

Energy and Environmental Engineering Curriculum (full-time)

Valid from Autumn Semester 2019/2020 / 12.02.2021

Semester	Context Modules	Project Modules	Subject-Specific Modules	Mathematics and Natural Science Modules
Semester 6	Elective Module Context 2	Bachelor Thesis: Energy and Environmental Engineering DE/EN 12	Specialisation Module 2 4 Specialisation Module 4 4 Specialisation Module 6 4 Specialisation Module 8 4	
Semester 5	Elective Module Context 2	Elective Module Context 2	Project Thesis: Energy and Environmental Engineering DE/EN 6 Specialisation-Module 1 4 Specialisation Module 3 4 Specialisation Module 5 4 Specialisation Module 7 4	Elective Module Cross-Curricular 4
Semester 4	Business Administration DE 2	Smart Grid and Electromobility DE 4	Applied Heat Transfer DE 4 Material Technology DE 4 Thermal and electrical Fundamentals of Power Plant Technology DE 4 Control Engineering DE 4	Technology Field Analysis DE 4 Numerics DE 4
Semester 3	Communication Competence 3 DE/EN 2	Project Management in Energy Plant Construction DE 4	Thermodynamics DE 4 Transformation of socio-technical Systems DE 4 Solar Technology Solar Power DE 4 Introduction to Electrical Power Grids DE 4	Analysis 3 DE 4 Statistics Strength of Materials Physics 3 DE 4
Semester 2	Communication Competence 2 DE/EN 2	Technology Assessment DE 4	Fluidynamics DE 4 Electrical Engineering and Semiconductors 2 DE 4 Computer Science Tools DE 2 CAD for EU DE 2	Analysis 2 DE 4 Algebra and Statistics 2 DE 4 Physics 2 DE 4
Semester 1	Communication Competence 1 DE/EN 2	Metrology in Solar Systems DE 4	Energy Efficiency and Policy DE 4 Electrical Engineering and Semiconductors 1 DE 4 Computer Science Programming 1 DE 4	Analysis 1 DE 4 Algebra and Statistics 1 DE 4 Physics 1 DE 4

Module Name
Language of Instruction
Credits

Overview of Energy and Environmental Engineering focus areas

During your third year of study, you will choose one of the following three specialisations:

Renewable Thermal Energy Systems			Renewable Electrical Energy Systems			Sustainable Development/Environment		
Semester 6	Wind and Water Power and Thermal Solar Energy DE	Thermal Energy Systems DE	Semester 6	Photovoltaic Technology and Memory Production DE	Photovoltaic Power Electronics and Systems DE	Semester 6	Smart Solutions DE	Business Models for Energy and Environmental Engineering DE
	Semester 5	Refrigeration and Heat Pumps DE		Exhaust Gas and Wastewater Treatment DE	Semester 5		Electrical Storage Systems and Power Electronics DE	Electrical Power Systems - Power Grids DE

In addition, you will select four elective modules from the other two specialisations, with at least one module from each specialisation. It is also possible to select the Smart Grid module.