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

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 |

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

Specialisation Process Engineering

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|---|---|---|---|---|---|---|---|
| 1 | **Chemistry**<br>Chemistry I VL 2<br>Chemistry II VL 2<br>Chemistry I HÜ 1<br>Chemistry II HÜ 1 | **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**<br>Advanced Internship AIW/ ES: Preparation SE 1<br>Advanced Intenship AIW/ ES: Internship-accompanying Seminar SE 1 |
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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 | **Fundamentals of Fluid Mechanics**<br>Fundamentals of Fluid Mechanics VL 2<br>Fluid Mechanics for Process Engineering HÜ 2 | **Heat and Mass Transfer**<br>Heat and Mass Transfer VL 2<br>Heat and Mass Transfer GÜ 1<br>Heat and Mass Transfer HÜ 1 | **Process and Plant Engineering I**<br>Process and Plant Engineering I VL 2<br>Process and Plant Engineering I HÜ 1<br>Process and Plant Engineering I GÜ 1 | |
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| 13 | **Mathematics I**<br>Linear Algebra I VL 2<br>Linear Algebra I GÜ 1<br>Linear Algebra I HÜ 1<br>Analysis I VL 2<br>Analysis I GÜ 1<br>Analysis I HÜ 1 | **Technical Thermodynamics I**<br>Technical Thermodynamics I VL 2<br>Technical Thermodynamics I HÜ 1<br>Technical Thermodynamics I GÜ 1 | **Mechanics III (Dynamics)**<br>Mechanics III VL 3<br>Mechanics III GÜ 2<br>Mechanics III HÜ 1 | **Phase Equilibria Thermodynamics**<br>Phase Equilibria Thermodynamics VL 2<br>Phase Equilibria Thermodynamics GÜ 1<br>Phase Equilibria Thermodynamics HÜ 1 | **Thermal Separation Processes**<br>Thermal Separation Processes VL 2<br>Thermal Separation Processes GÜ 2<br>Thermal Separation Processes HÜ 1<br>Separation Processes PR 1 | **Particle Technology and Solids Process Engineering**<br>Particle Technology I VL 2<br>Particle Technology I GÜ 1<br>Particle Technology I PR 2 | |
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| 19 | | **Mechanics II: Mechanics of Materials**<br>Mechanics II VL 2<br>Mechanics II GÜ 2<br>Mechanics II HÜ 2 | | **Renewables and Energy Systems**<br>Renewable Energy VL 2<br>Energy Systems and Energy Industry VL 2<br>Power Industry VL 1<br>Renewable Energy GÜ 1 | **Chemical Reaction Engineering (part 1)**<br>Chemical Reaction Engineering VL 2<br>Chemical Reaction Engineering HÜ 2 | **Chemical Reaction Engineering (part 2)**<br>Experimental Course Chemical Engineering PR 2 | **Bachelor Thesis** |
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| 21 | **Mechanics I (Statics)**<br>Mechanics I VL 2<br>Mechanics I GÜ 2<br>Mechanics I HÜ 1 | | **Computer Engineering**<br>Computer Engineering VL 3<br>Computer Engineering GÜ 1 | | **Measurement Technology for VT/ BVT**<br>Measurement Technology VL 2<br>Physical Fundamentals of Measurement Technology VL 2<br>Practical Course Measurement Technology PR 2 | | |
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| 25 | | **Mathematics II**<br>Linear Algebra II VL 2<br>Linear Algebra II GÜ 1<br>Linear Algebra II HÜ 1<br>Analysis II VL 2<br>Analysis II HÜ 1<br>Analysis II GÜ 1 | | **Bioprocess Engineering - Fundamentals**<br>Bioprocess Engineering - Fundamentals VL 2<br>Bioprocess Engineering- Fundamentals HÜ 2<br>Bioprocess Engineering - Fundamental Practical Course PR 2 | | | |
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| 27 | **Programming in C**<br>Programming in C VL 1<br>Programming in C PR 1 | | **Fundamentals of Process Engineering and Material Engineering**<br>Introduction into Process Engineering/Bioprocess Engineering VL 2<br>Fundamentals of material engineering VL 2 | | | | |
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| 29 | **Physics for Engineers (AIW)**<br>Physics for Engineers VL 2<br>Physics for Engineers GÜ 1 | | | | **Environmental Technology**<br>Environmental Assessment VL 2<br>Environmental Assessment GÜ 1 | | |
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Non-technical 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.