

# Course of Study Energy and Environmental Engineering (Study Cohort w18)

Sample course plan - Bachelor Energy and Environmental Engineering (EUTBS)

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

LP	Semester 1	FormHrs/wk	Semester 2	FormHrs/wk	Semester 3	FormHrs/wk	Semester 4	FormHrs/wk	Semester 5	FormHrs/wk	Semester 6	FormHrs/wk
1	<b>Engineering Mechanics I</b>		<b>Engineering Mechanics II</b>		<b>Mechanical Engineering: Design (part 1)</b>		<b>Fundamentals of Fluid Mechanics</b>		<b>Heat and Mass Transfer</b>		<b>Environmental Technology (part 2)</b>	
	Engineering Mechanics I	VL 3	Engineering Mechanics II	VL 3	Embodiment Design and 3D-CAD	VL 2	Fundamentals of Fluid Mechanics	VL 2	Heat and Mass Transfer	VL 2	Practical Exercise	PR 1
	Engineering Mechanics I	UE 2	Engineering Mechanics II	UE 2	Mechanical Design Project I	PBL 3	Fluid Mechanics for Process Engineering	HÜ 2	Heat and Mass Transfer	UE 1	Environmental Technology	
2											<b>Renewables and Energy Systems</b>	
3											Renewable Energy	VL 2
4											Energy Systems and Energy Industry	VL 2
5											Power Industry	VL 1
6											Renewable Energy	UE 1
7	<b>Mathematics I</b>		<b>Fundamentals of Mechanical Engineering Design</b>		Basics of Electrical Engineering	UE 2	<b>Electrical Machines and Actuators</b>		<b>Thermal Separation Processes</b>			
8	Linear Algebra I	VL 2	Fundamentals of Mechanical Engineering Design	VL 2	Basics of Electrical Engineering	UE 2	Electrical Machines and Actuators	VL 3	Thermal Separation Processes	VL 2	<b>Particle Technology and Solids Process Engineering</b>	
9	Linear Algebra I	UE 1	Fundamentals of Mechanical Engineering Design	UE 1			Electrical Machines and Actuators	HÜ 2	Thermal Separation Processes	UE 2	Particle Technology I	VL 2
10	Linear Algebra I	HÜ 1	Fundamentals of Mechanical Engineering Design	HÜ 1					Thermal Separation Processes	HÜ 1	Particle Technology I	UE 1
11	Analysis I	VL 2	Fundamentals of Mechanical Engineering Design	VL 2	<b>Technical Thermodynamics II</b>				Thermal Separation Processes	PR 1	Particle Technology I	PR 2
12	Analysis I	UE 1	Fundamentals of Mechanical Engineering Design	UE 1	Technical Thermodynamics II	VL 2			Separation Processes			
13	Analysis I	HÜ 1			Technical Thermodynamics II	HÜ 1						
14			<b>Technical Thermodynamics I</b>		Technical Thermodynamics II	UE 1	<b>Informatics for Process Engineers</b>		<b>Gas and Steam Power Plants</b>		<b>Environmental Technology</b>	
15			Technical Thermodynamics I	VL 2			Numeric and Matlab	PR 2	Gas and Steam Power Plants	VL 3	Environmental Assessment	VL 2
16	<b>General and Inorganic Chemistry</b>		Technical Thermodynamics I	HÜ 1	<b>Foundations of Management</b>		Informatics for Process Engineers	VL 2	Gas and Steam Power Plants	HÜ 1	Environmental Assessment	UE 1
17	General and Inorganic Chemistry	VL 3	Technical Thermodynamics I	UE 1	Introduction to Management	VL 3	Informatics for Process Engineers	UE 2				
18	Fundamentals in Inorganic Chemistry	PR 3			Management Tutorial	HÜ 2					<b>Bachelor Thesis</b>	
19	Fundamentals in Inorganic Chemistry	UE 1	<b>Mathematics II</b>				<b>Mechanical Engineering: Design (part 2)</b>		<b>Introduction to Control Systems</b>			
20			Linear Algebra II	VL 2			Team Project Design Methodology	PBL 2	Introduction to Control Systems	VL 2		
21	<b>Introduction into Energy and Environmental Engineering</b>		Linear Algebra II	UE 1			Mechanical Design Project II	PBL 3	Introduction to Control Systems	UE 2		
22	Introduction to Energy and Environmental Engineering	PBL 4	Linear Algebra II	HÜ 1								
23	Physics-Lab for VT/ BVT/ EUT	PR 2	Analysis II	VL 2	<b>Mathematics III</b>		<b>Fundamentals of Materials Science (part 2)</b>					
24			Analysis II	HÜ 1	Analysis III	VL 2	Fundamentals of Materials Science II	VL 2				
25			Analysis II	UE 1	Analysis III	UE 1						
26			Analysis II	UE 1	Analysis III	HÜ 1						
27					Differential Equations 1	VL 2						
28			<b>Organic Chemistry</b>		Differential Equations 1	UE 1						
29			Organic Chemistry	VL 4	Differential Equations 1	HÜ 1						
30			Organic Chemistry	PR 3								
					<b>Fundamentals of Materials</b>				<b>Measurement Technology for Mechanical and Process Engineers</b>			
									Measurement Technology for Mechanical and Process Engineers	VL 2		

31					
32					
33					
Nontechnical Complementary Courses for Bachelors (from catalogue) - 6LP					


**Science (part 1)**  
Fundamentals of Materials Science I VL 2  
Physical and Chemical Basics of Materials Science VL 2


Measurement Technology for HÜ Mechanical and Process Engineers 1  
Practical Course: Measurement and Control Systems PR 2  
**Environmental Technology (part 1)**  
Environmental Technologie VL 2

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.