

# Course of Study Computer Science in Engineering (Study Cohort w22)

Sample course plan C Bachelor Computer Science in Engineering (IIWBS) Dual study program  
 Specialisation I. Computer Science, Specialisation II. Mathematics & Engineering Science, Specialisation III.

Legend:

|  |                                    |                           |                              |
|--|------------------------------------|---------------------------|------------------------------|
| Core Qualification Compulsory          | Specialisation Compulsory          | Focus Compulsory          | Thesis Compulsory            |
| Core Qualification Elective Compulsory | Specialisation Elective Compulsory | Focus Elective Compulsory | Interdisciplinary complement |

| Subject Specific Focus |   |  |  |  |  |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
|------------------------|---|--|--|--|--|--|---|---|---|---|---|---|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|---|--|--|--|--|---|--|--|--|---|--|--|---|--|---|---|---|--|--|--|--|---|---|--|--|--|--|--|--|---|---|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|---|--|--|--|--|--|---|---|--|---|---|----|----|--|--|---|---|--|--|--|---|---|--|----|----|
| 1                      | <b>Discrete Algebraic Structures</b><br>Discrete Algebraic Structures VL 2<br>Discrete Algebraic Structures GÜ 2  | <b>Electrical Engineering II: Alternating Current Networks and Basic Devices</b><br>Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3<br>Electrical Engineering II: Alternating Current Networks and Basic Devices GÜ 2 | <b>Numerical Mathematics I</b><br>Numerical Mathematics I VL 2<br>Numerical Mathematics I GÜ 2   | <b>Signals and Systems</b><br>Signals and Systems VL 3<br>Signals and Systems GÜ 2   | <b>Introduction to Communications and Random Processes</b><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 |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 2                      |   |  |  |  |  | 3  | 4   | 5   | 6   | 7   | <b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b><br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 | <b>Automata Theory and Formal Languages</b><br>Automata Theory and Formal Languages VL 2<br>Automata Theory and Formal Languages GÜ 2         | <b>Computer Engineering</b><br>Computer Engineering VL 3<br>Computer Engineering GÜ 1                                      | <b>Stochastics</b><br>Stochastics VL 2<br>Stochastics GÜ 2   | <b>Introduction to Control Systems</b><br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2 | 8  | 9  | 10   | 11   | 12  | 13   | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2   | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2  | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1  | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1                    | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  | 14   | 15   | 16   | 17  | 18   | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2                             | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2 | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0                                    | 20   | 21   | 22  | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2   | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1               | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0  | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2        | 23  | 24  | 25   | 26   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0   | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0             | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   | 30   | 31   | 32   | 33  | 34  | 35   | 36   | 37   | 38   |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 3                      |   |  |  |  |  | 4  | 5   | 6   | 7   | <b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b><br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 |   |   |  |  |  | <b>Automata Theory and Formal Languages</b><br>Automata Theory and Formal Languages VL 2<br>Automata Theory and Formal Languages GÜ 2  | <b>Computer Engineering</b><br>Computer Engineering VL 3<br>Computer Engineering GÜ 1  | <b>Stochastics</b><br>Stochastics VL 2<br>Stochastics GÜ 2   | <b>Introduction to Control Systems</b><br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2   | 8   | 9  |  |  |  |  |  | 10   | 11   | 12   | 13  | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2   | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2  |  |  |   |  | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1  | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1  | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8   |  |  |   |  |   | 14  | 15  | 16   | 17   | 18   |  |   |   |  | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2   | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2  | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0                                | 20  | 21  | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1        | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0                                | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2                     | 23  | 24   | 25   | 26   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0    | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28  | 29   | 30   | 31   | 32   | 33   | 34  | 35  | 36   | 37  | 38  |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 4                      |   |  |  |  |  | 5  | 6   | 7   | <b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b><br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 |   |   |   |  |  |  |  |  |  |  | <b>Automata Theory and Formal Languages</b><br>Automata Theory and Formal Languages VL 2<br>Automata Theory and Formal Languages GÜ 2 | <b>Computer Engineering</b><br>Computer Engineering VL 3<br>Computer Engineering GÜ 1                                      |  |  |  |  |  | <b>Stochastics</b><br>Stochastics VL 2<br>Stochastics GÜ 2   | <b>Introduction to Control Systems</b><br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2 | 8  | 9   |  |  |  |  |   |  |  |  |   |  |  |   |  |   | 10  | 11  | 12   | 13   | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2   | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2  | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1 | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1 | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  | 14   |  |  |  |  | 15  | 16  | 17   |  |  |  |  |  | 18  | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2 | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2              |  |  |  |  | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0 | 20   | 21   | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2                         | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1 | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0 | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 | 23  | 24  | 25 | 26 | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0                                | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0                             | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0 | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   | 30  | 31  | 32   | 33 | 34 |
| 5                      |   |  |  |  |  | 6  | 7   | <b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b><br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  | <b>Automata Theory and Formal Languages</b><br>Automata Theory and Formal Languages VL 2<br>Automata Theory and Formal Languages GÜ 2  | <b>Computer Engineering</b><br>Computer Engineering VL 3<br>Computer Engineering GÜ 1   |  |  | <b>Stochastics</b><br>Stochastics VL 2<br>Stochastics GÜ 2   | <b>Introduction to Control Systems</b><br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2   | 8   | 9  |  |  |   |  |  |   |  |   | 10  | 11  | 12   | 13   |  |  |   |   |  | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2   |  |  |  |  | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2                     | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1 | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1                        |  |  |  |  |  | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8                               | 14   |  |  |  | 15   | 16   | 17   | 18   |   | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2 | <b>Mathematics III</b><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 |  |  |   |   |  | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2 | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0 | 20 | 21 | 22   |  |   |   |  | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1 | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0 | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 | 23 | 24 |
| 6                      |   |  |  |  |  | 7  | <b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b><br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 |   |   |   |   |   |  |  |  |  |  |  |  |   |  | <b>Automata Theory and Formal Languages</b><br>Automata Theory and Formal Languages VL 2<br>Automata Theory and Formal Languages GÜ 2  | <b>Computer Engineering</b><br>Computer Engineering VL 3<br>Computer Engineering GÜ 1  | <b>Stochastics</b><br>Stochastics VL 2<br>Stochastics GÜ 2   | <b>Introduction to Control Systems</b><br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2 | 8  |  |  |  |   |  |  |  |  | 9   | 10   |  |  |   | 11   | 12   | 13  | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2   | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2                                   | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1 | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1 | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  | 14   |  |  |   |   |  |  | 15   | 16   | 17   | 18   |   |   |  |  |  |  |  |  |   | 19   |  |  |  | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2 | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2              | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0  |   | 20   |  |  |  |  |   |   |  |   |   | 21 | 22 | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1 | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0 | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2                     |  |  |   |   |  | 23 | 24 |
| 7                      | <b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b><br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3<br>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2 | <b>Automata Theory and Formal Languages</b><br>Automata Theory and Formal Languages VL 2<br>Automata Theory and Formal Languages GÜ 2  | <b>Computer Engineering</b><br>Computer Engineering VL 3<br>Computer Engineering GÜ 1  | <b>Stochastics</b><br>Stochastics VL 2<br>Stochastics GÜ 2   | <b>Introduction to Control Systems</b><br>Introduction to Control Systems VL 2<br>Introduction to Control Systems GÜ 2   |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 8                      |   |  |  |  |  | 9  |   |   |   | 10  | 11  | 12  | 13   | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2   | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2                        | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1  | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1  | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  | 14   |   |  |  |  |  |  | 15   |  |  |  |   | 16   | 17   |  |  | 18  | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2   | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2 | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0  | 20   | 21  |  |   |   |   |  | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2                         | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1                           | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0             | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2                     |  | 23   | 24   | 25   | 26   |   |   |  | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0                                | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0                                    | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0                                | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 |   | 28   | 29   | 30   | 31   |  |  |  |  | 32  | 33   | 34   | 35   | 36   | 37   | 38  |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 9                      |   |  |  |  |  | 10   |   |   | 11  | 12  | 13  | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2  | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2                            |  |  |  |  |  | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1  | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1                                   | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  |  |  |  |  | 14   | 15   | 16   |  |   | 17   | 18   |  |  | 19  | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2                                 |  |  |   |  | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2 |  |   |   |   |  | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0  |  |  |   |   |  | 20   | 21   | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1 | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0   | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 | 23   |  |  |  |  | 24  | 25   | 26   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0    | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29  | 30   | 31   | 32   | 33   | 34   | 35  | 36  | 37   | 38  |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 10                     |   |  |  |  |  | 11   |   | 12  | 13  | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2  | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2   |   |  |  |  |  |  |  |  |   |  |  |  |  |  | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1  | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1                    | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  | 14   | 15  | 16   | 17   | 18   | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2  |  |  |  |   |  |  |   | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2 | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0   | 20  | 21   |  |  |  |   |   |  | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2   |  |  |   |   |  | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1  | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0                                | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 | 23   | 24   | 25  | 26   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0  |  |  |  |  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0 | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   | 30   | 31   | 32  | 33  | 34   | 35  | 36  | 37 | 38 |  |  |   |   |  |  |  |   |   |  |    |    |
| 11                     |   |  |  |  |  | 12   | 13  | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2  | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2   |   |   |   |  |  |  |  |  |  |  |   |  | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1  | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1  | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  | 14   |  |  |  | 15   | 16  | 17   | 18   | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2   |   |  | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2  | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0   | 20   |  |   |  |   |   | 21  | 22   |  |  |  |   |   |  | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 |  |  |  |  |   |   |  |  |  |  | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1                            | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0 | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 | 23   |  | 24   | 25   | 26   | 27   |  |   |  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0    | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28  | 29  | 30   | 31  | 32  | 33 | 34 | 35   | 36   | 37  | 38  |  |  |  |   |   |  |    |    |
| 12                     | 13  | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2   | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2  | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1  | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1  | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  | 14  |   |   |   |   |   |  | 15   | 16   | 17   | 18   | 19   |  |   |  |  |  |  | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2                             |  |  |  | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2 | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0  | 20   | 21   |  |   | 22   |  |  |   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2   | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1               |  |   |   | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0             | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2                     | 23   | 24   | 25   | 26  | 27  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0    | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   | 30   | 31   | 32  | 33   |  |  |  |  | 34  | 35  | 36   | 37  | 38  |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 13                     | <b>Mathematics I</b><br>Mathematics I VL 4<br>Mathematics I HÜ 2<br>Mathematics I GÜ 2  |  |  |  |  |  | <b>Foundations of Management</b><br>Introduction to Management VL 3<br>Management Tutorial GÜ 2   |   |   |   |   | <b>Computernetworks and Internet Security</b><br>Computer Networks and Internet Security VL 3<br>Computer Networks and Internet Security GÜ 1 | <b>Embedded Systems</b><br>Embedded Systems VL 3<br>Embedded Systems GÜ 1<br>Embedded Systems PBL 1                        | <b>Practical Course IIW</b><br>Practical Course IIW PBL 8  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 14                     |   |  |  |  |  |  |   |   |   | 15  | 16  |   |  |  | 17   | 18   | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2                             | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2     | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0                                    |  |  |  |  | 20   | 21   | 22   |  |   |  | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1  | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0   | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 | 23   | 24   | 25  |  |  |   | 26   | 27  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0   |   |  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28  | 29  | 30   |  | 31   | 32   | 33   | 34   | 35  | 36  | 37   | 38   |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 15                     |   |  |  |  |  |  |   | 16  | 17  | 18  | 19  |   |  |  | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2                             | <b>Mathematics III</b><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 | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2              |  |  |   |  | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0  | 20   | 21   | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1    | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0  | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2        | 23   |  |  |  |   |  | 24   | 25   | 26  |  |  |   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0   |   |   |  |  |  |  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0   | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0             | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   | 30   | 31   | 32   | 33  | 34  | 35   | 36   | 37   | 38   |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 16                     |   | 17   | 18   | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2   | <b>Mathematics III</b><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 |   | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2   | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0   | 20  | 21  |   |  |  |  |  |  |  |  |   |  |  | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 |  |  |  |  |   | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1                            |  |  |  |   |  | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0  | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2   | 23  | 24   | 25   | 26  | 27   |   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0   | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0             | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   |   |   |  | 30   | 31   | 32   | 33   | 34   | 35  | 36  | 37   | 38   |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 17                     | 18  | 19   | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2   | <b>Mathematics III</b><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 |  |  | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2   |   |   | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0   | 20  | 21  | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 |  |  |  | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2 | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1  | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0   | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 |  | 23   |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  | 24  | 25   | 26   | 27  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0   |   |   |  |  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28  | 29  | 30   | 31   | 32   | 33   | 34   | 35   | 36  | 37  | 38   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 18                     | 19  | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2   |  |  |  |  |   |   |   |   | <b>Mathematics III</b><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  | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2             | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0                                    |  | 20   | 21   | 22   |  |  |   |  | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2                         |  |  |  |  |  |  |   |  | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1  | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0                                | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2   | 23  | 24   |  |  | 25  | 26   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0   |  |   | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0   | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0             | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   |  |  | 29  | 30  | 31   | 32   | 33   | 34   | 35   | 36   | 37  | 38  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 19                     | <b>Mathematics II</b><br>Mathematics II VL 4<br>Mathematics II HÜ 2<br>Mathematics II GÜ 2  |  |  |  | <b>Mathematics III</b><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   | <b>Seminars Computer Science</b><br>Introductory Seminar Computer Science II SE 2<br>Introductory Seminar Computer Science I SE 2  |   | <b>Practical module 5 (dual study program, Bachelor's degree)</b><br>Practical term 5 0   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 20                     |   |  | 21   | 22   |  |  | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2  |   | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2  | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1   |   |   |  |  | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0                                | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2   | 23   |  |  |   |  |  |  | 24   | 25   | 26   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0                                | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0   | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 |  |  |  | 28  | 29   | 30   | 31   | 32  | 33   | 34   | 35  | 36   | 37  | 38  |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 21                     |   | 22   | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2 | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2   |  |  |   |   |   |   | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1   | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0   | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2 | 23   |  |  | 24   | 25   | 26   | 27  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0                                    |  |  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0                                | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1   | 28   |  |  |   |  |  |  |  | 29  | 30   | 31   | 32   | 33  | 34   | 35   | 36  | 37   | 38  |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 22                     | <b>Procedural Programming for Computer Engineers</b><br>Procedural Programming for Computer Engineers VL 2<br>Procedural Programming for Computer Engineers HÜ 1<br>Procedural Programming for Computer Engineers PR 2  | <b>Programming Paradigms</b><br>Programming Paradigms VL 2<br>Programming Paradigms HÜ 1<br>Programming Paradigms PR 2   |  |  | <b>Algorithms and Data Structures</b><br>Algorithms and Data Structures VL 4<br>Algorithms and Data Structures GÜ 1  | <b>Practical module 4 (dual study program, Bachelor's degree)</b><br>Practical term 4 0  |   | <b>Functional Programming</b><br>Functional Programming VL 2<br>Functional Programming HÜ 2<br>Functional Programming GÜ 2  |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 23                     |   |  |  |  |  |  |   |   |   |   |   |   |  | 24   |  |  | 25   | 26   | 27   | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0   | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0                                    | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   | 30   | 31   | 32   | 33   | 34  | 35   | 36   | 37   | 38   |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 24                     |   |  |  |  |  |  | 25  |   | 26  | 27  |   |   |  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0                                | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1 | 28   | 29   |   |  |  |  | 30   | 31   | 32   | 33   | 34   | 35   | 36  | 37   | 38   |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 25                     |   |  | 26   | 27   |  |  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0   |   | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0   | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0   | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1  | 28  | 29   |  |  |  |  | 30   | 31   | 32  | 33   | 34   | 35   | 36   | 37   | 38   |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 26                     | 27  | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0  | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1   | 28   |   | 29  |   |   |   | 30  | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38  |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 27                     | <b>Practical module 1 (dual study program, Bachelor's degree)</b><br>Practical term 1 0   |  |  |  |  | <b>Practical module 2 (dual study program, Bachelor's degree)</b><br>Practical term 2 0  | <b>Practical module 3 (dual study program, Bachelor's degree)</b><br>Practical term 3 0   | <b>Combinatorial Structures and Algorithms</b><br>Combinatorial Structures and Algorithms VL 3<br>Combinatorial Structures and Algorithms GÜ 1  |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 28                     |   | 29   | 30   | 31   | 32   |  |   |   | 33  | 34  | 35  | 36  | 37   | 38   |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 29                     | 30  | 31   | 32   | 33   | 34   | 35   | 36  | 37  | 38  |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 30                     | 31  | 32   | 33   | 34   | 35   | 36   | 37  | 38  |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 31                     | 32  | 33   | 34   | 35   | 36   | 37   | 38  |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 32                     | 33  | 34   | 35   | 36   | 37   | 38   |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 33                     | 34  | 35   | 36   | 37   | 38   |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 34                     | 35  | 36   | 37   | 38   |  |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 35                     | 36  | 37   | 38   |  |  |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 36                     | 37  | 38   |  |  |  |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 37                     | 38  |  |  |  |  |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |
| 38                     |   |  |  |  |  |  |   |   |   |   |   |   |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |  |   |  |  |  |  |   |  |  |  |   |  |  |   |  |   |   |   |  |  |  |  |   |   |  |  |  |  |  |  |   |   |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |   |  |  |  |  |  |   |   |  |   |   |    |    |  |  |   |   |  |  |  |   |   |  |    |    |

Linking theory and practice (dual study program, Bachelor's degree) (from catalogue) - 6LP  
 Technical Complementary Course for Computational Science and Engineering Bachelor - 12LP

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.

