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)) Dual study program

Specialisation Mechanical Engineering, Focus Theoretical Mechanical Engineering

Legend:

Core Qualification Compulsory	Specialisation Compulsory	Focus Compulsory	Thesis Compulsory
Core Qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

LP						
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**
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	**Practical module 4 (dual study program, Bachelor's degree)** Practical term 4 0	**Practical module 5 (dual study program, Bachelor's degree)** Practical term 5 0	**Modeling, Simulation and Optimization (EN)** Modeling, Simulation and Optimization IV 4	
8							
9							
10							
11							
12							
13	**Mathematics I** Mathematics I VL 4 Mathematics I HÜ 2 Mathematics I GÜ 2	**Technical Thermodynamics I** Technical Thermodynamics I VL 2 Technical Thermodynamics I HÜ 1 Technical Thermodynamics I GÜ 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	**Production Engineering** Production Engineering I VL 2 Production Engineering II VL 2 Production Engineering II HÜ 1 Production Engineering I HÜ 1	
14							
15			**Practical module 3 (dual study program, Bachelor's degree)** Practical term 3 0				
16							
17							
18							
19		**Mathematics II** Mathematics II VL 4 Mathematics II HÜ 2 Mathematics II GÜ 2		**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	**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	**Bachelor thesis (dual study program)**
20							
21	**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		**Engineering Mechanics III (Dynamics)** Engineering Mechanics III VL 3 Engineering Mechanics III GÜ 2 Engineering Mechanics III HÜ 1				
22							
23							
24							
25							
26				**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	
27	**Practical module 1 (dual study program, Bachelor's degree)** Practical term 1 0	**Practical module 2 (dual study program, Bachelor's degree)** Practical term 2 0	**Advanced Mechanical Engineering Design (part 1)** Advanced Mechanical Engineering Design I VL 2 Advanced Mechanical Engineering Design I HÜ 2				
28				**Mechanical Engineering: Design (part 2)** Team Project Design Methodology PBL 2 Mechanical Design Project II PBL 3			
29							
30			**Mechanical Engineering: Design (part 1)** Embodiment Design and 3D-CAD Introduction and Practical Training VL 2 Mechanical Design Project I PBL 3				
31							
32							
33	**Engineering Mechanics I (Stereostatics)** Engineering Mechanics I VL 2 Engineering Mechanics I GÜ 2 Engineering Mechanics I HÜ 1	**Engineering Mechanics II (Elastostatics)** Engineering Mechanics II VL 2 Engineering Mechanics II GÜ 2 Engineering Mechanics II HÜ 2	**Fundamentals of Materials Science** Fundamentals of Materials Science II VL 2 Fundamentals of Materials Science I VL 2 Physical and Chemical Basics of Materials Science VL 2				
34							
35							
36							
37							
38							

Linking theory and practice (dual study program, Bachelor's degree) (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.