

Course of Study General Engineering Science (German program, 7 semester) (Study Cohort w19)

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

Legend:

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|--|------------------------------------|---------------------------|------------------------------|
| 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 | Hrs | Semester 2 | Form | Hrs | Semester 3 | Form | Hrs | Semester 4 | Form | Hrs | Semester 5 | Form | Hrs | Semester 6 | Form | Hrs | Semester 7 | Form | Hrs/wk |
|----|---|--------------------------------|--|--|---|--|---|-----------------------------|------|---|---------------------------------|------|--|---|------|--|---|------|--------------------------------|------|--------|
| 1 | Chemistry | Chemistry I | VL 2 | Electrical Engineering II: Alternating Current Networks and Basic Devices | Electrical Engineering II: VL 3 | Alternating Current Networks and Basic Devices | Technical Thermodynamics II | Technical Thermodynamics II | VL 2 | Mechanical Engineering: Design (part 2) | Team Project Design Methodology | PBL2 | Introduction to Control Systems | Introduction to Control Systems | VL 2 | Foundations of Management | Introduction to Management | VL 3 | Advanced Internship GES | | |
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| 7 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Electrical Engineering I: VL 3 | Direct Current Networks and Electromagnetic Fields | Fundamentals of Mechanical Engineering Design | Fundamentals of Mechanical Engineering Design | HÜ 2 | Mathematics III | Analysis III | VL 2 | Fluid Dynamics | Fluid Mechanics | VL 3 | Measurement Technology for Mechanical and Process Engineers | Measurement Technology for Mechanical and Process Engineers | VL 2 | Advanced Mechanical Engineering Design (part 2) | Advanced Mechanical Engineering Design II | VL 2 | | | |
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| 13 | Mathematics I | Linear Algebra I | VL 2 | Technical Thermodynamics I | Technical Thermodynamics I | HÜ 1 | Mechanics III (Hydrostatics, Kinematics, Kinetics I) | Mechanics III | VL 3 | Mechanics IV (Kinetics II, Oscillations, Analytical Systems) | Mechanics IV | VL 3 | Advanced Mechanical Engineering Design (part 1) | Advanced Mechanical Engineering Design I | VL 2 | Electrical Machines and Actuators | Electrical Machines and Actuators | VL 3 | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | |
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| 19 | Mechanics I (Statics) | Mechanics I | VL 2 | Mechanics II: Mechanics of Materials | Mechanics II | VL 2 | Computer Engineering | Computer Engineering | VL 3 | Signals and Systems | Signals and Systems | VL 3 | Heat Transfer | Heat Transfer | VL 3 | Renewables and Energy Systems | Renewable Energy | VL 2 | Bachelor Thesis | | |
| 20 | | | | | | | | | | | | | | | | | | | | | |
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| | Mechanics I Mechanics I | UE 2 HÜ 1 | Mechanics II | HÜ 2 | Computer Engineering | UE 1 | | (part 1) Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines Fundamentals of Reciprocating Engines and Turbomachinery - Part Reciprocating Engines | VL 1 HÜ 1 | Energy Systems Energy Industry Power Industry Renewable Energy | VL 1 UE 1 | |
| 24 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 26 | | | Mathematics II | | | | | Computational Fluid Dynamics I | | | | |
| 27 | | | Linear Algebra II | VL 2 | | | | Computational Fluid Dynamics I | VL 2 | | | |
| 28 | Programming in C Programming in C Programming in C | VL 1 PR 1 | Linear Algebra II Linear Algebra II Analysis II | UE 1 HÜ 1 VL 2 | Mechanical Engineering: Design (part 1) Embodiment Design and 3D-CAD | VL 2 | | Computational Fluid Dynamics I | HÜ 2 | | | |
| 29 | Physics for Engineers (AIW) Physics for Engineers | VL 2 | Analysis II Analysis II | HÜ 1 UE 1 | Mechanical Design Project I | PBL3 | | | | | | |
| 30 | Physics for Engineers | UE 1 | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
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| 33 | | | | | | | | | | | | |
| 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.