

Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w18)

Sample course plan C Bachelor General Engineering Science (German program, 7 semester) (AIWBS(7))
Specialisation Mechanical Engineering, Focus Energy Systems

Legend:

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

| LP | Semester 1 | Form | Semester 2 | Form | Semester 3 | Form | Semester 4 | Form | Semester 5 | Form | Semester 6 | Form | Semester 7 | Form | | | | | |
|----|---|--------------|--|----------------------|---|---------------|--|---------------|--|--------------------|--|------|-------------------------------------|--|---|---|---|---|---|
| 1 | Chemistry | VL 2 | Electrical Engineering II: Alternating Current Networks and Basic Devices | VL 3 | Technical Thermodynamics II | VL 2 | Mechanical Engineering: Design (part 2) | PBL2 | Introduction to Control Systems | VL 2 | Foundations of Management | VL 3 | Advanced Internship AIW/ GES | | | | | | |
| 2 | | | | | | | | | | | | | | | Chemistry I | Technical Thermodynamics II | Team Project Design Methodology | Introduction to Control Systems | Introduction to Management |
| 3 | | | | | | | | | | | | | | | Chemistry II | Technical Thermodynamics II | Mechanical Design Project II | Introduction to Control Systems | Management Tutorial |
| 4 | | | | | | | | | | | | | | | Chemistry I | Technical Thermodynamics II | | | |
| 5 | | | | | | | | | | | | | | | Chemistry II | Technical Thermodynamics II | Fundamentals of Materials Science (part 2) | | |
| 6 | | | | | | | | | | | | | | | | Electrical Engineering II: Alternating Current Networks and Basic Devices | Fundamentals of Materials Science II | | |
| 7 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | VL 3 | Fundamentals of Mechanical Engineering Design | VL 2 | Mathematics III | VL 2 | Fluid Dynamics | VL 3 | Measurement Technology for Mechanical Engineers | VL 2 | Advanced Mechanical Engineering Design (part 2) | VL 2 | | | | | | | |
| 8 | | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Fundamentals of Mechanical Engineering Design | Analysis III | Fluid Mechanics | Measurement Technology for Mechanical Engineering | Advanced Mechanical Engineering Design II |
| 9 | | | | | | | | | | | | | | | Fundamentals of Mechanical Engineering Design | Analysis III | Fluid Mechanics | Measurement Technology for Mechanical Engineering | Advanced Mechanical Engineering Design II |
| 10 | | | | | | | | | | | | | | | Fundamentals of Mechanical Engineering Design | Analysis III | | Measurement Technology for Mechanical Engineering | |
| 11 | | | | | | | | | | | | | | | Fundamentals of Mechanical Engineering Design | Differential Equations 1 | | Measurement Technology for Mechanical Engineering | |
| 12 | | | | | | | | | | | | | | | Fundamentals of Mechanical Engineering Design | Differential Equations 1 | | Measurement Technology for Mechanical Engineering | |
| 13 | Mathematics I | VL 2 | Technical Thermodynamics I | VL 2 | Mechanics III (Hydrostatics, Kinematics, Kinetics I) | VL 3 | Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems) | VL 3 | Advanced Mechanical Engineering Design (part 1) | VL 2 | Advanced Materials | VL 2 | | | | | | | |
| 14 | | | | | | | | | | | | | | Linear Algebra I | Technical Thermodynamics I | Mechanics III | Mechanics IV | Advanced Mechanical Engineering Design I | Advanced Materials Characterization |
| 15 | | | | | | | | | | | | | | Linear Algebra I | Technical Thermodynamics I | Mechanics III | Mechanics IV | Advanced Mechanical Engineering Design I | Advanced Materials Design |
| 16 | | | | | | | | | | | | | | Linear Algebra I | Technical Thermodynamics I | Mechanics III | Mechanics IV | Advanced Mechanical Engineering Design I | Advanced Materials Design |
| 17 | | | | | | | | | | | | | | Analysis I | Technical Thermodynamics I | Mechanics III | | | |
| 18 | | | | | | | | | | | | | | Analysis I | Technical Thermodynamics I | Mechanics III | | | |
| 19 | Mechanics I (Statics) | VL 2 | Mechanics II: Mechanics of Materials | VL 2 | Computer Engineering | VL 3 | Signals and Systems | VL 3 | Heat Transfer | VL 3 | Reciprocating Machinery (part 1) | VL 2 | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | | | |
| 22 | Mechanics I | Mechanics II | Mechanics II | Computer Engineering | Signals and Systems | Heat Transfer | Signals and Systems | Heat Transfer | Reciprocating Machinery | Renewable Energy | Energy Systems and | | | | | | | | |
| 23 | Mechanics I | Mechanics II | Mechanics II | Computer Engineering | Signals and Systems | Heat Transfer | Signals and Systems | Heat Transfer | Reciprocating Machinery | Energy Systems and | | | | | | | | | |

| | | | | | | | | | |
|---|------------------------------------|------|-----------------------|------|---|---|---------------------------------------|------------------|------|
| | Mechanics I | HÜ 1 | | | | Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines | VL 1 | Energy Industry | |
| | | | | | | Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines | HÜ 1 | Power Industry | VL 1 |
| | | | | | | | | Renewable Energy | UE 1 |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | |
| 26 | | | | | | | | | |
| 27 | | | Mathematics II | | | | | | |
| 28 | Programming in C | | Linear Algebra II | VL 2 | | | | | |
| | Programming in C | VL 1 | Linear Algebra II | UE 1 | Mechanical Engineering: Design (part 1) | | Computational Fluid Dynamics I | | |
| | Programming in C | PR 1 | Linear Algebra II | HÜ 1 | Embodiment Design and 3D-CAD | VL 2 | Computational Fluid Dynamics I | VL 2 | |
| | | | Analysis II | VL 2 | Mechanical Design Project I | PBL3 | Computational Fluid Dynamics I | HÜ 2 | |
| 29 | Physics for Engineers (AIW) | | Analysis II | HÜ 1 | | | | | |
| | Physics for Engineers | VL 2 | Analysis II | UE 1 | | | | | |
| 30 | | | | | | | | | |
| 31 | Physics for Engineers | UE 1 | | | Fundamentals of Materials Science (part 1) | | | | |
| 32 | | | | | Fundamentals of Materials Science I | VL 2 | | | |
| 33 | | | | | Physical and Chemical Basics of Materials Science | VL 2 | | | |
| Nontechnical Complementary 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.