

Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w21)

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

Sample course plan A Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))

Specialisation	Advanced Materials	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	Electrical Engineering II: Alternating Current Networks and Basic Devices		Technical Thermodynamics II		Signals and Systems		Introduction to Control Systems		Foundations of Management		Advanced Internship AIW/ ES	
2	Chemistry I+II VL 4	Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3		Technical Thermodynamics II VL 2		Signals and Systems VL 3		Introduction to Control Systems VL 2		Introduction to Management VL 3		Advanced Internship AIW/ ES: SE 1	
3	Chemistry I+II HÜ 2	Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2		Technical Thermodynamics II HÜ 1		Signals and Systems GÜ 2		Introduction to Control Systems GÜ 2		Management Tutorial GÜ 2		Preparation	
4		Electrical Engineering II: Alternating Current Networks and Basic Devices		Technical Thermodynamics II GÜ 1								Advanced Internship AIW/ ES: Internship-accompanying Seminar SE 1	
5													
6													
7	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	Fundamentals of Mechanical Engineering Design		Mathematics III		Advanced Materials for Sustainability		Material Science Laboratory		Modeling, Simulation and Optimization (EN)			
8	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3	Fundamentals of Mechanical Engineering Design VL 2		Analysis III VL 2		Advanced Materials Characterization VL 2		Companion Lecture for Materials Science Laboratory VL 2		Modeling, Simulation and Optimization IV 4			
9	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2	Fundamentals of Mechanical Engineering Design HÜ 2		Analysis III GÜ 1		Advanced Materials for Sustainability VL 2		Material Science Laboratory PR 4					
10				Analysis III HÜ 1		Advanced Materials for Sustainability HÜ 2							
11				Differential Equations 1 VL 2									
12				Differential Equations 1 GÜ 1									
13	Mathematics I	Technical Thermodynamics I		Differential Equations 1 HÜ 1		Computational Mechanics (EN)		Fluid Mechanics (EN)		Materials Engineering: Materials Selection, Processing and Modelling			
14	Linear Algebra I VL 2	Technical Thermodynamics I VL 2				Computational Mechanics IV 4		Fluid Mechanics VL 3		Materials Selection and Processing VL 3			
15	Linear Algebra I GÜ 1	Technical Thermodynamics I HÜ 1		Engineering Mechanics III (Dynamics)		Computational Mechanics GÜ 2		Fluid Mechanics HÜ 2		Materials and Process Modelling VL 3			
16	Linear Algebra I HÜ 1	Technical Thermodynamics I GÜ 1		Engineering Mechanics III VL 3									
17	Analysis I VL 2			Engineering Mechanics III GÜ 2									
18	Analysis I GÜ 1			Engineering Mechanics III HÜ 1									
19	Analysis I HÜ 1												
20		Mechanics II: Mechanics of Materials				Mathematics IV (EN)		Quantum Mechanics for Materials Science		Machine Learning for Physical Systems		Bachelor Thesis	
21	Mechanics I (Statics)	Mechanics II VL 2		Numerical Mathematics I		Differential Equations 2 VL 2		Atomic-Scale Fundamentals of Materials Science VL 2		Machine Learning for Physical Systems VL 2			
22	Mechanics I VL 2	Mechanics II GÜ 2		Numerical Mathematics I VL 2		Differential Equations 2 HÜ 1		Science		Machine Learning for Physical Systems PBL 2			
23	Mechanics I GÜ 2	Mechanics II HÜ 2		Numerical Mathematics I GÜ 2		Differential Equations 2 GÜ 1		Atomic-Scale Fundamentals of Materials Science HÜ 2					
24	Mechanics I HÜ 1					Complex Functions VL 2		Science					
25						Complex Functions HÜ 1							
26		Mathematics II				Complex Functions GÜ 1		Fundamentals of Materials Science (part 2)		Measurement Technology for Mechanical Engineers			
27	Computer Science for Engineers - Introduction and Overview	Linear Algebra II VL 2		Fundamentals of Materials Science (part 1)				Fundamentals of Materials Science II VL 2		Measurement Technology for Mechanical Engineering VL 2			
28	Computer Science for Engineers - Introduction and Overview VL 3	Linear Algebra II GÜ 1		Fundamentals of Materials Science I VL 2						Measurement Technology for Mechanical Engineering HÜ 1			
29	Computer Science for Engineers - Introduction and Overview GÜ 2	Linear Algebra II HÜ 1		Physical and Chemical Basics of Materials Science VL 2						Measurement Technology for Mechanical Engineering PR 2			
30		Linear Algebra II GÜ 1								Control Systems			
31													
32													

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.

