Course of Study General Engineering Science (English program) (Study Cohort w15)

Sample course plan A Bachelor General Engineering Science (English program) (GESBS)
Specialisation Mechanical Engineering, Focus Materials in Engineering Sciences

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	**Chemistry (GES)**			**Physics for Engineers (GES) (part 2)**			**Technical Thermodynamics II**			**Mechanical Engineering: Design (part 2)**			**Introduction to Control Systems**			**Foundations of Management**		
2	Chemistry I	VL	2	Physics-Lab for ET/ AIW/ GES	PR	1	Technical Thermodynamics II	VL	2	Team Project Design Methodology	POL	2	Introduction to Control Systems	VL	2	Introduction to Management	VL	4
3	Chemistry II	VL	2	**Fundamentals of Mechanical Engineering Design**			Technical Thermodynamics II	HÜ	1	Mechanical Design Project II	TT	3	Introduction to Control Systems	UE	2	Project Entrepreneurship	POL	2
4	Chemistry I	HÜ	1	Fundamentals of Mechanical Engineering Design	VL	2	Technical Thermodynamics II	UE	1	**Fundamentals of Materials Science (part 2)**								
5	Chemistry II	HÜ	1	Fundamentals of Mechanical Engineering Design	HÜ	2				Fundamentals of Materials Science II	VL	2						
6										**Advanced Mechanical Engineering Design (part 2)**								
7	**Linear Algebra**						**Computer Engineering**			Advanced Mechanical Engineering Design II	VL	2	**Measurement Technology for Mechanical and Process Engineers**			**Structural Materials (part 2)**		
8	Linear Algebra	VL	4				Computer Engineering	VL	3	Advanced Mechanical Engineering Design II	HÜ	2	Measurement Technology for Mechanical and Process Engineers	VL	2	Fundamentals of Mechanical Properties of Materials	VL	2
	Linear Algebra	HÜ	2				Computer Engineering	UE	1				Measurement Technology for Mechanical and Process Engineers	HÜ	1			
	Linear Algebra	UE	2										Practical Course: Measurement and Control Systems	PR	2			
9				**Technical Thermodynamics I**						**Signals and Systems**						**Enhanced Fundamentals of Materials Science**		
10				Technical Thermodynamics I	VL	2				Signals and Systems	VL	3				Fundamentals of Metallic Materials	VL	2
11				Technical Thermodynamics I	HÜ	1				Signals and Systems	HÜ	1				Fundamentals of Ceramic and Polymer Materials	VL	2
12				Technical Thermodynamics I	UE	1										Fundamentals of Ceramic and Polymer Materials	HÜ	1
13							**Mathematics III**						**Numerical Mathematics I**					
14							Analysis III	VL	2				Numerical Mathematics I	VL	2			
15	**Electrical Engineering I**			**Mathematical Analysis**			Analysis III	UE	1	**Fluid Dynamics**			Numerical Mathematics I	UE	2	**Bachelor Thesis**		
16	Electrical Engineering I	VL	3	Mathematical Analysis	VL	4	Analysis III	HÜ	1	Fluid Mechanics	VL	3						
17	Electrical Engineering I	UE	2	Mathematical Analysis	HÜ	2	Differential Equations 1	VL	2	Fluid Mechanics	HÜ	1						
18				Mathematical Analysis	UE	2	Differential Equations 1	UE	1									
19							Differential Equations 1	HÜ	1				**Structural Materials (part 1)**					
20													Welding Technology	VL	3			
21	**Mechanics I (GES)**						**Mechanics III (GES)**			**Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)**								
22	Mechanics I	VL	2				Mechanics III	HÜ	1	Mechanics IV	VL	3	**Material Science Laboratory**					
23	Mechanics I	HÜ	3	**Electrical Engineering II**			Mechanics III	UE	2	Mechanics IV	UE	2	Companion Lecture for Materials Science Laboratory	VL	2			
24				Electrical Engineering II	VL	3	Mechanics III	VL	3	Mechanics IV	HÜ	1	Material Science Laboratory	PR	4			
25				Electrical Engineering II	UE	2												
26																		
27	**Physics for Engineers (GES) (part 1)**						**Mechanical Engineering: Design (part 1)**			**Electrical Machines**								
28	Physics for Engineers	VL	2				Embodiment Design and 3D-CAD	VL	2	Electrical Machines	VL	3						
29	Physics for Engineers	UE	1				Mechanical Design Project I	TT	3	Electrical Machines	HÜ	2						
30				**Mechanics II (GES)**														
31				Mechanics II	VL	2	**Fundamentals of Materials Science (part 1)**											
32				Mechanics II	HÜ	2	Fundamentals of Materials Science I	VL	2									
33							Physical and Chemical Basics of Materials Science	VL	2									

34			**Advanced Mechanical Engineering Design (part 1)**
35		**Programming in C**	Advanced Mechanical Engineering Design I VL 2
36		Programming in C VL 1 Programming in C PR 1	Advanced Mechanical Engineering Design I HÜ 2

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.