

Course of Study General Engineering Science (German program) (Study Cohort w15)

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

Legend:

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

| LP | Semester 1 | FormHrs/wk | Semester 2 | FormHrs/wk | Semester 3 | FormHrs/wk | Semester 4 | FormHrs/wk | Semester 5 | FormHrs/wk | Semester 6 | FormHrs/wk | | | | | | | | | | |
|----|---|------------|---|------------|---|------------|--|------------|--|------------|---|------------|---|-------|------------------------------|------|---|------|---|------|-------------------------------|------|
| 1 | Physics for Engineers (part 1) | | Electrical Engineering II: Alternating Current Networks and Basic Devices | | Technical Thermodynamics II | | Mechanical Engineering: Design (part 2) | | Introduction to Control Systems | | Foundations of Management | | | | | | | | | | | |
| 2 | Physics for Engineers | VL 2 | Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3 UE 1 | VL 3 | Technical Thermodynamics II | VL 2 | Team Project Design Methodology | POL 2 | Introduction to Control Systems | VL 2 | Introduction to Management | VL 4 | | | | | | | | | | |
| 3 | Physics for Engineers | UE 1 | | | Technical Thermodynamics II | HÜ 1 | Technical Thermodynamics II | UE 1 | Mechanical Design Project II | TT 3 | Introduction to Control Systems | UE 2 | Project Entrepreneurship | POL 2 | | | | | | | | |
| 4 | | | | | Electrical Engineering II: Alternating Current Networks and Basic Devices | UE 2 | | | | | | | | | | | | | | | | |
| 5 | Chemistry | | | | | | | | Fundamentals of Materials Science (part 2) | | | | | | | | | | | | | |
| 6 | Chemistry I | VL 2 | Fundamentals of Mechanical Engineering Design | VL 2 | Computer Engineering | VL 3 | Advanced Mechanical Engineering Design (part 2) | VL 2 | Measurement Technology for Mechanical and Process Engineers | VL 2 | Reciprocating Machinery (part 2) | VL 2 | | | | | | | | | | |
| 7 | Chemistry II | VL 2 | | | | | | | | | | | Fundamentals of Mechanical Engineering Design | UE 1 | Computer Engineering | UE 1 | Advanced Mechanical Engineering Design II | HÜ 2 | Measurement Technology for Mechanical and Process Engineers | HÜ 1 | Internal Combustion Engines I | VL 2 |
| 8 | Chemistry I | HÜ 1 | | | | | | | | | | | Fundamentals of Mechanical Engineering Design | HÜ 2 | | | Advanced Mechanical Engineering Design II | HÜ 2 | Measurement Technology for Mechanical and Process Engineers | PR 2 | Internal Combustion Engines I | HÜ 1 |
| 9 | Chemistry II | HÜ 1 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | Signals and Systems | | | | | | | | | | | | | | | |
| 11 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | | Technical Thermodynamics I | VL 2 | Mathematics III | VL 2 | Fluid Dynamics | VL 3 | Gas and Steam Power Plants | VL 3 | Bachelor Thesis | | | | | | | | | | | |
| 12 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | VL 3 | | | | | | | | | | | Technical Thermodynamics I | HÜ 1 | Analysis III | UE 1 | Fluid Mechanics | HÜ 1 | Gas and Steam Power Plants | HÜ 2 | | |
| 13 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | UE 2 | | | | | | | | | | | Technical Thermodynamics I | UE 1 | Analysis III | HÜ 1 | Fluid Mechanics | HÜ 1 | | | | |
| 14 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | UE 2 | | | | | | | | | | | Technical Thermodynamics I | UE 1 | Differential Equations 1 | VL 2 | | | | | | |
| 15 | | | | | Differential Equations 1 | UE 1 | | | | | | | | | | | | | | | | |
| 16 | | | | | Differential Equations 1 | HÜ 1 | | | | | | | | | | | | | | | | |
| 17 | Mathematics I | | Mechanics II: Mechanics of Materials | VL 2 | Mechanics III (Hydrostatics, Kinematics, Kinetics I) | VL 3 | Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems) | VL 3 | Computational Fluid Dynamics I | VL 2 | Heat Transfer | VL 3 | | | | | | | | | | |
| 18 | Linear Algebra I | VL 2 | | | | | | | | | | | Mechanics II | UE 2 | Mechanics III | UE 2 | Mechanics IV | UE 2 | Computational Fluid Dynamics I | HÜ 2 | Heat Transfer | HÜ 1 |
| 19 | Linear Algebra I | UE 1 | | | | | | | | | | | Mechanics II | HÜ 2 | Mechanics III | HÜ 1 | Mechanics IV | HÜ 1 | | | | |
| 20 | Linear Algebra I | HÜ 1 | | | | | | | | | | | | | | | | | | | | |
| 21 | Analysis I | VL 2 | | | | | | | | | | | | | | | | | | | | |
| 22 | Analysis I | UE 1 | | | | | | | | | | | | | | | | | | | | |
| 23 | Analysis I | HÜ 1 | | | | | | | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | | | | | | | | | |
| 25 | Mechanics I (Statics) | | Mathematics II | VL 2 | Mechanical Engineering: Design (part 1) | VL 2 | Electrical Machines | VL 3 | Heat Transfer | VL 3 | Reciprocating Machinery (part 1) | VL 1 | | | | | | | | | | |
| 26 | Mechanics I | VL 2 | | | | | | | | | | | Linear Algebra II | UE 1 | Embodiment Design and 3D-CAD | TT 3 | Electrical Machines | HÜ 2 | Heat Transfer | HÜ 1 | Fundamentals of Reciprocating | VL 1 |
| 27 | Mechanics I | UE 2 | | | | | | | | | | | Linear Algebra II | HÜ 1 | Mechanical Design Project I | TT 3 | Electrical Machines | HÜ 2 | | | | |
| 28 | Mechanics I | HÜ 1 | | | | | | | | | | | Analysis II | VL 2 | | | | | | | | |
| 29 | | | Analysis II | HÜ 1 | | | | | | | | | | | | | | | | | | |
| 30 | | | Analysis II | UE 1 | | | | | | | | | | | | | | | | | | |
| 31 | | | | | Fundamentals of Materials Science (part 1) | | | | | | | | | | | | | | | | | |
| 32 | | | | | Fundamentals of Materials Science I | VL 2 | | | | | | | | | | | | | | | | |
| | | | | | Physical and Chemical Basics of | VL 2 | | | | | | | | | | | | | | | | |
| | | | | | Materials Science | | | | | | | | | | | | | | | | | |

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| | | | | reciprocating engines Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines HÜ 1 |
| 33 | Programming in C | | | |
| 34 | Programming in C VL 1 Programming in C PR 1 | Advanced Mechanical Engineering Design (part 1) | | |
| 35 | Physics for Engineers (part 2) | Advanced Mechanical Engineering VL 2 Design I | | |
| 36 | Physics-Lab for ET/ AIW/ GES PR 1 | Advanced Mechanical Engineering HÜ 2 Design I | | |

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.