Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w20)

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 - Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))
Specialisation Mechanical Engineering, Focus Materials in Engineering Sciences

LP	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**		**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: Preparation	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	Advanced Intenship AIW/ ES: Internship-accompanying Seminar	SE 1
4					Technical Thermodynamics II	GÜ 1								
5														
6														
7	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**		**Fundamentals of Mechanical Engineering Design**		**Mathematics III**		**Fluid Dynamics**		**Measurement Technology for Mechanical Engineers**		**Advanced Materials for Sustainability**			
8	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL 3	Fundamentals of Mechanical Engineering Design	VL 2	Analysis III	VL 2	Fluid Mechanics	VL 3	Measurement Technology for Mechanical Engineering	VL 2	Advanced Materials Characterization	VL 2		
9					Analysis III	GÜ 1	Fluid Mechanics	HÜ 2			Advanced Materials for Sustainability	VL 2		
10	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	GÜ 2	Fundamentals of Mechanical Engineering Design	HÜ 2	Analysis III	HÜ 1			Measurement Technology for Mechanical Engineering	HÜ 1	Advanced Materials for Sustainability	HÜ 2		
11					Differential Equations 1	VL 2			Practical Course: Measurement and Control Systems	PR 2				
12					Differential Equations 1	GÜ 1								
13	**Mathematics I**		**Technical Thermodynamics I**		Differential Equations 1	HÜ 1	**Mechanics IV (Oscillations, Analytical Mechanics, Multibody Systems, Numerical Mechanics)**		**Numerical Mathematics I**		**Enhanced Fundamentals of Materials Science**			
14	Linear Algebra I	VL 2	Technical Thermodynamics I	VL 2			Mechanics IV	VL 3	Numerical Mathematics I	VL 2	Materials for Energy Storage and Conversion	VL 2		
15	Linear Algebra I	GÜ 1	Technical Thermodynamics I	HÜ 1	**Mechanics III (Dynamics)**		Mechanics IV	GÜ 2	Numerical Mathematics I	GÜ 2	Enhanced Fundamentals: Ceramics and Polymers	VL 2		
16	Linear Algebra I	HÜ 1	Technical Thermodynamics I	GÜ 1	Mechanics III	VL 3	Mechanics IV	HÜ 1			Enhanced Fundamentals: Ceramics and Polymers	HÜ 1		
17	Analysis I	VL 2			Mechanics III	GÜ 2								
18	Analysis I	GÜ 1			Mechanics III	HÜ 1								
19	Analysis I	HÜ 1	**Mechanics II: Mechanics of Materials**				**Advanced Mechanical Engineering Design (part 2)**		**Computer Engineering**		**Materials Engineering: Materials Selection, Processing and Modelling (part 2)**		**Bachelor Thesis**	
20			Mechanics II	VL 2			Advanced Mechanical Engineering Design II	VL 2	Computer Engineering	VL 3	Materials Selection and Processing	VL 3		
21	**Mechanics I (Statics)**		Mechanics II	GÜ 2	**Advanced Mechanical Engineering Design (part 1)**		Advanced Mechanical Engineering Design II	HÜ 2	Computer Engineering	GÜ 1	Materials and Process Modeling	VL 3		
22	Mechanics I	VL 2	Mechanics II	HÜ 2	Advanced Mechanical Engineering Design I	VL 2	**Mechanical Engineering: Design (part 2)**							
23	Mechanics I	GÜ 2			Advanced Mechanical Engineering Design I	HÜ 2	Team Project Design Methodology	PBL 2						
24	Mechanics I	HÜ 1			**Mechanical Engineering: Design (part 1)**		Mechanical Design Project II	PBL 3						
25			**Mathematics II**		Embodiment Design and 3D-CAD	VL 2	**Fundamentals of Materials Science (part 2)**		**Material Science Laboratory**					
26			Linear Algebra II	VL 2	Mechanical Design Project I	PBL 3	Fundamentals of Materials Science II	VL 2	Companion Lecture for Materials Science Laboratory	VL 2				
27	**Programming in C**		Linear Algebra II	GÜ 1	**Fundamentals of Materials Science (part 1)**				Material Science Laboratory	PR 4				
28	Programming in C	VL 1	Linear Algebra II	HÜ 1	Fundamentals of Materials Science I	VL 2								
29	Programming in C	PR 1	Analysis II	VL 2	Physical and Chemical Basics of Materials Science	VL 2			**Materials Engineering: Materials Selection, Processing and Modelling**					
30	**Physics for Engineers (AIW)**		Analysis II	HÜ 1					Materials Selection and Processing	VL 3				
31	Physics for Engineers	VL 2	Analysis II	GÜ 1					Materials and Process Modeling	VL 3				
32	Physics for Engineers	GÜ 1												
33														
34														
35														
36														

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.