

Course of Study Computational Science and Engineering (Study Cohort w19)

Sample course plan E Bachelor Computational Science and Engineering (IIWBS)

Specialisation I. Computer Science, Specialisation II. Mathematics & Engineering Science, Specialisation III. Subject Specific Focus

| Legend | | | |
|--|------------------------------------|---------------------------|------------------------------|
| 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 | Discrete Algebraic Structures | VL 2 | Electrical Engineering II: Alternating Current Networks and Basic Devices | VL 3 | Numerical Mathematics I | VL 2 | Signals and Systems | VL 3 | Introduction to Communications and Random Processes | VL 3 | Operating Systems | VL 2 | | | | | |
| 2 | | | | | | | | | | | | | Discrete Algebraic Structures | Numerical Mathematics I | Signals and Systems | Introduction to Communications and Random Processes | Operating Systems |
| 3 | | | | | | | | | | | | | Discrete Algebraic Structures | Numerical Mathematics I | Signals and Systems | Introduction to Communications and Random Processes | Operating Systems |
| 4 | | | | | | | | | | | | | Discrete Algebraic Structures | Numerical Mathematics I | Signals and Systems | Introduction to Communications and Random Processes | Operating Systems |
| 5 | | | | | | | | | | | | | Discrete Algebraic Structures | Numerical Mathematics I | Signals and Systems | Introduction to Communications and Random Processes | Operating Systems |
| 6 | | | | | | | | | | | | | Discrete Algebraic Structures | Numerical Mathematics I | Signals and Systems | Introduction to Communications and Random Processes | Operating Systems |
| 7 | Procedural Programming | VL 1 | Automata Theory and Formal Languages | VL 2 | Computer Engineering | VL 3 | Stochastics | VL 2 | Introduction to Control Systems | VL 2 | Bachelor Thesis | | | | | | |
| 8 | | | | | | | | | | | | | Procedural Programming | Computer Engineering | Stochastics | Introduction to Control Systems | |
| 9 | | | | | | | | | | | | | Procedural Programming | Computer Engineering | Stochastics | Introduction to Control Systems | |
| 10 | | | | | | | | | | | | | Procedural Programming | Computer Engineering | Stochastics | Introduction to Control Systems | |
| 11 | | | | | | | | | | | | | Procedural Programming | Computer Engineering | Stochastics | Introduction to Control Systems | |
| 12 | Procedural Programming | Computer Engineering | Stochastics | Introduction to Control Systems | Bachelor Thesis | | | | | | | | | | | | |
| 13 | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | VL 3 | Foundations of Management | VL 3 | Computernetworks and Internet Security | VL 3 | Embedded Systems | VL 3 | Practical Course IIW | PR 4 | | | | | | | |
| 14 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Foundations of Management | Computernetworks and Internet Security | Embedded Systems | Practical Course IIW |
| 15 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Foundations of Management | Computernetworks and Internet Security | Embedded Systems | Practical Course IIW |
| 16 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Foundations of Management | Computernetworks and Internet Security | Embedded Systems | Practical Course IIW |
| 17 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Foundations of Management | Computernetworks and Internet Security | Embedded Systems | Practical Course IIW |
| 18 | | | | | | | | | | | | | Electrical Engineering I: Direct Current Networks and Electromagnetic Fields | Foundations of Management | Computernetworks and Internet Security | Embedded Systems | Practical Course IIW |
| 19 | Mathematics I | VL 2 | Mathematics II | VL 2 | Mathematics III | VL 2 | Seminars Computer Science and Mathematics | SE 2 | Computer Architecture | VL 2 | | | | | | | |
| 20 | | | | | | | | | | | | | Linear Algebra I | Mathematics II | Mathematics III | Seminars Computer Science and Mathematics | Computer Architecture |
| 21 | | | | | | | | | | | | | Linear Algebra I | Mathematics II | Mathematics III | Seminar Computer Science und Mathematics 1 | Computer Architecture |
| 22 | | | | | | | | | | | | | Linear Algebra I | Mathematics II | Mathematics III | Seminar Computer Science und Mathematics 2 | Computer Architecture |
| 23 | | | | | | | | | | | | | Linear Algebra I | Mathematics II | Mathematics III | Seminar Computer Science und Mathematics 3 | Computer Architecture |
| 24 | | | | | | | | | | | | | Analysis I | Mathematics II | Differential Equations 1 | | |
| 25 | | | | | | | | | | | | | Analysis I | Mathematics II | Differential Equations 1 | | |
| 26 | | | | | | | | | | | | | Analysis I | Mathematics II | Differential Equations 1 | | |
| 27 | Objectoriented Programming | VL 2 | Algorithms and Data Structures | VL 4 | Algorithms and Data Structures | VL 4 | | | Electronic Devices | VL 3 | | | | | | | |
| 28 | | | | | | | | | | | | | Objectoriented Programming | Algorithms and Data Structures | Algorithms and Data Structures | Electronic Devices | |
| 29 | | | | | | | | | | | | | Objectoriented Programming | Algorithms and Data Structures | Algorithms and Data Structures | Electronic Devices | |
| 30 | | | | | | | | | | | | | Objectoriented Programming | Algorithms and Data Structures | Algorithms and Data Structures | Electronic Devices | |
| 31 | | | | | | | | | | | | | Objectoriented Programming | Algorithms and Data Structures | Algorithms and Data Structures | Electronic Devices | |
| 32 | Objectoriented Programming | Algorithms and Data Structures | Algorithms and Data Structures | Electronic Devices | | | | | | | | | | | | | |

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.