

Energy and Environmental Engineering Curriculum (part-time)

Valid from Autumn Semester 2020/2021 / 12.02.2021

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

Module Name
Language of Instruction
Credits

Overview of Energy and Environmental Engineering focus areas

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

Renewable Thermal Energy Systems		
Semester 8	Wind and Water Power and Thermal Solar Energy DE	Thermal Energy Systems DE
Semester 7	Refrigeration and Heat Pumps DE	Exhaust Gas and Wastewater Treatment DE

Renewable Electrical Energy Systems		
Semester 8	Photovoltaic Technology and Memory Production DE	Photovoltaic Power Electronics and Systems DE
Semester 7	Electrical Storage Systems and Power Electronics DE	Electrical Power Systems - Power Grids DE

Sustainable Development/Environment		
Semester 8	Smart Solutions DE	Business Models for Energy and Environmental Engineering DE
Semester 7	Business Dynamics DE	Foresight and Scenarios 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.