Course of Study Computer Science (Study Cohort w22)

Sample course plan R Bachelor Computer Science (CSBS) Dual study program
Specialisation I. Computer and Software Engineering, Specialisation II. Mathematics and Engineering Science,
Specialisation III. Subject Specific Focus

Discrete Algebraic Structures
| Discrete Algebraic Structures | VL | 2 |
| Discrete Algebraic Structures | GÜ | 2 |

Automata Theory and Formal Languages
| Automata Theory and Formal Languages | VL | 2 |
| Automata Theory and Formal Languages | GÜ | 2 |

Databases
| Databases | VL | 3 |
| Databases - Exercise | GÜ | 2 |

Computability and Complexity Theory
| Computability and Complexity Theory | VL | 2 |
| Computability and Complexity Theory | GÜ | 2 |

Software Industrial Internship

Embedded Systems
Embedded Systems	VL	3
Embedded Systems	GÜ	1
Embedded Systems	PBL	1

Functional Programming
Functional Programming	VL	2
Functional Programming	HÜ	2
Functional Programming	GÜ	2

Foundations of Management
| Introduction to Management | VL | 3 |
| Management Tutorial | GÜ | 2 |

Computer Engineering
| Computer Engineering | VL | 3 |
| Computer Engineering | GÜ | 1 |

Stochastics
| Stochastics | VL | 2 |
| Stochastics | GÜ | 2 |

Seminars Computer Science
| Introductory Seminar Computer Science II | SE | 2 |
| Introductory Seminar Computer Science I | SE | 2 |

Introduction into Medical Technology and Systems
Introduction into Medical Technology and Systems	VL	2
Introduction into Medical Technology and Systems	PS	2
Introduction into Medical Technology and Systems	HÜ	1

Procedural Programming for Computer Engineers
Procedural Programming for Computer Engineers	VL	2
Procedural Programming for Computer Engineers	HÜ	1
Procedural Programming for Computer Engineers	PR	2

Programming Paradigms
Programming Paradigms	VL	2
Programming Paradigms	HÜ	1
Programming Paradigms	PR	2

Computernetworks and Internet Security
| Computer Networks and Internet Security | VL | 3 |
| Computer Networks and Internet Security | GÜ | 1 |

Software Engineering
| Software Engineering | VL | 2 |
| Software Engineering | GÜ | 2 |

Practical module 5 (dual study program, Bachelor's degree)
| Practical term 5 | | 0 |

Signals and Systems
| Signals and Systems | VL | 3 |
| Signals and Systems | GÜ | 2 |

Mathematics I (EN)
Mathematics I	VL	4
Mathematics I	HÜ	2
Mathematics I	GÜ	2

Mathematics II (EN)
Mathematics II	VL	4
Mathematics II	HÜ	2
Mathematics II	GÜ	2

Algorithms and Data Structures
| Algorithms and Data Structures | VL | 4 |
| Algorithms and Data Structures | GÜ | 1 |

Graph Theory and Optimization
| Graph Theory and Optimization | VL | 2 |
| Graph Theory and Optimization | GÜ | 2 |

Computer Architecture
Computer Architecture	VL	2
Computer Architecture	PBL	2
Computer Architecture	GÜ	1

Bachelor thesis (dual study program)

Mathematics III (EN)
Analysis III	VL	2
Analysis III	HÜ	1
Analysis III	GÜ	1
Differential Equations 1	VL	2
Differential Equations 1	HÜ	1
Differential Equations 1	GÜ	1

Practical module 4 (dual study program, Bachelor's degree)
| Practical term 4 | | 0 |

Introduction to Quantum Computing
| Introduction to Quantum Computing | VL | 2 |
| Introduction to Quantum Computing | HÜ | 2 |

Practical module 1 (dual study program, Bachelor's degree)
| Practical term 1 | | 0 |

Practical module 2 (dual study program, Bachelor's degree)
| Practical term 2 | | 0 |

Practical module 3 (dual study program, Bachelor's degree)
| Practical term 3 | | 0 |

| Linking theory and practice (dual study program, Bachelor's degree) (from catalogue) - 6LP |
| Technical Complementary Course I for CSBS - 6LP |
| Technical Complementary Course II for CSBS - 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.