Course of Study Engineering Science (Study Cohort w20)

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

Sample course plan E Bachelor Engineering Science (ESBS)

Specialisation Mechatronics

	Semester 1	FormHrs/wk	Semester 2	FormHrs/wk	Semester 3	FormHrs/wk	Semester 4	FormHrs/wk	Semester 5	FormHrs/wk	Semester 6	FormHrs/wk	Semester 7	FormHrs/wk
1	**Chemistry (GES)**		**Mathematical Analysis**		**Mechanical Engineering: Design (part 1)**		**Mechanical Engineering: Design (part 2)**		**Numerical Mathematics I**		**Fundamentals of Production and Quality Management**		**Advanced Internship AIW/ ES**	
2	Chemistry I+II	VL 4	Mathematical Analysis	VL 4	Embodiment Design and 3D-CAD	VL 2	Team Project Design Methodology	PBL 2	Numerical Mathematics I	VL 2			Advanced Internship AIW/ ES:	SE 1
3	Chemistry I+II	HÜ 2	Mathematical Analysis	HÜ 2	Mechanical Design Project I	PBL 3	Mechanical Design Project II	PBL 3	Numerical Mathematics I	GÜ 2	Production Process Organization	VL 2	Preparation	
4			Mathematical Analysis	GÜ 2							Quality Management	VL 2	Advanced Intniship AIW/ ES: Internship-	SE 1
5					**Engineering Mechanics III (EN)**		**Fundamentals of Materials Science (EN) (part 2)**						accompanying Seminar	
6					Mechanics III	HÜ 1	Fundamentals of Materials Science II	VL 2						
7	**Linear Algebra**				Mechanics III	GÜ 2			**Fluid Mechanics (EN)**		**Modeling, Simulation and Optimization (EN)**			
8	Linear Algebra	VL 4			Mechanics III	VL 3	**Electromagnetics for Engineers I: Time-Independent Fields**		Fluid Mechanics	VL 3	Modeling, Simulation and Optimization	IV 4		
9	Linear Algebra	HÜ 2					Electromagnetics for Engineers I: Time-Independent Fields	VL 3	Fluid Mechanics	HÜ 2				
10	Linear Algebra	GÜ 2	**Electrical Engineering II (GES)**				Electromagnetics for Engineers I: Time-Independent Fields	GÜ 2						
11			Electrical Engineering II	VL 3	**Fundamentals of Materials Science (EN) (part 1)**									
12			Electrical Engineering II	GÜ 2	Fundamentals of Materials Science I	VL 2								
13					Physical and Chemical Basics of Materials	VL 2	**Computational Mechanics (EN)**		**Introduction to Control Systems (EN)**		**Foundations of Management (EN)**			
14					Science		Computational Mechanics	IV 4	Introduction to Control Systems	VL 2	*** Introduction to Management	VL 3		
15	**Electrical Engineering I (GES)**		**Engineering Mechanics II (GES)**		**Computer Science for Engineers (EN)**		Computational Mechanics	GÜ 2	Introduction to Control Systems	GÜ 2	*** Introduction to Management	GÜ 3		
16	Electrical Engineering I	VL 3	Mechanics II	VL 2	**** Computer Science for Engineers	VL 0								
17	Electrical Engineering I	GÜ 2	Mechanics II	HÜ 2	**** Computer Science for Engineers	GÜ 3								
18														
19							**Signals and Systems (EN)**		**Measurement Technology for Mechanical Engineers**		**Semiconductor Circuit Design**		**Bachelor Thesis**	
20							Signals and Systems	GÜ 2	Measurement Technology for Mechanical	VL 2	Semiconductor Circuit Design	VL 3		
21	**Engineering Mechanics I (GES)**		**Fundamentals of Mechanical Engineering Design (GES)**		**Mathematics III (EN)**		Signals and Systems	VL 3	Engineering		Semiconductor Circuit Design	GÜ 1		
22	Mechanics I	VL 2			Analysis III	VL 2			Measurement Technology for Mechanical	HÜ 1				
23	Mechanics I	HÜ 3	Fundamentals of Mechanical Engineering	VL 2	Analysis III	HÜ 1			Engineering					
24			Fundamentals of Mechanical Engineering	GÜ 2	Analysis III	GÜ 1			Practical Course: Measurement and	PR 2				
25					Differential Equations 1	VL 2			Control Systems		**Automata Theory and Formal Languages**			
26					Differential Equations 1	HÜ 1					Automata Theory and Formal Languages	VL 2		
27	**Physics for Engineers (GES)**		**Technical Thermodynamics I (GES)**		Differential Equations 1	GÜ 1			**Functional Programming**		Automata Theory and Formal Languages	GÜ 2		
28	Physics for Engineers	VL 2	*** Technical Thermodynamics I	IV 3					Functional Programming	VL 2				
29	Physics for Engineers	GÜ 1	*** Technical Thermodynamics I	GÜ 1					Functional Programming	HÜ 2				
30									Functional Programming	GÜ 2				
31	**GES 101**													
32	GES 101	SE 2												

Non-technical 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.