Dynamics & Control Exercise         Helicopter Performance, Stability and Control	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 EC 4 2 3 3 2 2 2 4 4 4 4 4 3 3 3	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2 3 1 4 4 4
WM0324LR** WI2056LR AE4117 AE4138-18 AE4139 AE4139 AE4143 AE4260A AE4260B AE4260B AE4260B AE4245 AE4270 AE4245 AE4270 AE4311 AE4314 AE4313 AE4313P	Ethics and Engineering for Aerospace Engineering**         Systems Theory         MSc Electives from all tracks         Course Name         Fluid-Structure Interaction         CFD 4: Uncertainty Quantification         CFD 3: Large Eddy Simulation         Hypersonic Aerodynamics         Fundamentals of Aeroacoustics         Experimental Applications of Aeroacoustics         Wind Resource and Wind Farm Yield         Advanced Aircraft Design II         Control and Operations Project (track 2 elective)         Nonlinear and Adaptive Flight Control         Helicopter Performance, Stability and Control         Spacecraft Attitude Dynamics & Control Exercise         Helicopter Performance, Stability and Control         Spacecraft Attitude Dynamics & Control Exercise         Helicopter Performance, Stability and Control	MSc MSc Cat. MSc MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 <b>EC</b> 4 2 3 3 2 2 4 4 4 4 4 3 3 1	2,3 1 Period 3 4 3 2,3 1 2,3 1 2 1,2 3 1 4 4 4 3 3 3
WM0324LR** WI2056LR Code AE4117 AE4138-18 AE4139 AE4139 AE4143 AE4260A AE4260B AE4260B AE4260B AE4245 AE4270 AE4211 AE4311 AE4313 AE4313P AE4313P	Ethics and Engineering for Aerospace Engineering**         Systems Theory         MSc Electives from all tracks         Course Name         Fluid-Structure Interaction         CFD 4: Uncertainty Quantification         CFD 3: Large Eddy Simulation         Hypersonic Aerodynamics         Fundamentals of Aeroacoustics         Experimental Applications of Aeroacoustics         Wind Resource and Wind Farm Yield         Advanced Aircraft Design II         Control and Operations Project (track 2 elective)         Nonlinear and Adaptive Flight Control         Helicopter Performance, Stability and Control         Spacecraft Attitude Dynamics & Control Exercise         Helicopter Performance, Stability and Control	MSc MSc MSc MSc MSc MSc MSc MSc MSc MSc	3 4 EC 4 2 3 3 2 2 4 4 4 4 4 3 3 1 1	2,3 1 Period 3 4 3 2,3 1 2,3 1,2 3,3 1 1,2 3 1 4 4 4 3 3 4

Supervisory Control and Cognitive Systems

Manual Control & Cybernetics

AE4318

AE4319

3

4

MSc

MSc

2

2

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
AE4423	Airline Planning & Optimization	MSc	4	2
AE4424	Network Scheduling	MSc	3	3
AE4446	Airport Operations	MSc	4	3
AE4448	Agent-based Safety Risk Analysis	MSc	4	2,3
AE4454-16	Life Cycle Analysis and Production	MSc	3	3
AE4467	Numerical Methods for Aircraft Performance Analysis	MSc	3	3
AE4468	Airline Maintenance Operations	MSc	3	3
AE4470	Monte Carlo simulation of stochastic processes II	MSc	4	2
AE4874-11	Astrodynamics II	MSc	4	3
AE4S04	Introduction to Thermal Rocket Propulsion	MSc	1	1
AE4S07	Micropropulsion	MSc	4	1,2,3,4
AE4S50	Concurrent Engineering Challenge	MSc	4	1,2
AE4ASM501	Design of Lightweight Structures II	MSc	3	3
AE4ASM503	Sheet Metal Forming	MSc	3	3
AE4ASM504	Structural Integrity and Maintenance	MSc	3	3
AE4ASM507	Adaptive Aerospace Structures	MSc	3	3
AE4ASM508	Design of Self-healing materials	MSc	3	3
AE4ASM509	Design and Manufacturing of Wind turbine blades	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	3
AE4ASM520	Industrial Composite Manufacturing	MSc	2	4
AE4ASM514TU	Continuum Mechanics	MSc	4	3

## MSc courses at another TU Delft faculty strongly related to Aerospace

Code	Course Name	Cat.	EC	Period
CIE4601	Physics of the Earth and Atmosphere	MSc	5	1
ET3604LR	Electronic Circuits	Minor	3	1
ET4117	Electrical Machines Drives	MSc	4	2
ME41025	Robotics Practical	MSc	3	4
ME45000	Advanced Heat Transfer	MSc	3	1
ME45025	Introduction to Multiphase Flow	MSc	5	3,4
ME45030	Turbulence	MSc	5	3,4
ME45100	Fuel Cell Systems	MSc	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
WI4007TU	Fourier and Laplace Transform	MSc	4	3
WI4011-17	Computational Fluid Dynamics	MSc	6	1,2
WI4014TU	Numerical Analysis	MSc	6	1,2
WI4019	Non-linear Differential Equations	MSc	6	3,4
WI4210	Scientific Computing	MSc	6	1,2
WI4460TU	Monte Carlo Simulation of Stochastic Processes I	MSc	3	1
WI3150TU	Partial Differential Equations A	MSc	3	1

#### REMARKS:

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

<sup>\*</sup> Please inform us at <u>exchange-ae@tudelft.nl</u> if you are taking this course

Academic Calendar will be announced later, these are approximate dates!

Starting period	from/to
1 - semester I	September 2, 2019 - November 8, 2019
2 - semester I	November 11, 2019 - January 31, 2020
3 - semester II	February 10, 2020 - April 17, 2019
4 - semester II	April 20, 2020 - July 3, 2020

#### Important:

BSc students can take MSc courses as long as they have met 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
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
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
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

## Faculty of Applied Sciences

#### English courses available for BSc exchange students

This is a conditional list. The online study guide will be updated in April-May 2019. Please always carefully check the study guide for the latest updates.

#### Applied Physics - BSc & MSc Courses for 3rd year BSc students Please notice: MSc AP courses in quarters but BSc AP(TN) courses in octals! This is a selection. For a complete overview of all available MSc AP courses please see <u>http://ap.msc.studyguide.tudelft.nl</u>

Course Code	Course Name	Cat.	EC	Period (Quarters- MSc AP or Octals – BSc AP)
TN1651	Introduction to Biophysics	BSc	3	2
TN2305	Quantummechanics for the minor	BSc	4	1
TN2624NB	Statistical Physics	BSc	4	3
TN2612	Theory of Relativity	BSc	3	1
TN2545	Systems and Signals	BSc	6	3,4
TN1951	Physics of Lasers	BSc	3	4
TN2304	Quantum mechanics 1	BSc	3	5
TN2624	Statistical Physics	BSc	6	7,8
AP3261	Mesoscopic Physics	MSc	6	1,2
AP3303	Applications of Quantum Mechanics	MSc	3	2
AP3311	Neutrons, X-Rays and Positrons for Studying Microscopic Structures and Dynamics	MSc	6	3,4
AP3511	Biophysics	MSc	6	1,2
AP3582	Medical Physics of Photon and Proton Therapy	MSc	6	3,4
AP3352	Introduction to Nuclear Science and Engineering	MSc	6	1+2
AP3991	Research Project	B&M	12-30	All

	Minor Physics for Non-Physics Students					
Course Code	Course Name	Cat.	EC	Period (Octals)		
TN2305	Quantum Mechanics for the minor	Minor/BSc	4	2		
TN2625	Statistical Physics for the minor	Minor/BSc	4	3		
TN2894	Introduction to Methods in Physics and Mathematics	Minor/BSc	4	1		
TN2993	Experimental and Integrating Final Project	Minor/BSc	9	4		
TN2612	Theory of Relativity	Minor/BSc	3	1		
NB2011	Thermodynamics and Transport	Minor/BSc	3	2		
TN1651	Introduction to Biophysics	Minor/BSc	3	4		

NEW MINOR Fall 2019: Quantum Science and Quantum Information (30 EC)					
Prerequisit	Prerequisites: for Applied Physics students with knowledge of quantum mechanics. More detailed information will follow in Spring 2019.				
Course Codes	Course Names				
To be announced	To be announced	Minor/BSc	30	1+2	

Chemical Engineering - BSc & MSc courses for 3rd year BSc students (period in quarters) This is a selection. For a complete overview of all available MSc CE courses please see <u>http://chem.msc.studyguide.tudelft.nl</u>						
Course Code     Course Name     Cat.     EC     Period (Quarters)						
CH3131	Applied Numerical Mathematics	MSc	5	1		
AP3352	Introduction to Nuclear Science and Engineering	MSc	6	1+2		
CH3562	Nanoparticle Technology	MSc	3	3		
CH3141	Molecular Thermodynamics	MSc	5	1		
CH3073	Separation Processes, Design and Operation	MSc	3	3		
CH3632	Chemistry and Physics of Solar Cells	MSc	6	3		
CH3043	Process Dynamics & Control	MSc	3	2		
CH3861*	Hydro Carbon Processing* (cancelled)	MSc	3	3		
CH3082**	Chemical Technology** (cancelled)	MSc	3	-		
CH3783	Materials Chemistry for the Nuclear Fuel Cycle	MSc	3	3		
CH3771	Nuclear Chemistry	MSc	6	3		
CH3622	Process Intensification	MSc	3	3		
CH3982	Literature Study	B&M	3-6	all		
CH3991all	Research Project	B&M	15-30	all		
CH3542	Inorganic Materials	MSc	3	3		

BSc Life Science & Technology+					
Course Code	Course Name	Cat.	EC	Period (Quarters)	
LB2801	Bio-Based Materials in a Circular Economy	BSc	4	1	
LB2951	Cell Signaling and Biophysics	BSc	8	LU	
LB2961	Biocatalysis	BSc	5	1	
LB2971	Inorganic Chemistry in Life	BSc	5	LU	
LB2941	Quantitative Imaging in Life Sciences	BSc	5	LU	
LB2981	Literature, Research and Validation+*	BSc	3	1,2	

#### MSc Life Science & Technology Please see study guide for complete overview: <u>www.studyguide.tudelft.nl</u> Acceptance based on academic knowledge and educational background.

	Nanobiology (Propaedeutic) + +					
Course Code	Course Name	Cat.	EC	Period (Q)		
NB1022	Genetics (EMC)	Bsc(10)	4	1		
NB1012	Biochemistry (EMC)	Bsc(10)	3	2		
NB1016	Molecular Biology (EMC)	Bsc(10)	3	3		
NB1072	Physical Biology of the Cell part 1 (EMC)	Bsc(5)	3	4		
NB1132	Biophysics	Bsc(5)	3	3		
NB1140	Physics 1a	Bsc(5)	4	2		
NB1143	Physics 1b	Bsc(5)	3	3		
NB1102	Chemistry-1(EMC)	Bsc(5)	3	1		
NB1110	Chemistry-2(EMC)	Bsc(5)	3	2		
WI1415NB	Analysis-1	Bsc(5)	5	1		
WI1423NB	Analysis-2	Bsc(5)	5	2		
WI1416NB	Analysis-3	Bsc(5)	3	4		
WI1142NB	Linear Algebra	Bsc(5)	3	4		

Nanobiology (Head phase, 2nd year) + +					
Course Code	Course Name	Cat.	EC	Period (Q)	
NB2071	Physical Biology of the Cell part 2	Bsc(5)	3	1	
NB2031	Evolutionairy and Developmental Biology(EMC)	Bsc(5)	6	2	
NB2111	Evolution	Bsc(5)	3	3	
NB2041	Optics and Microscopy	Bsc(10)	3	3	
NB2141	Physics 2	Bsc(5)	3	1	
NB2061	Differential equations	Bsc(5)	3	1	
NB2171	Statistics	Bsc(5)	3	3	
NB2121	Image analysis(EMC)	Bsc(5)	3	4	
NB2181	Computational Science	Bsc(5)	3	3,4	
NB2161	Bioinformatics	Bsc(5)	4,5	4	

Minor Communication Design for Innovation (CDI) Minor preferably to be taken as one complete course package.				
Course Code	Course Name	Cat.	EC	Period (Q)
SL4072TU	Sociology and psychology of collaboration and social networks	BSc	6	1
SL4092TU	C-Lab part 1: analysis	BSc	6	1
SL4081TU	Conversation strategies (masterclass)	BSc	1	1
SL4131TU	Visual Thinking (masterclass)	BSc	1	1
SL4181TU	Innovation through teamwork (masterclass)	BSc	1	1
SL4062TU-16	Communication, Marketing & Innovation	BSc	4	2
SL4152TU-16	C-Lab part 2: synthesis	BSc	9	2
SL4161TU	Intercultural communication	BSc	1	2
SL4191TU	From Knowledge to Advice	BSc	1	2

#### <u>REMARKS</u>

- \* Hydro Carbon Processing is only given in odd years
- \*\* Chemical Technology is only given in even years
- + For Life Science & Technology, some courses are given at Leiden University. These course names have been marked with (LU). Please be aware of extra travel time.
- ++ For Nanobiology, some courses are given at Erasmus MC (Rotterdam). These have been marked with (EMC). Please be aware of extra travel time.
- ++ For Nanobiology, all courses have a maximum amount of exchange students, indicated with x at BSc(x).
- +\* Course LB2981 is part of the minor Advanced LST, just like the other courses in this section. This course can only be followed when the full minor is chosen.

## Faculty of Architecture and the Built Environment

#### Provisional list course packages 2019-2020 for EXCHANGE STUDENTS

Due to issues concerning scheduling and availability, we cannot offer our students a free choice of subjects. Within the study exchange program, the Faculty of Architecture and the Built Environment allows:

Master level students to make a choice from our Master 1 programs during the first semester (autumn) During the second semester (spring) we will offer a MSc2 design course + 3 elective courses (the options will be communicated later).

Bachelor level students have a choice from our English taught Bachelor minor programs, which are only offered in the first semester (autumn).

Below you will find the list of course packages we offer. Since we cannot guarantee enrolment in your first choice, it is obligatory to mention <u>a second choice and a third choice</u> in the application system.

In case you apply for two semesters you only have to mention the three choices for the <u>first</u> semester. You can enrol yourself for the second semester in November 2019. Any choices for the second semester will not be taken into account. Please note that it is still possible that some minor changes might occur in the offered course packages. In May the courses for the preceding Academic Year will be published on our <u>website</u> again.

In the course catalogue (<u>www.studyguide.tudelft.nl</u>) you will find more detailed information on the courses. A manual to the study guide can be found via this link: <u>studyguide manual</u>

Once you have submitted your application it is not allowed to switch programmes.

#### English taught Bachelor minors (autumn only)

NEW: Bachelor students can choose one 15 ECTS course offered in Q1 and one that is offered in Q2.

\*These courses can only be followed in combination with matching Q1 course.

Minor: Code	Course name	Autumn - Q1	Autumn - Q2
BK-Mi-123-18	House of the future (only offered as 30 ECTS programme)	x	х
BK-MI-193-18	Cities Migration and Socio-Spatial Inequality (CMSI)	x	
BK-MI-197-18	Spatial Computing in Architectural Design		х
BK-MI-198-18	Architecture Presentation: Visions Reviewed		х
BK-MI-203-18	Archineering Q1	х	
BK-MI-204-18	Archineering Q2*		х
BK-MI-216-18	Minor Sustainable Urbanism: The Green-Blue City		х
BK-MI-209-18	Spaces of Display Q1	х	
BK-MI-210-18	Spaces of Display Q2*		х
BK-MI-211-18	Heritage and Design Q1	х	
BK-MI-212-18	Heritage and Design Q2*		х

	BK-Mi-123-18 House of the future				
Course Code         Course Name         Credits         Start education         Educat perio					
BK7800	Project House of the Future (Design)	15.0	1	1, 2	
BK7810	Analysis and Model Study (Design Analysis)	7.5	1	1, 2	
BK7820	Imaging and Communication (Form Study)	7.5	1	1, 2	

В	BK-MI-193-18 Cities Migration and Socio-Spatial Inequality (CMSI)				
Course Code         Course Name         Credits         Start education         Education					
BK7470	CMSI Lecture Series & Review Paper	6.0	1	1	
BK7471	CMSI Collaborative Project: Tackling Spatial Inequality	6.0	1	1	
BK7472	CMSI Engaging with Practice of Spatial Inequality	3.0	1	1	

	MI-197-18 Spatial Computing in Architectural Design				
Course Code     Course Name     Credits     Start education     Education					
BK7084	Computational Simulations	6.0	2	2	
BK7083	Computational Design Studio	9.0	2	2	

BK-MI-198-18 Architecture Presentation: Visions Reviewed							
Course Code	Course Code         Course Name         Credits         Start education         Education period						
BK7140	Presenting Project Facts	3.0	2	2			
BK7141	Presenting Project Visions	3.0	2	2			
BK7142	Presenting Project Prospects	9.0	2	2			

BK-MI-203-18 Archineering Q1				
Course Code	Course Name	Credits	Start education	Education period
BK7460-13	Archineering 1	15.0	1	1

BK-MI-204-18 Archineering Q2				
Course Code	Course Name	Credits	Start education	Education period
BK7461	Archineering 2	15.0	2	2

BK-MI-216-18 Minor Sustainable Urbanism: The Green-Blue City				
Course Code	Course Name	Credits	Start education	Education period
BK7215	Basic techniques for sustainable urban design	5.0	2	2
BK7225	City and Public Space: Sustainable Urban Design	10.0	2	2

BK-MI-209-18 Spaces of Display Q1 (for this minor is a selection procedure, please send your portfolio and motivation to <u>L.M.M.deWit@tudelft.nl</u> )				
Course Code	Course Name	Credits	Start education	Education period
BK7064	Spaces of Display 1; retail and exhibition design (design project)	10.0	1	1
BK7066	Tools for Spaces of Display 1	5.0	1	1

BK-MI-210-18 Spaces of Display Q2				
Course Code	Course Name	Credits	Start education	Education period
BK7065	Spaces of Display 2; retail and exhibition design (design project)	10.0	2	2
BK7067	Tools for Spaces of Display 2	5.0	2	2

	BK-MI-211-18 Heritage and Design Q1					
Course Code	Course Name	Credits	Start education	Education period		
BK7550	Landscape and Transition	5.0	1	1		
BK7551	History of Dutch Cities and Landscapes	5.0	1	1		
BK7555	City and Transformation	5.0	1	1		

BK-MI-212-18 Heritage and Design Q2				
Course Code	Course Name	Credits	Start education	Education period
BK7552	Heritage: Theory and Practice	5.0	2	2
BK7553	Architecture and Re-use	5.0	2	2
BK7554	History of Dutch architecture and art	5.0	2	2

#### Faculty specific requirements & restrictions

The Faculty of **Architecture and the Built Environment** offers fixed course packages to incoming exchange students.

Bachelor students can only choose from the English-taught Bachelor minor programmes which are only taught in the first (autumn) semester.

In the first (autumn) semester incoming master exchange students can only choose a complete 'MSc1' package.

In the second (spring) semester incoming master exchange students can can choose a MSc2 design course + 3 elective courses (the options will be communicated later.

It is not allowed to combine courses from different 'MSc1' packages and 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.

## Faculty of Civil Engineering and Geosciences

#### English BSc courses CIE 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 CodeCourse NameCat.ECPeriod (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 Pureus 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

	Minor Courses			
Course Code	Course Name	Cat.	EC	Period (Q)
CT3101	Project Management Basics	Minor	5	1
CT3102-15	Introduction to project finance & legal aspects of projects	Minor	5	1
*CT3367	Introduction to Water and Climate	Minor	4	1
*CT3411-16	Waterwerken in de prakijk	Minor	5	1,2

*CT3411-16	Meten aan water	Minor	4	2
CTB3360	Water System Analysis	Minor	4	1
*CTB3366	Rainfall in the City	Minor	4	1
**SPM6102	Procesmanagement en Besluitvorming	Minor	5	2
**WB3501	Fit-for-purpose Projectmanagement	Minor	5	2
CT3200	Infrastructure Planning & Governance	Minor	3	1

\*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

The Faculty of Civil Engineering and Geosciences has only limited possibilities to accept students who would like to undertake research-based project-/thesis work during their semester at TU Delft.

Only projects with a maximum workload of 10 EC are allowed and that students need to combine such a project with courses to obtain at least 15 EC.

Students are responsible themselves to find a suitable project in time and to provide the supervisor and the exchange officer with a work plan before arrival (please ask the CEG exchange officers for a template of this workplan).

Students wishing to do their thesis or a project for more than 10 ECTS can't be admitted as exchange students, but they will have to make this arrangement via the selected research group as guest researcher or trainee.

Exchange students at the Faculty of Civil Engineering and Geosciences follow at least 70% of their courses at this faculty except for students wishing to follow interfaculty study programmes TIL and CME.

Attending courses and obtaining credits at the Faculty of Architecture and the Built Environment is in principle not permitted. It is not allowed to extend your exchange period after application.

## Faculty Electrical Engineering, Mathematics and Computer Science

#### 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 catalogue.

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 catalogue.

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 BSc courses available for exchange students

	BSc Courses
	Minor Electronics for Robotics (Electrical Engineering)
	https://www.tudelft.nl/en/eemcs/study/minors/electronics-for-robotics/
	Minor Electrical Sustainable Energy Systems
ht	tps://www.tudelft.nl/en/eemcs/study/minors/electrical-sustainable-energy-systems/
	Minor Finance
	https://www.tudelft.nl/en/eemcs/study/minors/finance/
	Minor Mathematics and Finance
	https://www.tudelft.nl/en/eemcs/study/minors/mathematics-and-finance/
	Minor Computational Science and Engineering (Applied Mathematics)
htti	os://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			
TW1030	Linear Algebra 1	BSc	5	1
TW1021	Kaleidoscope	BSc	6	1
TW1010	Mathematical Structures	BSc	6	1,2
TW1040	Analysis 1	BSc	5	2

TW1090	Introduction to Programming	BSc	5	2
EE1510TW	Mechanics and Theory of Relativity	BSc	6	3
TI1520TW	Algorithms and Data Structures	BSc	6	3
EE1510TW	Electricity and Magnetism	BSc	6	3
TW1050-A	Modelling-A	BSc	5	3
TW1070	Analysis 2	BSc	6	3,4
TW1061	Algebra 1	Bsc	6	3,4
TW1050-B	Modelling-B	BSc	5	4
TW1080	Introduction to Probability Theory	BSc	5	4
	Applied Mathematics: 2nd yea	r		
TW2011	Linear Algebra 2	BSc	6	2
TW2020	Optimization	BSc	6	1
TW2030	Ordinary Differential Equations	BSc	6	2
TW2040	Complex Function Theory	BSc	6	4
TW2050-A	Modelling 2A	BSc	3	3
TW2050-B	Modelling 2B	BSc	3	4
TW2060	Numerical Methods 1	BSc	6	3,4
TW2070	Partial Differential Equations	BSc	6	3,4
TW2080	Introduction to Statistics	BSc	6	1
TW2090	Real Analysis	BSc	6	1,2
TW2510	Decision Theory	Bsc	6	3
TW2520	History and philosophy of Mathematics	BSc	6	1,2
TW2530	Systems Theory	BSc	6	3
TW2550	Advanced Statistics	BSc	6	3
TW2560	Applied Mathematics:Codes and Cryptosystems	BSc	6	3
TW2570	Markov Processes	BSc	6	3
	Applied Mathematics: 3rd year	r		
TW3530	Mathematical Physical Models	BSc	6	3
TW3560	Logic	BSc	6	1,2
TW3520	Numerical Methods 2	BSc	6	3
TW3530	Combinatorial Optimization	BSc	6	3
TW3560	Advanced Probability	BSc	6	3
TW3520	Fourier Analysis	BSc	6	1,2
TW3530	Differential Geometry	BSc	6	3

BSc Computer Science				
Course Code	Course Name	Cat.	EC	Period (Q)
	Computer science: 2nd year			
CSE 2115	Software Engineering Methods	BSc	5	2
CSE2310	Algorithm Design	BSc	5	2
CSE2120	Concepts of Programming Languages	BSc	5	3
CSE2315	Automata, Languages and Computability	BSc	5	3
CSE2220-A	Signal Processing	BSc	5	1
CSE2225-B	Image Processing	BSc	5	2
CSE2230-C	Multimedia Analysis	Bsc	5	3
CSE2420-A	Digital Systems	BSc	5	1
CSE2425-B	Embedded Software	BSc	5	2
CSE2430-C	Operating Systems	BSc	5	3
CSE2530-C	Computational Intelligence	BSc	5	3

CSE2520-A	Big Data Processing	BSc	5	1
CSE2525-B	Data Mining	BSc	5	2
CSE2510	Machine Learning	BSc	5	1
CSE2215	Computer Graphics	BSc	5	1
	Computer science: 3rd year			
TI3306	Complexity theory	BSc	5	3
WM0388TI	IT and Values	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	Telecommunications A	BSc	5	3
EE2E21	Sustainable Energy Supply	BSc	5	3
EE2S31	Signal Processing	BSc	5	4
EE2T21	Telecommunications B	BSc	5	4
	Elecrical 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

#### English courses available for exchange students

	BSc Courses			
Course Code	Course Name	Cat.	EC	Period (Q)
IO1016ZI	Design Drawing for Erasmus and Adaptation	BSc	3	2, 4
IO1040-17	Form and experience	BSc	7,5	2
IO1080-13	Research and design	BSc	7,5	4
IO2010-15	PO3, Design Driven Innovation	BSc	7,5	2
IO2031	Stategic Product Innovation	BSc	7,5	1
IO2060-15	Interaction and electronics	BSc	7,5	3
IO2081	Design for Sustainability	BSc	7,5	4
IO3010	Designing Connected Experiences	BSc	7,5	3
103020	Design and Cultural Impact	BSc	7,5	3
103030	Design Visualisation	BSc	7,5	3
IO3040	Software	BSc	7,5	3
IO3045	Video for Designers	BSc	7,5	3
IO3050	Mechatronics	BSc	7,5	3
103060	Creating in Project Teams	BSc	7,5	3
103075	Towards Circular Product Design	BSc	7,5	3

	Minor People in Transit *			
Course Code	Course Name	Cat.	EC	Period (Q)
IO3610	Human Mobility	Minor	3	1
103620	Automotive Styling	Minor	4	1
103630	Automotive Technology	Minor	7	7
IO3640-12	Mobility Systems Design	Minor	7	2
IO3650	Automotive Skills	Minor	6	2
WB3190IO	Automotive Safety and Human Factors	Minor	3	2

Minor Interactive Environment*									
Course Code	Course Name	Cat.	EC	Period (Q)					
BK 7500	Design of Prototypes	Minor	7,5	1					
BK 7511	Architectural prototypes	Minor	7,5	1					
IO3850	Advanced prototyping for design	Minor	7,5	1					
IO3851	Personal prototyping project	Minor	7,5	1					

	Minor Advanced Prototyping*									
Course Code	Course Name Cat. EC Period									
	courses not defined yet	minor	30	1						

	Minor Sustainable Design Engineering*										
Course Code	Course Name	Course Name Cat. EC Period (Q)									
	courses not defined yet	minor	30	1							

\* Minors can only be taken as a whole, courses are not offered separately

#### Faculty specific requirements & restrictions

The Faculty of **Industrial Design Engineering** offers fixed course packages. Information is available <u>here</u>.

## Faculty of Mechanical, Maritime and Materials Engineering

#### English courses available for exchange students

At the faculty of Mechanical, Maritime and Materials Engineering we do not offer English BSc subjects for exchange student. Exchange (also BSc) students 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.

Exchange students can enrol in any MSc course within the faculty even if they are electives which can be outside our faculty at other faculties within TU Delft. Students can chose from any master and are not limited within one master track. For more information please check the <u>study guide</u>

For further questions and help with finding the best subjects for your case please email our international office: <u>internationaloffice-3me@tudelft.nl</u>

## Faculty of Technology, Policy and Management

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

BSc Courses								
Course Code	Course Name	Cat.	EC	Period (Q)				
TB241TA	Logistic 2	В	5	1				
TB142IB:	Computer and Information systems	В	5	4				
TB242IA:	Intelligent Data Analysis	В	5	2				
TB341IB:	I&C risk and control	В	5	3				
TB243IA	Interconnected World	В	5	4				
SPM6010	System dynamics water specialization	В	4	1,2,3,4				
SPM6102	Process management and decisionmaking	В	5	2				
TBM007A	Critical thinking in engineering	В	3	4				
TBM010A	Economics of offshore wind energy	В	3	1				
WM0376TU	Ethics of Technological Risks	В	5	3				
WM0378TU	Value sensitive design	В	3	2				
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							
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 only accepts students to take courses. A (research) project is only allowed if specifically agreed upon in a bilateral agreement.

## TU Delft Calendar, Academic Year 2019/2020

#### **1ST SEMESTER**

OT OLINEO																						
Week no.	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5
Week type	С	С	С	С	СТ	С	С	CW	CWT	Т	С	С	С	С	СТ	С	V	V	С	CW	CWT	Т
Teaching week	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	2.1	2.2	2.3	2.4	2.5	2.6	X-n Holi	nas days	2.7	2.8	2.9	2.10
Monday	Open. Acad. year	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27
Tuesday	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28
Wednesday	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29
Thursday	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30
Friday	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	31
Saturday	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1
Sunday	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2
	Sept	•			Oct	•	•		•	Nov			•	Dec	•	•		Jan	•		•	

#### 2ND SEMESTER

				1	1	1			T	1	1		1	1	1						1	
Week no.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Week type	V	С	С	С	С	СТ	С	С	CW(T)	CWT	т	С	С	С	С	С	СТ	С	С	CW	CWT	Т
Teaching week	Spring	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11
Monday	3	10	17	24	2	9	16	23	30	6	Easter Monday	20	Kings Day	4	11	18	25	Whit Monday	8	15	22	29
Tuesday	4	11	18	25	3	10	17	24	31	7	14	21	28	Liber- ation Day	12	19	26	2	9	16	23	30
Wednesday	5	12	19	26	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1
Thursday	6	13	20	27	5	12	19	26	2	9	16	23	30	7	14	Ascen- sion Day	28	4	11	18	25	2
Friday	7	14	21	28	6	13	20	27	3	Good Friday	17	24	1	8	15	Statutory Holiday	29	5	12	19	26	3
Saturday	8	15	22	29	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4
Sunday	9	16	23	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5
	Feb				March	1			April					May				June				July

#### SUMMER PERIOD 2020

Week no.	28	29	30	31	32	33	34	35
Week type	V	V	V	V	V	Т	V	V
Teaching week	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8
Monday	6	13	20	27	3	10	17	24
Tuesday	7	14	21	28	4	11	18	25
Wednesday	8	15	22	29	5	12	19	26
Thursday	9	16	23	30	6	13	20	27
Friday	10	17	24	31	7	14	21	28
Saturday	11	18	25	1	8	15	22	29
Sunday	12	19	26	2	9	16	23	30
	July				Aug			

C =	Lectures and other teaching activities
CT =	Lectures and examinations BSc-programmes
CW =	Lectures / free week; varies per study programme
CWT =	Lectures/free week/examinations; varies per study programme
Τ=	Tentaminations / Resits
V =	No Teaching, Vacation or public holiday

31 August 2020: start Academic Year 2020-2021

# Student Exchange Fact sheet

2019-2020



## Why study at TU Delft?

TU Delft is the largest technical university in the Netherlands and covers practically the entire spectrum of engineering sciences. We are one of the top 20 universities in Europe, and one of the top 20 universities of technology worldwide (THE and QS ranking). At Delft University of Technology, we aim for a balance between pursuing world-class academic excellence, providing high quality education and developing expert solutions for societal and sustainable challenges. In this, our students play a pivotal role as educating the next generation of responsible top-level engineers is the biggest impact that TU Delft has on society. Our graduates make a difference by combining technical expertise with personal and professional attributes for effective leadership. Also key at TU Delft is the integration of research education and innovation.



#### How to apply

The faculty or department where you will be enrolled is responsible for advising, informing, selecting and accepting applications for international exchange students.

Exchange students can apply online. Instructions are available on our <u>website</u>. Your application will be sent to the <u>Faculty</u> Exchange Coordinator.

After the application deadline of either **1 October** or **1 April** you will receive your admission letter via email from the Education Service Centre. This will take an estimated 4 to 8 weeks. For some faculties this may take longer. Follow the instructions in the email to accept your offer. Exchange students are generally accepted by faculties for one or maximum two semesters and some faculties may accept exchange students for a research-based project such as a thesis project.

Note that any final thesis project conducted at TU Delft is the responsibility of your home university. Exchange students are not eligible for a TU Delft diploma.

Any student seeking to undertake a researchbased project at TU Delft is responsible for arranging their own suitable project and finding a TU Delft supervisor. This must be organised well in advance.

#### Application deadlines and Academic Calender

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1st Semester (Autumn)
1 April (23:59 CET) (application intake starts 1 March)
2nd Semester (Spring)
1 October (23:59 CET) (application intake starts 1 September)

Applications that are incomplete or received after the deadline will not be considered

#### 1st semester:

2 September 2019 – 31 January 2020 1st period (September – November) and 2nd period (November - January)

#### 2nd semester:

10 February 2020 – 3 July 2020 *3rd period* (February- April) and *4th period* (April - July).

For information about lecture hours, please see our <u>timetable</u>





#### Course selection and faculty specific restrictions

TU Delft programmes are academically challenging and rigorous, therefore students are expected to be motivated and dedicated throughout their studies. Should the results of an exchange student appear to be unsatisfactory, they will be discussed with the student and the home institution.

We expect students to carefully prepare a study plan according to our guidelines and discuss it with 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. <u>TU Delft's course catalogue</u> outlines all available courses for 2019-2020. The study plan should be based on this current course catalogue. Minor changes may occur as the course catalogue is updated every May. Students are advised to carefully check in which period the courses you wish to follow will take place. A <u>study</u> <u>guide manual</u> is available to help. Students can also select Bachelor level courses by consulting <u>the list of TU Delft -</u> <u>English courses</u> on our website.

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.

#### Required number of ECTS, grading system and Erasmus+ learning agreement

Students are allowed to choose their courses, but they are required to obtain a minimum of 24 EC (European Credits) per semester. Less than 24 EC is not acceptable, even if allowed by your home university. The number of EC should not exceed 30. The majority of these courses (at least 51%) should be chosen from one faculty only with the exception of Civil Engineering and Geosciences and the faculty of Industrial Design Engineering which require minimum 70% of courses chosen within their own faculty. Courses chosen outside the selected faculty will only be considered with the approval of the exchange coordinator.

It is highly recommended to choose between courses that evenly distribute the workload within one semester. The advisable study load is 12-15 EC per quarter. Each student is expected to attend classes, submit assessments and sit final exams for all courses in which he/she is enrolled at TU Delft.

TU Delft uses the European Credit Transfer System (ECTS) shared by all universities in the European Union. One academic year consists of 60 EC. One EC is equivalent to a study load of 28 hours (including lectures, laboratory courses, practical work, assignments, projects, private work, examinations or other assessment activities). Bachelor programmes at TU Delft consist of 180 EC and Master programmes, 120 EC.

Here you can find information about the <u>Dutch grading</u> system.

Students coming to TU Delft with Erasmus+ can send their Learning Agreement to the faculty exchange coordinators via email or upload it during the application phase.



#### Language of instruction and language requirements

The language of instruction for most bachelor programmes is Dutch. The Bachelor's programmes Aerospace Engineering, Applied Earth Sciences, Computer Sciences and Engineering and Nanobiology are fully taught in English. There are over 250 available courses taught in English in other TU bachelor programmes. All Master courses are taught in English.

#### TU Delft Language skills policy for Erasmus+ partner universities

We trust our partner universities to nominate students with language level C1 or higher in English. Students do not need to provide test results; the statement included in the <u>Nomination Letter</u> from the home university is sufficient.

#### TU Delft language requirements for non-Erasmus+ partner universities

- an original TOEFL test with an overall band score of at least 90;
- or an IELTS (academic version) with an overall band score of at least 6.5;
- or proof that you have passed the University of Cambridge 'Certificate of Proficiency in English (CPE)', University of Cambridge 'Certificate in Advanced English (CAE)'

#### The following students are exempted from taking the English language test:

- Nationals from the USA, U.K., Ireland, Australia, New Zealand, Canada, Switzerland and Singapore
- · BSc and MSc graduates who obtained their qualification in one of the abovementioned countries;
- Students currently enrolled in a Bsc/Msc programme in one of the abovementioned countries where the degree is fully taught in English and the home university can provide a statement confirming this.

#### **Practical Matters**

#### **Tuition fees and finances**

Exchange students must remain enrolled and pay tuition fees to their home university and are therefore exempt from paying tuition fees at TU Delft. Besides incidental and set-up costs, the costs of living and study, is estimated to be between 850 and 1,100 Euro per month.

#### Visa/residence permit requirements

At TU Delft we offer assistance to non-EU students in arranging visa and residence permits. Non- EU students coming to the Netherlands are required to meet specific visa or residence permit requirements. Non-EU students coming to TU Delft must provide proof of sufficient financial means to support themselves for the period of stay. Students will receive more information about this after they have been admitted (tudelft.nl/visa).

#### Accommodation

TU Delft has partnered with various housing agencies in the greater-Delft region to

offer accommodation to students coming from abroad however TU Delft cannot guarantee <u>accommodation</u> to all incoming exchange students as the number of available options is limited while demand is increasing. To increase ones chances of obtaining accommodation through TU Delft's housing service, students are advised to finalize their application procedure as soon as possible as housing is offered on a first come first served basis.

Students who choose the 2nd semester have more chances of finding accommodation through TU Delft. Finding a room in Delft can be difficult and time-consuming. As most university cities in the Netherlands, Delft has a shortage of affordable student accommodations, a list of private providers is available here.

#### Health and liability insurance

All the information relevant on this topic are available on our insurance page.

#### Students and jobs

Students may be permitted to engage in part-

time employment either paid or unpaid, only prior approval of the faculty exchange coordinator. Further <u>conditions</u> may apply, please consult the <u>Immigration and Naturalisation Service</u> website.

#### Introduction period

Closer to the starting of the programme exchange students will find more information on our website about the <u>introduction period</u> at TU Delft.

#### Transcript of Records upon departure

Exchange students are advised to request an official transcript of records at the end of their study period from the faculty coordinator for international exchange. Transcript of records are provided within 5 weeks from the end of the exam period.

At the end of their exchange the Faculty of Architecture and the Built Environment will email their departing students a "Grade Transfer" form in order to obtain the Transcript of Records.



## TU Delft Academic culture & Code of Conduct

TU Delft is a highly valued and rated institution recognized worldwide for the quality of its academic environment. Our exchange students enrich our <u>academic culture</u> and offer an invaluable contribution to learning.

We aim to assist Exchange Students in understanding local regulations and customs and our policies.

Information concerning students' rights and responsibilities can be found on our website.

#### **ESN Delft and InterDelft**

<u>Erasmus</u> Students Network Delft and InterDelft aim to provide an excellent experience for all international students who have chosen TU Delft by enhancing cultural awareness among all students.

#### The Netherlands and Delft

Coming to the Netherlands you will find yourself in the world's fourth happiest nation, and Dutch youngsters seem to be the happiest in the world, according to recent surveys. The country scores in the top five for most European quality of life indicators, including life expectancy, median income, water quality, personal freedom and education. Dutch people tend to be open and easy to approach, and they can be very outspoken. All people speak Dutch as their first, and English as their second language. That makes life easy in the Netherlands. studyinholland.nl

Delft is an interesting and historic town located between the larger cities of The Hague and Rotterdam. The city is known for the painter Johannes Vermeer and the Delft blue pottery. You will find a great many things that will help you to enjoy student life, including numerous cafes and pubs, cinema and theatre. There are also many reasonably-priced restaurants with national and international cuisine. Most students cycle from home to campus and back, day and night, all year long, come rain or sunshine.

#### The TU Delft Campus

Naturally, you will spend a lot of time on our TU Delft campus. It is a little town within a town, only a ten minute walk from Delft city centre, with enough study places, project facilities, Wi-Fi, green spaces, a super market, restaurants, coffee bars and other amenities you may need to make it your home away from home. Our library with the green roof is the main meeting point for those in search for information, study places and relaxation. <u>campus.tudelft.nl</u>

#### **Useful websites**

<u>TU Delft corporate story</u>
 <u>Study and Student Associations</u>

Sports and Culture





680 incoming exchange students







30+ MSc programmes





23.461 students

#### Contact

Contact Centre Education & Student Affairs (for online application questions and practical matters like visa or housing) contactcentre-esa@tudelft.nl

#### **Faculty Exchange Coordinators**

(for course information and admission) You can find the detailed contact information per faculty on the <u>website</u>.

