Course of Study General Engineering Science (German program) (Study Cohort w14)

Sample course plan C Bachelor General Engineering Science (German program) (AIWBS)
Specialisation Mechanical Engineering, Focus Energy Systems

Legend:

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

LP	Semester 1	Form	Hrs/wk	Semester 2	Form	Hrs/wk	Semester 3	Form	Hrs/wk	Semester 4	Form	Hrs/wk	Semester 5	Form	Hrs/wk	Semester 6	Form	Hrs/wk
1	**Physics for Engineers (part 1)**			**Electrical Engineering II: Alternating Current Networks and Basic Devices**			**Technical Thermodynamics II**			**Mechanical Engineering: Design (part 2)**			**Introduction to Control Systems**			**Foundations of Management**		
2	Physics for Engineers	VL	2				Technical Thermodynamics II	VL	2	Team Project Design Methodology	POL	2	Introduction to Control Systems	VL	2	Introduction to Management	VL	4
	Physics for Engineers	UE	1	Electrical Engineering II: Alternating	VL	3	Technical Thermodynamics II	HÜ	1	Mechanical Design Project II	TT	3	Introduction to Control Systems	UE	2	Project Entrepreneurship	POL	2
3				Current Networks and Basic Devices			Technical Thermodynamics II	UE	1									
4				Electrical Engineering II: Alternating	UE	2				**Fundamentals of Materials Science (part 2)**								
5	**Chemistry**			Current Networks and Basic Devices						Fundamentals of Materials Science II	VL	2						
6	Chemistry I	VL	2															
	Chemistry II	VL	2							**Advanced Mechanical Engineering Design (part 2)**								
7	Chemistry I	HÜ	1	**Fundamentals of Mechanical Engineering Design**			**Computer Engineering**						**Measurement Technology for Mechanical and Process Engineers**			**Reciprocating Machinery (part 2)**		
8	Chemistry II	HÜ	1				Computer Engineering	VL	3	Advanced Mechanical Engineering	VL	2				Internal Combustion Engines I	VL	2
				Fundamentals of Mechanical	VL	2	Computer Engineering	UE	1	Design II			Measurement Technology for	VL	2	Internal Combustion Engines I	HÜ	1
				Engineering Design						Advanced Mechanical Engineering	HÜ	2	Mechanical and Process Engineers					
9				Fundamentals of Mechanical	HÜ	2				Design II			Measurement Technology for	HÜ	1			
10				Engineering Design						**Signals and Systems**			Mechanical and Process Engineers					
11	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**									Signals and Systems	VL	3	Practical Course: Measurement and	PR	2			
12										Signals and Systems	HÜ	1	Control Systems			**Bachelor Thesis**		
13	Electrical Engineering I: Direct Current	VL	3	**Technical Thermodynamics I**			**Mathematics III**											
14	Networks and Electromagnetic Fields			Technical Thermodynamics I	VL	2	Analysis III	VL	2				**Gas and Steam Power Plants**					
	Electrical Engineering I: Direct Current	UE	2	Technical Thermodynamics I	HÜ	1	Analysis III	UE	1				Gas and Steam Power Plants	VL	3			
15	Networks and Electromagnetic Fields			Technical Thermodynamics I	UE	1	Analysis III	HÜ	1	**Fluid Dynamics**			Gas and Steam Power Plants	HÜ	2			
16							Differential Equations 1	VL	2	Fluid Mechanics	VL	3						
17	**Mathematics I**						Differential Equations 1	UE	1	Fluid Mechanics	HÜ	1						
18	Linear Algebra I	VL	2				Differential Equations 1	HÜ	1									
19	Linear Algebra I	UE	1	**Mechanics II: Mechanics of Materials**									**Computational Fluid Dynamics I**					
	Linear Algebra I	HÜ	1	Mechanics II	VL	2							Computational Fluid Dynamics I	VL	2			
20	Analysis I	VL	2	Mechanics II	UE	2							Computational Fluid Dynamics I	HÜ	2			
21	Analysis I	UE	1				**Mechanics III (Hydrostatics, Kinematics, Kinetics I)**			**Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)**								
22	Analysis I	HÜ	1				Mechanics III	VL	3	Mechanics IV	VL	3						
23							Mechanics III	UE	2	Mechanics IV	UE	2						
24							Mechanics III	HÜ	1	Mechanics IV	HÜ	1						
25	**Mechanics I (Statics)**			**Mathematics II**									**Heat Transfer**					
26	Mechanics I	VL	2	Linear Algebra II	VL	2							Heat Transfer	VL	3			
27	Mechanics I	UE	2	Linear Algebra II	UE	1							Heat Transfer	HÜ	1			
	Mechanics I	HÜ	1	Linear Algebra II	HÜ	1	**Mechanical Engineering: Design (part 1)**			**Advanced Materials**								
28				Analysis II	VL	2	Embodiment Design and 3D-CAD	VL	2	Advanced Materials Characterization	VL	2						
29				Analysis II	HÜ	1	Mechanical Design Project I	TT	3	Advanced Materials Design	VL	2						
				Analysis II	UE	1				Advanced Materials Design	HÜ	2						
30							**Fundamentals of Materials Science (part 1)**											
31							Fundamentals of Materials Science I	VL	2				**Reciprocating Machinery (part 1)**					
32							Physical and Chemical Basics of	VL	2				Fundamentals of Reciprocating	VL	1			
							Materials Science						Engines and Turbomachinery - Part Reciprocating Engines					

				Reciprocating Engines
				Fundamentals of Reciprocating HÜ 1
				Engines and Turbomachinery - Part
				Reciprocating Engines
33		**Programming in C**		
34		Programming in C VL 1	**Advanced Mechanical Engineering Design**	
		Programming in C PR 1	**(part 1)**	
35		**Physics for Engineers (part 2)**	Advanced Mechanical Engineering VL 2	
		Physics-Lab for ET/IIW-Engineers PR 1	Design I	
36			Advanced Mechanical Engineering HÜ 2	
			Design I	

Nontechnical Complementary Courses for Bachelors (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.