Course of Study Computational Science and Engineering (Study Cohort w21)

Sample course plan C 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	Form	Hrs/wk	Semester 2	Form	Hrs/wk	Semester 3	Form	Hrs/wk	Semester 4	Form	Hrs/wk	Semester 5	Form	Hrs/wk	Semester 6	Form	Hrs/wk
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**			**Computability and Complexity Theory**		
2	Discrete Algebraic Structures	VL	2				Numerical Mathematics I	VL	2	Signals and Systems	VL	3				Computability and Complexity Theory	VL	2
3	Discrete Algebraic Structures	GÜ	2	Electrical Engineering II: Alternating Current Networks and Basic Devices	VL	3	Numerical Mathematics I	GÜ	2	Signals and Systems	GÜ	2	Introduction to Communications and Random Processes	VL	3	Computability and Complexity Theory	GÜ	2
4				Electrical Engineering II: Alternating Current Networks and Basic Devices	GÜ	2							Introduction to Communications and Random Processes	HÜ	1			
5													Introduction to Communications and Random Processes	GÜ	1			
6																		
7	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**			**Automata Theory and Formal Languages**			**Computer Engineering**			**Stochastics**			**Introduction to Control Systems**			**Bachelor Thesis**		
8				Automata Theory and Formal Languages	VL	2	Computer Engineering	VL	3	Stochastics	VL	2	Introduction to Control Systems	VL	2			
9	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL	3	Automata Theory and Formal Languages	GÜ	2	Computer Engineering	GÜ	1	Stochastics	GÜ	2	Introduction to Control Systems	GÜ	2			
10	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	GÜ	2															
11																		
12																		
13	**Mathematics I**			**Foundations of Management**			**Computernetworks and Internet Security**			**Embedded Systems**			**Practical Course IIW**					
14	Linear Algebra I	VL	2	Introduction to Management	VL	3	Computer Networks and Internet Security	VL	3	Embedded Systems	VL	2	Practical Course IIW	PBL	8			
15	Linear Algebra I	GÜ	1	Management Tutorial	GÜ	2	Computer Networks and Internet Security	GÜ	1	Embedded Systems	GÜ	1						
16	Linear Algebra I	HÜ	1							Embedded Systems	PBL	1						
17	Analysis I	VL	2															
18	Analysis I	GÜ	1															
19	Analysis I	HÜ	1	**Mathematics II**			**Mathematics III**			**Seminars Computer Science**			**Functional Programming**					
20				Linear Algebra II	VL	2	Analysis III	VL	2	Introductory Seminar Computer Science II	SE	2	Functional Programming	VL	2			
21	**Procedural Programming for Computer Engineers**			Linear Algebra II	GÜ	1	Analysis III	GÜ	1	Introductory Seminar Computer Science I	SE	2	Functional Programming	HÜ	2			
22	Procedural Programming for Computer Engineers	VL	1	Linear Algebra II	HÜ	1	Analysis III	HÜ	1				Functional Programming	GÜ	2			
23	Procedular Programming for Computer Engineers	HÜ	1	Analysis II	VL	2	Differential Equations 1	VL	2									
24	Procedural Programming for Computer Engineers	PR	2	Analysis II	HÜ	1	Differential Equations 1	GÜ	1									
25				Analysis II	GÜ	1	Differential Equations 1	HÜ	1				**Combinatorial Structures and Algorithms**					
26													Combinatorial Structures and Algorithms	VL	3			
27				**Programming Paradigms**			**Algorithms and Data Structures**						Combinatorial Structures and Algorithms	GÜ	1			
28				Programming Paradigms	VL	2	Algorithms and Data Structures	VL	4									
29				Programming Paradigms	HÜ	1	Algorithms and Data Structures	GÜ	1									
30				Programming Paradigms	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.