# Course of Study General Engineering Science (English program) (Study Cohort w15)

Sample course plan A Bachelor General Engineering Science (English program) (GESBS)
Specialisation Mechanical Engineering, Focus Aircraft Systems 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 |

| 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 | **Chemistry (GES)** | | **Physics for Engineers (GES) (part 2)** | | **Technical Thermodynamics II** | | **Mechanical Engineering: Design (part 2)** | | **Introduction to Control Systems** | | **Foundations of Management** | |
| 2 | Chemistry I | VL 2 | Physics-Lab for ET/ AIW/ GES | PR 1 | Technical Thermodynamics II | VL 2 | Team Project Design Methodology | POL 2 | Introduction to Control Systems | VL 2 | Introduction to Management | VL 4 |
| 3 | Chemistry II | VL 2 | **Fundamentals of Mechanical Engineering Design** | | Technical Thermodynamics II | HÜ 1 | Mechanical Design Project II | TT 3 | Introduction to Control Systems | UE 2 | Project Entrepreneurship | POL 2 |
| 4 | Chemistry I | HÜ 1 | Fundamentals of Mechanical Engineering Design | VL 2 | Technical Thermodynamics II | UE 1 | **Fundamentals of Materials Science (part 2)** | | | | | |
| 5 | Chemistry II | HÜ 1 | Fundamentals of Mechanical Engineering Design | HÜ 2 | | | Fundamentals of Materials Science II | VL 2 | | | | |
| 6 | | | | | | | **Advanced Mechanical Engineering Design (part 2)** | | | | | |
| 7 | **Linear Algebra** | | | | **Computer Engineering** | | | | **Measurement Technology for Mechanical and Process Engineers** | | **Integrated Product Development and Lightweight Design** | |
| 8 | Linear Algebra | VL 4 | | | Computer Engineering | VL 3 | Advanced Mechanical Engineering Design II | VL 2 | Measurement Technology for Mechanical and Process Engineers | VL 2 | Integrated Product Development I | VL 2 |
| | Linear Algebra | HÜ 2 | | | Computer Engineering | UE 1 | Advanced Mechanical Engineering Design II | HÜ 2 | Measurement Technology for Mechanical and Process Engineers | HÜ 1 | Development of Lightweight Design Products | VL 2 |
| 9 | Linear Algebra | UE 2 | **Technical Thermodynamics I** | | | | **Signals and Systems** | | Practical Course: Measurement and Control Systems | PR 2 | CAE-Team Project | POL 2 |
| 10 | | | Technical Thermodynamics I | VL 2 | | | Signals and Systems | VL 3 | | | | |
| 11 | | | Technical Thermodynamics I | HÜ 1 | | | Signals and Systems | HÜ 1 | | | | |
| 12 | | | Technical Thermodynamics I | UE 1 | | | | | | | | |
| 13 | | | | | **Mathematics III** | | | | **Simulation of Dynamic Systems and Reliability** | | **Aeronautical Systems** | |
| 14 | | | | | Analysis III | VL 2 | | | Simulation of Dynamic Systems | VL 2 | Air Transportation Systems | VL 2 |
| 15 | **Electrical Engineering I** | | **Mathematical Analysis** | | Analysis III | UE 1 | **Fluid Dynamics** | | Reliability of Dynamic Systems | VL 2 | Fundamentals of Aircraft Systems | VL 2 |
| 16 | Electrical Engineering I | VL 3 | Mathematical Analysis | VL 4 | Analysis III | HÜ 1 | Fluid Mechanics | VL 3 | Simulation of Dynamic Systems | UE 1 | Fundamentals of Aircraft Systems | UE 1 |
| 17 | Electrical Engineering I | UE 2 | Mathematical Analysis | HÜ 2 | Differential Equations 1 | VL 2 | Fluid Mechanics | HÜ 1 | Reliability of Dynamic Systems | UE 1 | Air Transportation Systems | HÜ 1 |
| 18 | | | Mathematical Analysis | UE 2 | Differential Equations 1 | UE 1 | | | | | | |
| 19 | | | | | Differential Equations 1 | HÜ 1 | | | **Advanced Mechanical Design Project** | | **Bachelor Thesis** | |
| 20 | | | | | | | | | Advanced Mechanical Design Project | TT 4 | | |
| 21 | **Mechanics I (GES)** | | | | **Mechanics III (GES)** | | **Mechanics IV (Kinetics II, Oscillations, Analytical Mechanics, Multibody Systems)** | | | | | |
| 22 | Mechanics I | VL 2 | | | Mechanics III | HÜ 1 | Mechanics IV | VL 3 | | | | |
| 23 | Mechanics I | HÜ 3 | **Electrical Engineering II** | | Mechanics III | UE 2 | Mechanics IV | UE 2 | | | | |
| 24 | | | Electrical Engineering II | VL 3 | Mechanics III | VL 3 | Mechanics IV | HÜ 1 | | | | |
| 25 | | | Electrical Engineering II | UE 2 | | | | | | | | |
| 26 | | | | | | | | | | | | |
| 27 | **Physics for Engineers (GES) (part 1)** | | | | **Mechanical Engineering: Design (part 1)** | | **Electrical Machines** | | | | | |
| 28 | Physics for Engineers | VL 2 | | | Embodiment Design and 3D-CAD | VL 2 | Electrical Machines | VL 3 | | | | |
| 29 | Physics for Engineers | UE 1 | **Mechanics II (GES)** | | Mechanical Design Project I | TT 3 | Electrical Machines | HÜ 2 | | | | |
| 30 | | | Mechanics II | VL 2 | **Fundamentals of Materials Science (part 1)** | | | | | | | |
| 31 | | | Mechanics II | HÜ 2 | Fundamentals of Materials Science I | VL 2 | | | | | | |
| 32 | | | | | Physical and Chemical Basics of Materials Science | VL 2 | | | | | | |
| 33 | | | | | | | | | | | | |

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| 34 | | | **Advanced Mechanical Engineering Design (part 1)** |
| 35 | | **Programming in C** | Advanced Mechanical Engineering Design I VL 2 |
| 36 | | Programming in C VL 1<br>Programming in C PR 1 | Advanced Mechanical Engineering Design I HÜ 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.