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 B Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))
Specialisation Mechanical Engineering, Focus Theoretical Mechanical Engineering

1	**Chemistry** Chemistry I+II VL 4 Chemistry I+II HÜ 2	**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							
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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	**Measurement Technology for Mechanical Engineers** Measurement Technology for Mechanical Engineering VL 2 Measurement Technology for Mechanical Engineering PR 2 Practical Course: Measurement and Control Systems PR 2	**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	**Engineering Mechanics III (Dynamics)** Engineering Mechanics III VL 3 Engineering Mechanics III GÜ 2 Engineering Mechanics III HÜ 1	**Computational Mechanics** Computational Multibody Dynamics IV 2 Computational Mechanics GÜ 2 Computational Stuctural Mechanics IV 2	**Numerical Mathematics I** Numerical Mathematics I VL 2 Numerical Mathematics I GÜ 2	**Electrical Machines and Actuators** Electrical Machines and Actuators VL 3 Electrical Machines and Actuators HÜ 2	
14							
15							
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19		**Mechanics II: Mechanics of Materials** Mechanics II VL 2 Mechanics II GÜ 2 Mechanics II HÜ 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	**Machine Learning I** Machine Learning I VL 2 Machine Learning I GÜ 3	**Bachelor Thesis**
20							
21	**Mechanics I (Statics)** Mechanics I VL 2 Mechanics I GÜ 2 Mechanics I HÜ 1		**Advanced Mechanical Engineering Design (part 1)** Advanced Mechanical Engineering Design I VL 2 Advanced Mechanical Engineering Design I HÜ 2	**Mechanical Engineering: Design (part 2)** Team Project Design Methodology PBL 2 Mechanical Design Project II PBL 3			
22							
23							
24			**Mechanical Engineering: Design (part 1)** Embodiment Design and 3D-CAD Introduction and Practical Training VL 2 Mechanical Design Project I PBL 3				
25		**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		**Fundamentals of Materials Science (part 2)** Fundamentals of Materials Science II VL 2		**Computer Science for Engineers - Programming Concepts, Data Handling & Communication** Computer Science for Engineers - Programming Concepts, Data Handling & Communication VL 3 Computer Science for Engineers - Programming Concepts, Data Handling & Communication GÜ 2	
26							
27	**Computer Science for Engineers - Introduction and Overview** Computer Science for Engineers - Introduction and Overview VL 3 Computer Science for Engineers - Introduction and Overview GÜ 2		**Fundamentals of Materials Science (part 1)** Fundamentals of Materials Science I VL 2 Physical and Chemical Basics of Materials Science VL 2				
28							
29							
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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.