Course of Study Engineering Science (Study Cohort w20)

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 Engineering Science (ESBS)
Specialisation Biomedical Engineering

LP							
1	**Chemistry (GES)** Chemistry I+II VL 4 Chemistry I+II HÜ 2	**Mathematical Analysis** Mathematical Analysis VL 4 Mathematical Analysis HÜ 2 Mathematical Analysis GÜ 2	**Mechanical Engineering: Design (part 1)** Embodiment Design and 3D-CAD VL 2 Mechanical Design Project I PBL 3	**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	**Fundamentals of Production and Quality Management** Production Process Organization VL 2 Quality Management VL 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			**Engineering Mechanics III (EN)** Mechanics III HÜ 1 Mechanics III GÜ 2 Mechanics III VL 3	**Fundamentals of Materials Science (EN) (part 2)** Fundamentals of Materials Science II VL 2			
6				**Electromagnetics for Engineers I: Time-Independent Fields** Electromagnetics for Engineers I: Time-Independent Fields VL 3 Electromagnetics for Engineers I: Time-Independent Fields GÜ 2			
7	**Linear Algebra** Linear Algebra VL 4 Linear Algebra HÜ 2 Linear Algebra GÜ 2				**Fluid Mechanics (EN)** Fluid Mechanics VL 3 Fluid Mechanics HÜ 2	**Modeling, Simulation and Optimization (EN)** Modeling, Simulation and Optimization IV 4	
8							
9		**Electrical Engineering II (GES)** Electrical Engineering II VL 3 Electrical Engineering II GÜ 2					
10				**Fundamentals of Materials Science (EN) (part 1)** Fundamentals of Materials Science I VL 2 Physical and Chemical Basics of Materials Science VL 2			
11							
12				**Computational Mechanics (EN)** Computational Mechanics IV 4 Computational Mechanics GÜ 2			
13							
14			**Computer Science for Engineers (EN)** **** Computer Science for Engineers VL 0 **** Computer Science for Engineers GÜ 3		**Introduction to Control Systems (EN)** Introduction to Control Systems VL 2 Introduction to Control Systems GÜ 2	**Foundations of Management (EN)** *** Introduction to Management VL 3 *** Introduction to Management GÜ 3	
15	**Electrical Engineering I (GES)** Electrical Engineering I VL 3 Electrical Engineering I GÜ 2	**Engineering Mechanics II (GES)** Mechanics II VL 2 Mechanics II HÜ 2					
16							
17							
18				**Signals and Systems (EN)** Signals and Systems GÜ 2 Signals and Systems VL 3			
19							
20			**Mathematics III (EN)** Analysis III VL 2 Analysis III HÜ 1 Analysis III GÜ 1 Differential Equations 1 VL 2 Differential Equations 1 HÜ 1 Differential Equations 1 GÜ 1		**MED II: Introduction to Biochemistry and Molecular Biology** Introduction to Biochemistry and Molecular Biology VL 2	**Introduction into Medical Technology and Systems** Introduction into Medical Technology and Systems VL 2 Introduction into Medical Technology and Systems PS 2 Introduction into Medical Technology and Systems HÜ 1	**Bachelor Thesis**
21	**Engineering Mechanics I (GES)** Mechanics I VL 2 Mechanics I HÜ 3	**Fundamentals of Mechanical Engineering Design (GES)** Fundamentals of Mechanical Engineering VL 2 Fundamentals of Mechanical Engineering GÜ 2			**BIO I: Implants and Fracture Healing** Implants and Fracture Healing VL 2		
22							
23							
24							
25					**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	**MED I: Introduction to Anatomy** Introduction to Anatomy VL 2	
26							
27	**Physics for Engineers (GES)** Physics for Engineers VL 2 Physics for Engineers GÜ 1	**Technical Thermodynamics I (GES)** *** Technical Thermodynamics I IV 3 *** Technical Thermodynamics I GÜ 1					
28							
29						**MED I: Introduction to Radiology and Radiation Therapy** Introduction to Radiology and Radiation Therapy VL 2	
30							
31	**GES 101** GES 101 SE 2						
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.