# Course of Study Green Technologies: Energy, Water, Climate (Study Cohort w25)

Legend:

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

Sample course plan S  Bachelor Green Technologies: Energy, Water, Climate (GTBS)
Specialisation Energy Systems / Renewable Energies

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|---|---|---|---|---|---|---|
| 1 | **Mathematics I**<br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2 | **Technical Thermodynamics I**<br>Technical Thermodynamics I VL 2<br>Technical Thermodynamics I HÜ 1<br>Technical Thermodynamics I GÜ 2 | **Basics of Electrical Engineering**<br>Basics of Electrical Engineering VL 3<br>Basics of Electrical Engineering GÜ 2 | **Fundamentals of Fluid Mechanics**<br>Fundamentals of Fluid Mechanics VL 2<br>Fluid Mechanics for Process Engineering HÜ 2<br>Fundamentals on Fluid Mechanics GÜ 2 | **Heat and Mass Transfer**<br>Heat and Mass Transfer VL 2<br>Heat and Mass Transfer GÜ 2<br>Heat and Mass Transfer HÜ 1 | **System Integration Renewable Energies (part 2)**<br>System Integration Renewable Energies II VL 2<br>System Integration Renewable Energies II GÜ 1 |
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| 3 | | | | | | |
| 4 | | | | | | **Climate change impact & mitigation**<br>Technical measures to mitigate greenhouse gas emissions VL 2<br>Technical measures to mitigate greenhouse gas emissions GÜ 2<br>Basics of climate change and its effects VL 2 |
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| 6 | | | | | | |
| 7 | | **Mathematics II**<br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2 | **Technical Thermodynamics II**<br>Technical Thermodynamics II VL 2<br>Technical Thermodynamics II HÜ 1<br>Technical Thermodynamics II GÜ 2 | **Sanitary Engineering I**<br>Wastewater Treatment VL 2<br>Wastewater Treatment HÜ 1<br>Drinking Water Supply VL 2<br>Drinking Water Supply HÜ 1 | **Introduction to Control Systems**<br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2 | |
| 8 | | | | | | |
| 9 | **General and Inorganic Chemistry**<br>General and Inorganic Chemistry VL 3<br>Fundamentals in Inorganic Chemistry PR 3<br>Fundamentals in Inorganic Chemistry GÜ 1 | | | | | **Bachelor Thesis** |
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| 13 | | | **Mathematics III**<br>Analysis III VL 2<br>Analysis III GÜ 1<br>Analysis III HÜ 1<br>Differential Equations 1 VL 2<br>Differential Equations 1 GÜ 1<br>Differential Equations 1 HÜ 1 | **Conventional Energy Systems and Energy Industry**<br>Power Industry VL 1<br>Energy markets and energy trading VL 2<br>Fossil Energy Systems VL 2<br>Fuels I VL 1 | **Economic and environmental project assessment**<br>Basics of Environmental Project Assessment VL 2<br>Case studies economic and environmental project assessment GÜ 1<br>Basics of economic project assement VL 2 | |
| 14 | | | | | | |
| 15 | **Computer Science for Engineers - Introduction and Overview**<br>Computer Science for Engineers - Introduction and Overview VL 3<br>Computer Science for Engineers - Introduction and Overview GÜ 2 | **Organic Chemistry**<br>Organic Chemistry VL 2<br>Organic Chemistry PR 2<br>Organic Chemistry GÜ 2 | | | | |
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| 19 | | | | **Renewable Energies**<br>Renewable Energies I VL 2<br>Renewable Energies II VL 2<br>Renewable Energies I HÜ 1<br>Fuels II VL 1 | **Electrical Power Systems I: Introduction to Electrical Power Systems**<br>Electrical Power Systems I: Introduction to Electrical Power Systems VL 3<br>Electrical Power Systems I: Introduction to Electrical Power Systems GÜ 2 | |
| 20 | | | | | | |
| 21 | **Green Technologies I**<br>Meteorology and Climate Systems - Introduction VL 2<br>Introduction Green Technologies SE 2<br>Meteorology and Climate Systems - Introduction GÜ 2 | **Engineering Mechanics II (Elastostatics)**<br>Engineering Mechanics II VL 2<br>Engineering Mechanics II GÜ 2<br>Engineering Mechanics II HÜ 2 | **Measurement Technology for Chemical and Bioprocess Engineering**<br>Measurement Technology VL 2<br>Physical Fundamentals of Measurement Technology VL 2<br>Practical Course Measurement Technology PR 2 | | | |
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| 25 | | | | **Green Technologies II (part 2)**<br>Practical Exercise Environmental Technology PR 1 | **Green Technologies III**<br>Scientific Work and Writing SE 2<br>Study Work Green Technologies PS 2 | |
| 26 | | | | **Computer Science for Engineers - Programming Concepts, Data Handling & Communication**<br>Computer Science for Engineers - Programming Concepts, Data Handling & Communication IV 3<br>Computer Science for Engineers - Programming Concepts, Data Handling & Communication GÜ 2 | | |
| 27 | **Engineering Mechanics I (Stereostatics)**<br>Engineering Mechanics I VL 2<br>Engineering Mechanics I GÜ 2<br>Engineering Mechanics I HÜ 2 | | **Green Technologies II (part 1)**<br>Environmental Technologie VL 2<br>Pollutant analysis VL 2 | | | |
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| 31 | | | | | **System Integration Renewable Energies (part 1)**<br>System Integration Renewable Energies I VL 2<br>System Integration Renewable Energies I GÜ 1 | |
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Non-technical Courses for Bachelors (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.