

Energy and Environmental Engineering Curriculum (full-time)

Valid from Autumn Semester 2023/2024 / 29.01.2024

Semester	Module Name	Language of Instruction	Credits	Module Name	Language of Instruction	Credits	Module Name	Language of Instruction	Credits	Module Name	Language of Instruction	Credits	Module Name	Language of Instruction	Credits												
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	Elective Module Cross-Curricular		4	Specialisation Module 7		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	Transformation of socio-technical Systems	DE	4	Numerics	DE	4			
Semester 3	Communication Competence 3	DE/EN	2	Project Management in Energy Plant Construction	DE	4	Thermodynamics	DE	4	Technology Field Analysis	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			
	Context Modules			Project Modules			Subject-Specific Modules						Mathematics and Natural Science Modules														

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 Water Sector Coupling Synthetic Fuels DE	Thermal Energy Systems DE	Semester 6	Photovoltaic Technology and Memory Production DE	Photovoltaic Power Electronics and Systems DE	Semester 6	Smart Solutions DE	Sustainable Business Models 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	Semester 5	Energy System 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.