

Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w22)

Sample course plan - Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7)) Dual study program

Legend:

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

| Specialisation | Chemical and Bioengineering | Semester 2 | FormHrs/wk | Semester 3 | FormHrs/wk | Semester 4 | FormHrs/wk | Semester 5 | FormHrs/wk | Semester 6 | FormHrs/wk | Semester 7 | FormHrs/wk |
|----------------|---|--|------------|---|------------|--|------------|---|------------|---|------------|---|------------|
| 1 | Chemistry | Electrical Engineering II: Alternating Current Networks and Basic Devices | | Technical Thermodynamics II | | Signals and Systems | | Introduction to Control Systems | | Foundations of Management | | Advanced Internship AIW/ ES | |
| 2 | Chemistry I+II VL 4 | Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3 | | Technical Thermodynamics II VL 2 | | Signals and Systems VL 3 | | Introduction to Control Systems VL 2 | | Introduction to Management VL 3 | | Advanced Internship AIW/ ES: SE 1 | |
| 3 | Chemistry I+II HÜ 2 | Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3 | | Technical Thermodynamics II HÜ 1 | | Signals and Systems GÜ 2 | | Introduction to Control Systems GÜ 2 | | Management Tutorial GÜ 2 | | Preparation | |
| 4 | | Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2 | | Technical Thermodynamics II GÜ 1 | | | | | | | | Advanced Internship AIW/ ES: Internship-accompanying Seminar SE 1 | |
| 5 | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | |
| 7 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Fundamentals of Mechanical Engineering Design | | Mathematics III | | Practical module 4 (dual study program, Bachelor's degree) | | Practical module 5 (dual study program, Bachelor's degree) | | Process and Plant Engineering I | | | |
| 8 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3 | Fundamentals of Mechanical Engineering Design VL 2 | | Analysis III VL 2 | | Practical term 4 0 | | Practical term 5 0 | | Process and Plant Engineering I VL 2 | | | |
| 9 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields HÜ 2 | Fundamentals of Mechanical Engineering Design HÜ 2 | | Analysis III GÜ 1 | | | | | | Process and Plant Engineering I HÜ 1 | | | |
| 10 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 | Fundamentals of Mechanical Engineering Design HÜ 2 | | Analysis III HÜ 1 | | | | | | Process and Plant Engineering I GÜ 1 | | | |
| 11 | | | | Differential Equations 1 VL 2 | | | | | | | | | |
| 12 | | | | Differential Equations 1 GÜ 1 | | | | | | | | | |
| 13 | Mathematics I | Technical Thermodynamics I | | Practical module 3 (dual study program, Bachelor's degree) | | Fundamentals of Fluid Mechanics | | Heat and Mass Transfer | | Particle Technology and Solids Process Engineering | | | |
| 14 | Mathematics I VL 4 | Technical Thermodynamics I VL 2 | | Practical term 3 0 | | Fundamentals of Fluid Mechanics VL 2 | | Heat and Mass Transfer VL 2 | | Particle Technology I VL 2 | | | |
| 15 | Mathematics I HÜ 2 | Technical Thermodynamics I HÜ 1 | | | | Fluid Mechanics for Process Engineering HÜ 2 | | Heat and Mass Transfer GÜ 1 | | Particle Technology I HÜ 1 | | | |
| 16 | Mathematics I GÜ 2 | Technical Thermodynamics I GÜ 1 | | | | Fundamentals on Fluid Mechanics GÜ 2 | | Heat and Mass Transfer HÜ 1 | | Particle Technology I GÜ 1 | | | |
| 17 | | | | | | | | | | Particle Technology I PR 2 | | | |
| 18 | | | | | | | | | | | | | |
| 19 | | Mathematics II | | Engineering Mechanics III (Dynamics) | | Phase Equilibria Thermodynamics | | Thermal Separation Processes | | Chemical Reaction Engineering (part 2) | | Bachelor thesis (dual study program) | |
| 20 | | Mathematics II VL 4 | | Engineering Mechanics III VL 3 | | Phase Equilibria Thermodynamics VL 2 | | Thermal Separation Processes VL 2 | | Experimental Course Chemical Engineering PR 2 | | | |
| 21 | Computer Science for Engineers - Introduction and Overview | Mathematics II HÜ 2 | | Engineering Mechanics III GÜ 2 | | Phase Equilibria Thermodynamics GÜ 1 | | Thermal Separation Processes GÜ 2 | | | | | |
| 22 | Computer Science for Engineers - Introduction and Overview VL 3 | Mathematics II GÜ 2 | | Engineering Mechanics III HÜ 1 | | Phase Equilibria Thermodynamics HÜ 1 | | Thermal Separation Processes HÜ 1 | | | | | |
| 23 | Computer Science for Engineers - Introduction and Overview GÜ 2 | | | | | | | Separation Processes PR 1 | | | | | |
| 24 | Computer Science for Engineers - Introduction and Overview | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | |
| 26 | | | | | | Fundamentals in Molecular Biology | | Chemical Reaction Engineering (part 1) | | | | | |
| 27 | Practical module 1 (dual study program, Bachelor's degree) | Practical module 2 (dual study program, Bachelor's degree) | | Measurement Technology for Chemical and Bioprocess Engineering | | Genetics and Molecular Biology VL 2 | | Chemical Reaction Engineering VL 2 | | | | | |
| 28 | Practical term 1 0 | Practical term 2 0 | | Measurement Technology VL 2 | | Genetics and Molecular Biology PBL 1 | | Chemical Reaction Engineering HÜ 2 | | | | | |
| 29 | | | | Physical Fundamentals of Measurement Technology VL 2 | | Lab Course in Microbiology and Biochemistry PR 3 | | | | | | | |
| 30 | | | | Practical Course Measurement Technology PR 2 | | | | Material Engineering | | | | | |
| 31 | | | | | | | | Material Engineering VL 2 | | | | | |
| 32 | | | | | | | | | | | | | |
| 33 | Engineering Mechanics I (Stereostatics) | Engineering Mechanics II (Elastostatics) | | Introduction to Chemical and Bioengineering | | Biological and Biochemical Fundamentals (part 2) | | Bioprocess Technology I | | | | | |
| 34 | Engineering Mechanics I VL 2 | Engineering Mechanics II VL 2 | | Introduction to Chemical and Bioengineering VL 2 | | Fundamental Biological and Biochemical PR 3 | | Bioprocess Technology I VL 2 | | | | | |
| 35 | Engineering Mechanics I GÜ 2 | Engineering Mechanics II GÜ 2 | | | | Practical Course | | Bioprocess Technology I HÜ 2 | | | | | |
| 36 | Engineering Mechanics I HÜ 1 | Engineering Mechanics II HÜ 2 | | | | Introduction to the Biological and Biochemical Practical Course VL 1 | | Bioprocess Technology I - Fundamental PR 2 | | | | | |
| 37 | | | | | | | | Practical Course | | | | | |
| 38 | | | | Biological and Biochemical Fundamentals (part 1) | | | | | | | | | |
| | | | | Biological and Biochemical Fundamentals VL 2 | | | | | | | | | |

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.

