

# Course of Study General Engineering Science (English program) (Study Cohort w14)

Sample course plan - Bachelor General Engineering Science (English program) (GESBS)  
Specialisation Electrical Engineering

Legend:

|                               |                           |                           |                              |
|-------------------------------|---------------------------|---------------------------|------------------------------|
| 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  | <b>Chemistry (GES)</b>                      |            | <b>Physics for Engineers (GES) (part 2)</b>          |            | <b>Technical Thermodynamics II</b>                               |                             | <b>Theoretical Electrical Engineering I: Time-Independent Fields</b>      |                            | <b>Introduction to Control Systems</b>                       |            | <b>Foundations of Management</b>                                    |            |                                     |      |
| 2  | Chemistry I                                 | VL 2       | Physics-Lab for ET/IIW-Engineers                     | PR 1       | Technical Thermodynamics II                                      | VL 2                        | Theoretical Electrical Engineering I: Time-Independent Fields             |                            | Introduction to Control Systems                              | VL 2       | Introduction to Management  | VL 4       |                                     |      |
| 3  | Chemistry II                                | VL 2       | <b>Fundamentals of Mechanical Engineering Design</b> |            | Technical Thermodynamics II                                      | HÜ 1                        | Theoretical Electrical Engineering I: Time-Independent Fields             | VL 3                       | Introduction to Control Systems                              | UE 2       | Project Entrepreneurship  | POL 2      |                                     |      |
| 4  | Chemistry I                                 | HÜ 1       |  |            | Technical Thermodynamics II                                      | UE 1                        | Theoretical Electrical Engineering I: Time-Independent Fields             | UE 2                       |  |            |   |            |                                     |      |
| 5  | Chemistry II                                | HÜ 1       |  |            |  |                             |   |                            |  |            |   |            |                                     |      |
| 6  |   |            |  |            |  |                             |   |                            |  |            |   |            |                                     |      |
| 7  | <b>Linear Algebra</b>                       |            |  |            |  | <b>Computer Engineering</b> |   | <b>Signals and Systems</b> |  |            | <b>Theoretical Electrical Engineering II: Time-Dependent Fields</b> |            | <b>Semiconductor Circuit Design</b> |      |
| 8  | Linear Algebra                              | VL 4       |  |            |  | Computer Engineering        | VL 3  | Signals and Systems        |  | VL 3       | Theoretical Electrical Engineering II: Time-Dependent Fields        | VL 3       | Semiconductor Circuit Design        | VL 3 |
| 9  | Linear Algebra                              | HÜ 2       |  |            | Computer Engineering   | UE 1                        | Signals and Systems   | HÜ 1                       | Theoretical Electrical Engineering II: Time-Dependent Fields | UE 2       | Semiconductor Circuit Design  | UE 1       |                                     |      |
| 10 | Linear Algebra                              | UE 2       | <b>Technical Thermodynamics I</b>                    |            |  |                             |   |                            |  |            |   |            |                                     |      |
| 11 |   |            | Technical Thermodynamics I                           | VL 2       |  |                             |   |                            |  |            |   |            |                                     |      |
| 12 |   |            | Technical Thermodynamics I                           | HÜ 1       |  |                             |   |                            |  |            |   |            |                                     |      |
| 13 |   |            | Technical Thermodynamics I                           | UE 1       |  |                             |   |                            |  |            |   |            |                                     |      |
| 14 |   |            |  |            | <b>Mathematics III</b>   |                             | <b>Electrical Engineering IV: Transmission Lines and Research Seminar</b> |                            | <b>Introduction to Communications and Random Processes</b>   |            | <b>Bachelor Thesis</b>  |            |                                     |      |
| 15 | <b>Electrical Engineering I</b>             |            | <b>Mathematical Analysis</b>                         |            | Analysis III   | VL 2                        | Transmission Line Theory  | VL 2                       | Introduction to Communications and Random Processes          | VL 3       |   |            |                                     |      |
| 16 | Electrical Engineering I                    | VL 3       | Mathematical Analysis                                | VL 4       | Analysis III   | UE 1                        | Research Seminar Electrical Engineering, Computer Science, Mathematics    | SE 2                       | Introduction to Communications and Random Processes          | HÜ 1       |   |            |                                     |      |
| 17 | Electrical Engineering I                    | UE 2       | Mathematical Analysis                                | HÜ 2       | Differential Equations 1   | VL 2                        | Transmission Line Theory  | HÜ 2                       |  |            |   |            |                                     |      |
| 18 |   |            | Mathematical Analysis                                | UE 2       | Differential Equations 1   | UE 1                        |   |                            |  |            |   |            |                                     |      |
| 19 |   |            | Mathematical Analysis                                | UE 2       | Differential Equations 1   | HÜ 1                        |   |                            |  |            |   |            |                                     |      |
| 20 |   |            |  |            |  |                             | <b>Electrical Engineering Project Laboratory</b>                          |                            | <b>Electronic Devices</b>                                    |            |   |            |                                     |      |
| 21 | <b>Mechanics I (GES)</b>                    |            |  |            | <b>Mechanics III (GES)</b>                                       |                             | Electrical Engineering Project Laboratory                                 | PR 5                       | Electronic Devices   | VL 3       |   |            |                                     |      |
| 22 | Mechanics I                                 | VL 2       |  |            | Mechanics III  | HÜ 1                        |   |                            | Electronic Devices   | POL 2      |   |            |                                     |      |
| 23 | Mechanics I                                 | HÜ 3       |  |            | Mechanics III  | UE 2                        |   |                            |  |            |   |            |                                     |      |
| 24 |   |            | <b>Electrical Engineering II</b>                     |            | Mechanics III  | VL 3                        |   |                            |  |            |   |            |                                     |      |
| 25 |   |            | Electrical Engineering II                            | VL 3       |  |                             |   |                            |  |            |   |            |                                     |      |
| 26 |   |            | Electrical Engineering II                            | UE 2       |  |                             |   |                            |  |            |   |            |                                     |      |
| 27 | <b>Physics for Engineers (GES) (part 1)</b> |            |  |            | <b>Electrical Engineering III: Circuit Theory and Transients</b> |                             | <b>Materials in Electrical Engineering</b>                                |                            | <b>Measurements: Methods and Data Processing</b>             |            |   |            |                                     |      |
| 28 | Physics for Engineers                       | VL 2       |  |            | Circuit Theory   | VL 3                        | Materials in Electrical Engineering                                       | VL 2                       | Measurements: Methods and Data Processing                    | VL 2       |   |            |                                     |      |
| 29 | Physics for Engineers                       | UE 1       |  |            | Circuit Theory   | UE 2                        | Materials in Electrical Engineering                                       | UE 2                       | Processing   |            |   |            |                                     |      |
| 30 |   |            | <b>Mechanics II (GES)</b>                            |            |  |                             | Electrotechnical Experiments  | VL 1                       | Measurements: Methods and Data Processing                    | UE 1       |   |            |                                     |      |
| 31 |   |            | Mechanics II   | VL 2       |  |                             |   |                            | EE Experimental Lab  | PR 2       |   |            |                                     |      |
| 32 |   |            | Mechanics II   | HÜ 2       |  |                             |   |                            |  |            |   |            |                                     |      |
| 33 |   |            |  |            |  |                             | <b>Mathematics IV</b>   |                            |  |            |   |            |                                     |      |
| 34 |   |            |  |            |  |                             | Complex Functions   | VL 2                       |  |            |   |            |                                     |      |
|    |   |            |  |            |  |                             | Complex Functions   | UE 1                       |  |            |   |            |                                     |      |
|    |   |            |  |            |  |                             | Complex Functions   | HÜ 1                       |  |            |   |            |                                     |      |
|    |   |            |  |            |  |                             | Differential Equations 2  | VL 2                       |  |            |   |            |                                     |      |
|    |   |            |  |            |  |                             | Differential Equations 2  | UE 1                       |  |            |   |            |                                     |      |

|    |                         |                          |      |
|----|-------------------------|--------------------------|------|
| 35 | <b>Programming in C</b> | Differential Equations 2 | DE 1 |
| 36 | Programming in C VL 1   | Differential Equations 2 | HÜ 1 |
|    | Programming in C PR 1   |                          |      |

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.