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

Sample course plan I 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

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

Non-technical Courses for Bachelors (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.