Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w22)

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

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