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

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

Specialisation Electrical Engineering

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 |

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|---|---|---|---|---|---|---|---|
| 1 | **Chemistry**<br>Chemistry I+II VL 4<br>Chemistry I+II HÜ 2 | **Electrical Engineering II: Alternating Current Networks and Basic Devices**<br>Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3<br>Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2 | **Technical Thermodynamics II**<br>Technical Thermodynamics II VL 2<br>Technical Thermodynamics II HÜ 1<br>Technical Thermodynamics II GÜ 1 | **Signals and Systems**<br>Signals and Systems VL 3<br>Signals and Systems GÜ 2 | **Introduction to Control Systems**<br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2 | **Foundations of Management**<br>Introduction to Management VL 3<br>Management Tutorial GÜ 2 | **Advanced Internship AIW/ ES** |
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| 7 | **Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 | **Fundamentals of Mechanical Engineering Design**<br>Fundamentals of Mechanical Engineering Design VL 2<br>Fundamentals of Mechanical Engineering Design HÜ 2 | **Mathematics III**<br>Analysis III VL 2<br>Analysis III GÜ 1<br>Analysis III HÜ 1<br>Differential Equations 1 VL 2<br>Differential Equations 1 GÜ 1<br>Differential Equations 1 HÜ 1 | **Practical module 4 (dual study program, Bachelor's degree)**<br>Practical term 4 0 | **Practical module 5 (dual study program, Bachelor's degree)**<br>Practical term 5 0 | **Electrical Engineering Project Laboratory**<br>Electrical Engineering Project Laboratory PBL 8 | |
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| 13 | **Mathematics I**<br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2 | **Technical Thermodynamics I**<br>Technical Thermodynamics I VL 2<br>Technical Thermodynamics I HÜ 1<br>Technical Thermodynamics I GÜ 1 | | **Theoretical Electrical Engineering I: Time-Independent Fields**<br>Theoretical Electrical Engineering I: Time-Independent Fields VL 3<br>Theoretical Electrical Engineering I: Time-Independent Fields GÜ 2 | **Theoretical Electrical Engineering II: Time-Dependent Fields**<br>Theoretical Electrical Engineering II: Time-Dependent Fields VL 3<br>Theoretical Electrical Engineering II: Time-Dependent Fields GÜ 2 | **Semiconductor Circuit Design**<br>Semiconductor Circuit Design VL 3<br>Semiconductor Circuit Design GÜ 1 | |
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| 15 | | | **Practical module 3 (dual study program, Bachelor's degree)**<br>Practical term 3 0 | | | | |
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| 19 | | **Mathematics II**<br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2 | | **Materials in Electrical Engineering**<br>Materials in Electrical Engineering VL 2<br>Materials in Electrical Engineering GÜ 2<br>Electrotechnical Experiments VL 2 | **Introduction to Communications and Random Processes**<br>Introduction to Communications and Random Processes VL 3<br>Introduction to Communications and Random Processes HÜ 1<br>Introduction to Communications and Random Processes GÜ 1 | | **Bachelor thesis (dual study program)** |
| 20 | | | | | | | |
| 21 | **Computer Science for Engineers - Introduction and Overview**<br>Computer Science for Engineers - Introduction and Overview VL 3<br>Computer Science for Engineers - Introduction and Overview GÜ 2 | | **Engineering Mechanics III (Dynamics)**<br>Engineering Mechanics III VL 3<br>Engineering Mechanics III GÜ 2<br>Engineering Mechanics III HÜ 1 | | | | |
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| 27 | **Practical module 1 (dual study program, Bachelor's degree)**<br>Practical term 1 0 | **Practical module 2 (dual study program, Bachelor's degree)**<br>Practical term 2 0 | **Electrical Engineering III: Circuit Theory and Transients**<br>Circuit Theory VL 3<br>Circuit Theory GÜ 2 | | | | |
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| 31 | | | | **Introduction to Waveguides, Antennas, and Electromagnetic Compatibility**<br>Introduction to Waveguides, Antennas, and Electromagnetic Compatibility VL 3<br>Introduction to Waveguides, Antennas, and Electromagnetic Compatibility GÜ 2 | **Electrical Power Systems I: Introduction to Electrical Power Systems**<br>Electrical Power Systems I: Introduction to Electrical Power Systems VL 3<br>Electrical Power Systems I: Introduction to Electrical Power Systems GÜ 2 | | |
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| 33 | **Engineering Mechanics I (Stereostatics)**<br>Engineering Mechanics I VL 2<br>Engineering Mechanics I GÜ 2<br>Engineering Mechanics I HÜ 1 | **Engineering Mechanics II (Elastostatics)**<br>Engineering Mechanics II VL 2<br>Engineering Mechanics II GÜ 2<br>Engineering Mechanics II HÜ 2 | **Computer Engineering**<br>Computer Engineering VL 3<br>Computer Engineering GÜ 1 | | | | |
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| | 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.