Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w19)

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 Mechanical Engineering, Focus Theoretical Mechanical Engineering

1	**Chemistry** Chemistry I VL 2 Chemistry II VL 2 Chemistry I HÜ 1 Chemistry II HÜ 1	**Electrical Engineering II: Alternating Current Networks and Basic Devices** Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3 Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2	**Technical Thermodynamics II** Technical Thermodynamics II VL 2 Technical Thermodynamics II HÜ 1 Technical Thermodynamics II GÜ 1	**Signals and Systems** Signals and Systems VL 3 Signals and Systems GÜ 2	**Introduction to Control Systems** Introduction to Control Systems VL 2 Introduction to Control Systems GÜ 2	**Foundations of Management** Introduction to Management VL 3 Management Tutorial GÜ 2	**Advanced Internship AIW/ ES** Advanced Internship AIW/ ES: Preparation SE 1 Advanced Intenship AIW/ ES: Internship-accompanying Seminar SE 1
2							
3							
4							
5							
6							
7	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields** Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3 Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2	**Fundamentals of Mechanical Engineering Design** Fundamentals of Mechanical Engineering Design VL 2 Fundamentals of Mechanical Engineering Design HÜ 2	**Mathematics III** Analysis III VL 2 Analysis III GÜ 1 Analysis III HÜ 1 Differential Equations 1 VL 2 Differential Equations 1 GÜ 1 Differential Equations 1 HÜ 1	**Fluid Dynamics** Fluid Mechanics VL 3 Fluid Mechanics HÜ 2	**Computer Engineering** Computer Engineering VL 3 Computer Engineering GÜ 1	**Modeling, Simulation and Optimization (EN)** Modeling, Simulation and Optimization IV 4	
8							
9							
10							
11							
12							
13	**Mathematics I** Linear Algebra I VL 2 Linear Algebra I GÜ 1 Linear Algebra I HÜ 1 Analysis I VL 2 Analysis I GÜ 1 Analysis I HÜ 1	**Technical Thermodynamics I** Technical Thermodynamics I VL 2 Technical Thermodynamics I HÜ 1 Technical Thermodynamics I GÜ 1		**Mechanics IV (Oscillations, Analytical Mechanics, Multibody Systems, Numerical Mechanics)** Mechanics IV VL 3 Mechanics IV GÜ 2 Mechanics IV HÜ 1	**Measurement Technology for Mechanical Engineers** Measurement Technology for Mechanical Engineering VL 2 Measurement Technology for Mechanical Engineering HÜ 1 Practical Course: Measurement and Control Systems PR 2	**Mathematics IV** Complex Functions VL 2 Complex Functions GÜ 1 Complex Functions HÜ 1 Differential Equations 2 VL 2 Differential Equations 2 GÜ 1 Differential Equations 2 HÜ 1	
14							
15							
16							
17							
18			**Mechanics III (Dynamics)** Mechanics III VL 3 Mechanics III GÜ 2 Mechanics III HÜ 1				
19		**Mechanics II: Mechanics of Materials** Mechanics II VL 2 Mechanics II GÜ 2 Mechanics II HÜ 2		**Mechanical Engineering: Design (part 2)** Team Project Design Methodology PBL 2 Mechanical Design Project II PBL 3	**Numerical Mathematics I** Numerical Mathematics I VL 2 Numerical Mathematics I GÜ 2	**Production Engineering (part 2)** Production Engineering II VL 2 Production Engineering II HÜ 1	**Bachelor Thesis**
20							
21	**Mechanics I (Statics)** Mechanics I VL 2 Mechanics I GÜ 2 Mechanics I HÜ 1		**Mechanical Engineering: Design (part 1)** Embodiment Design and 3D-CAD VL 2 Mechanical Design Project I PBL 3	**Fundamentals of Materials Science (part 2)** Fundamentals of Materials Science II VL 2			
22							
23							
24			**Fundamentals of Materials Science (part 1)** Fundamentals of Materials Science I VL 2 Physical and Chemical Basics of Materials Science VL 2	**Advanced Mechanical Engineering Design (part 2)** Advanced Mechanical Engineering Design II VL 2 Advanced Mechanical Engineering Design II HÜ 2	**Heat Transfer** Heat Transfer VL 3 Heat Transfer HÜ 2		
25							
26		**Mathematics II** Linear Algebra II VL 2 Linear Algebra II GÜ 1 Linear Algebra II HÜ 1 Analysis II VL 2 Analysis II HÜ 1 Analysis II GÜ 1					
27	**Programming in C** Programming in C VL 1 Programming in C PR 1						
28			**Advanced Mechanical Engineering Design (part 1)** Advanced Mechanical Engineering Design I VL 2 Advanced Mechanical Engineering Design I HÜ 2				
29	**Physics for Engineers (AIW)** Physics for Engineers VL 2 Physics for Engineers GÜ 1						
30							
31					**Production Engineering (part 1)** Production Engineering I VL 2 Production Engineering I HÜ 1		
32							
33							

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.