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

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

Specialisation Computer Science

Core Qualification (Columns 1–3)

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

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
- Analysis III — GÜ 1
- Analysis III — HÜ 1
- Differential Equations 1 — VL 2
- Differential Equations 1 — GÜ 1
- Differential Equations 1 — HÜ 1

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 I (Statics)
- Mechanics I — VL 2
- Mechanics I — GÜ 2
- Mechanics I — HÜ 1

Mechanics II: Mechanics of Materials
- Mechanics II — VL 2
- Mechanics II — GÜ 2
- Mechanics II — HÜ 2

Discrete Algebraic Structures
- Discrete Algebraic Structures — VL 2
- Discrete Algebraic Structures — GÜ 2

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

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

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

Specialisation / Core (Columns 4–6)

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

Automata Theory and Formal Languages
- Automata Theory and Formal Languages — VL 2
- Automata Theory and Formal Languages — GÜ 2

Numerical Mathematics I
- Numerical Mathematics I — VL 2
- Numerical Mathematics I — GÜ 2

Software Engineering
- Software Engineering — VL 2
- Software Engineering — GÜ 2

Stochastics
- Stochastics — VL 2
- Stochastics — GÜ 2

Functional Programming
- Functional Programming — VL 2
- Functional Programming — HÜ 2
- Functional Programming — GÜ 2

Lab Cyber-Physical Systems
- Lab Cyber-Physical Systems — PBL 4

Embedded Systems
- Embedded Systems — VL 3
- Embedded Systems — GÜ 1

Computernetworks and Internet Security
- Computer Networks and Internet Security — VL 3
- Computer Networks and Internet Security — GÜ 1

Graph Theory and Optimization
- Graph Theory and Optimization — VL 2
- Graph Theory and Optimization — GÜ 2

Seminars Computer Science
- Introductory Seminar Computer Science II — SE 2
- Introductory Seminar Computer Science I — SE 2

Thesis / Internship (Column 7)

Advanced Internship AIW/ ES
- Advanced Internship AIW/ ES: Preparation — SE 1
- Advanced Intenship AIW/ ES: Internship-accompanying Seminar — SE 1

Bachelor Thesis

Interdisciplinary complement

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.