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

Sample course plan B Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))
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

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

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
- Fundamentals of Mechanical Engineering Design — HÜ

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 — HÜ 1
- Practical Course: Measurement and Control Systems — PR 2

Modeling, Simulation and Optimization (EN)
- Modeling, Simulation and Optimization — IV 4

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 III (Dynamics)
- Mechanics III — VL 3
- Mechanics III — GÜ 2
- Mechanics III — HÜ 1

Mechanics IV (Oscillations, Analytical Mechanics, Multibody Systems, Numerical Mechanics)
- Mechanics IV — VL 3
- Mechanics IV — GÜ 2
- Mechanics IV — HÜ 1

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

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 2

Bachelor Thesis

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

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

Computer Engineering
- Computer Engineering — VL 3
- Computer Engineering — GÜ 1

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

Programming in C
- Programming in C — VL 1
- Programming in C — PR 1

Physics for Engineers (AIW)
- Physics for Engineers — VL 2
- Physics for Engineers — GÜ 1

Fundamentals of Materials Science (part 1)
- Fundamentals of Materials Science I — VL 2
- Physical and Chemical Basics of Materials Science — VL 2

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.