Course of Study Green Technologies: Energy, Water, Climate (Study Cohort w23)

Legend:

Core Qualification Compulsory	Specialisation Compulsory	Focus Compulsory	Thesis Compulsory
Core Qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

Sample course plan T Bachelor Green Technologies: Energy, Water, Climate (GTBS) Dual study program

Specialisation Energy Technology

1	**Mathematics I** Mathematics I VL 4 Mathematics I HÜ 2 Mathematics I GÜ 2	**Technical Thermodynamics I** Technical Thermodynamics I VL 2 Technical Thermodynamics I HÜ 1 Technical Thermodynamics I GÜ 1	**Basics of Electrical Engineering** Basics of Electrical Engineering VL 3 Basics of Electrical Engineering GÜ 2	**Fundamentals of Fluid Mechanics** Fundamentals of Fluid Mechanics VL 2 Fluid Mechanics for Process Engineering HÜ 2 Fundamentals on Fluid Mechanics GÜ 2	**Heat and Mass Transfer** Heat and Mass Transfer VL 2 Heat and Mass Transfer GÜ 1 Heat and Mass Transfer HÜ 1	**Mechanical Engineering: Design (part 2)** Team Project Design Methodology PBL 2 Mechanical Design Project II PBL 3
2						
3						
4						**Reciprocating Machinery (part 2)** Internal Combustion Engines I VL 2 Internal Combustion Engines I HÜ 1
5						
6						
7		**Mathematics II** Mathematics II VL 4 Mathematics II HÜ 2 Mathematics II GÜ 2	**Technical Thermodynamics II** Technical Thermodynamics II VL 2 Technical Thermodynamics II HÜ 1 Technical Thermodynamics II GÜ 1	**Sanitary Engineering I** Wastewater Disposal VL 2 Wastewater Disposal HÜ 1 Drinking Water Supply VL 2 Drinking Water Supply HÜ 1	**Introduction to Control Systems** Introduction to Control Systems VL 2 Introduction to Control Systems GÜ 2	**Bachelor thesis (dual study program)**
8						
9	**General and Inorganic Chemistry** General and Inorganic Chemistry VL 3 Fundamentals in Inorganic Chemistry PR 3 Fundamentals in Inorganic Chemistry GÜ 1					
10						
11						
12						
13			**Mathematics III** Analysis III VL 2 Analysis III GÜ 1 Analysis III HÜ 1 Differential Equations 1 VL 2 Differential Equations 1 GÜ 1 Differential Equations 1 HÜ 1	**Conventional Energy Systems and Energy Industry** Power Industry VL 1 Energy markets and energy trading VL 2 Fossil Energy Systems VL 2 Fuels I VL 1	**Practical module 5 (dual study program, Bachelor's degree)** Practical term 5 0	
14						
15	**Computer Science for Engineers - Introduction and Overview** Computer Science for Engineers - Introduction and Overview VL 3 Computer Science for Engineers - Introduction and Overview GÜ 2	**Organic Chemistry** Organic Chemistry VL 2 Organic Chemistry PR 2 Organic Chemistry GÜ 2				
16						
17						
18				**Renewable Energies** Renewable Energies I VL 2 Renewable Energies II VL 2 Renewable Energies I HÜ 1 Fuels II VL 1	**Economic and environmental project assessment** Basics of Environmental Project Assessment VL 2 Case studies economic and environmental project assessment GÜ 1 Basics of economic project assement VL 2	
19						
20						
21	**Green Technologies I** Meteorology and Climate Systems - Introduction VL 2 Introduction Green Technologies SE 2 Meteorology and Climate Systems - Introduction GÜ 2	**Practical module 2 (dual study program, Bachelor's degree)** Practical term 2 0	**Measurement Technology for Chemical and Bioprocess Engineering** Measurement Technology VL 2 Physical Fundamentals of Measurement Technology VL 2 Practical Course Measurement Technology PR 2			
22						
23						
24				**Practical module 4 (dual study program, Bachelor's degree)** Practical term 4 0	**Mechanical Engineering: Design (part 1)** Embodiment Design and 3D-CAD Introduction and Practical Training VL 2 Mechanical Design Project I PBL 3	
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27	**Practical module 1 (dual study program, Bachelor's degree)** Practical term 1 0	**Engineering Mechanics II (Elastostatics)** Engineering Mechanics II VL 2 Engineering Mechanics II GÜ 2 Engineering Mechanics II HÜ 2	**Green Technologies II (part 1)** Environmental Technologie VL 2 Pollutant analysis VL 2		**Numerical Mathematics I** Numerical Mathematics I VL 2 Numerical Mathematics I GÜ 2	
28						
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31				**Green Technologies II (part 2)** Practical Exercise Environmental Technology PR 1		
32			**Practical module 3 (dual study program, Bachelor's degree)** Practical term 3 0	**Fundamentals of Mechanical Engineering Design** Fundamentals of Mechanical Engineering Design VL 2 Fundamentals of Mechanical Engineering Design HÜ 2		
33	**Engineering Mechanics I (Stereostatics)** Engineering Mechanics I VL 2 Engineering Mechanics I GÜ 2 Engineering Mechanics I HÜ 1				**Fundamentals of Materials Science** Fundamentals of Materials Science II VL 2 Fundamentals of Materials Science I VL 2 Physical and Chemical Basics of Materials Science VL 2	
34						
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39					**Reciprocating Machinery (part 1)** Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines VL 1 Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines HÜ 1	
40						
41						

Linking theory and practice (dual study program, Bachelor's degree) (from catalogue) - 6LP

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.