Course of Study Renewable Energies (Study Cohort w24)

Sample course plan A Master Renewable Energies (REMS) Dual study program

Specialisation Bioenergy Systems

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

LP							
1	**Fluid Mechanics and Ocean Energy**			**Dimensioning and Assessment of Renewable Energy Systems (part 2)**			**Thermal Energy Systems**			**Master thesis (dual study program)**
2	Fluid Mechanics II	VL	2	Heat Provision from Renewable Sources of Energy	SE	2	Thermal Engergy Systems	VL	3	
3	Energy from the Ocean	VL	2	**Use of Solar Energy**			Thermal Engergy Systems	HÜ	1	
4				Solar Power Generation	VL	2				
5				Energy Meteorology	VL	1				
6				Energy Meteorology	GÜ	1				
7				Collector Technology	VL	2	**Practical module 3 (dual study program, Master's degree)**			
8	**Electrical Power Systems II: Operation and Information Systems of Electrical Power Grids**						Practical term 3		0	
9	Electrical Power Systems II: Operation and Information Systems of Electrical Power Grids	VL	3	**System Aspects of Renewable Energies**						
10	Electrical Power Systems II: Operation and Information Systems of Electrical Power Grids	HÜ	2	Energy Trading	VL	1				
11				Energy Trading	GÜ	1				
12				Fuel Cells, Batteries, and Gas Storage: New Materials for Energy Production and Storage	VL	2				
13	**Bioenergy**			Deep Geothermal Energy	VL	2				
14	Biofuels Process Technology	VL	1							
15	Biofuels Process Technology	GÜ	1	**Modelling and Technical Design of Bio Refinery Processes**						
16	Thermal Biomass Utilization	VL	2	CAPE in Energy Engineering	PK	3				
17	World Market for Commodities from Agriculture and Forestry	VL	1	Biorefineries - Technical Design and Optimization	PBL	3	**Examples in Solid Process Engineering**			
18	Thermal Biomass Utilization	PR	1				Fluidization Technology	VL	2	
19	**Energy Projects - Development and Assessment**						Technical Applications of Particle Technology	VL	2	
20	Development of Energy Projects	VL	2				Practical Course Fluidization Technology	PR	1	
21	Economic Aspects of Energy Projects	VL	1	**Practical module 2 (dual study program, Master's degree)**			Exercises in Fluidization Technology	GÜ	1	
22	Aspects of Sustainability Management	VL	1	Practical term 2		0				
23	Renewable Energy Projects in Emerged Markets	PS	2				**Advanced Fuels**			
24							Carbon dioxide as an economic determinant in the mobility sector	VL	1	
25	**Dimensioning and Assessment of Renewable Energy Systems (part 1)**						Second generation biofuels and electricity based fuels	VL	2	
26	Electricity Generation from Renewable Sources of Energy	SE	2				Sustainability aspects and regulatory framework	VL	1	
27	Environmental Technology and Energy Economics	PBL	2				Mobility and climate protection	GÜ	2	
28										
29	**Practical module 1 (dual study program, Master's degree)**									
30	Practical term 1		0							
31				**Sustainable energy from wind and water**						
32				Wind Turbine Plants	VL	2				
33				Wind Energy Use - Focus Offshore	VL	1				
34				Hydro Power Use	VL	1				
35				Offshore Geotechnical Engineering	VL	1				
36										
37				**Applied optimization in energy and process engineering**						
38				Applied optimization in energy and process engineering	IV	2				
39				Applied optimization in energy and process engineering	GÜ	3				
40										
41										
	Business & Management (from catalogue) - 6LP									
	Linking theory and practice (dual study program, Master'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.