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

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	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	Computability and Complexity Theory	VL	2
3	Discrete Algebraic Structures	UE	2	Electrical Engineering II: Alternating Current Networks and Basic Devices	UE	2	Numerical Mathematics I	UE	2	Signals and Systems	UE	2	Introduction to Communications and Random Processes	HÜ	1	Computability and Complexity Theory	UE	2
4																		
5																		
6																		
7	**Procedural Programming**			**Automata Theory and Formal Languages**			**Computer Engineering**			**Stochastics**			**Introduction to Control Systems**			**Bachelor Thesis**		
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			
9	Procedural Programming	HÜ	1	Automata Theory and Formal Languages	UE	2	Computer Engineering	UE	1	Stochastics	UE	2	Introduction to Control Systems	UE	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**					
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	PR	4			
15	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE	2	Management Tutorial	HÜ	2	Computer Networks and Internet Security	UE	1	Embedded Systems	UE	1						
16																		
17																		
18																		
19	**Mathematics I**			**Mathematics II**			**Mathematics III**			**Seminars Computer Science and Mathematics**			**Functional Programming**					
20	Linear Algebra I	VL	2	Linear Algebra II	VL	2	Analysis III	VL	2	Seminar Computer Science und Mathematics 1	SE	2	Functional Programming	VL	2			
21	Linear Algebra I	UE	1	Linear Algebra II	UE	1	Analysis III	UE	1	Seminar Computer Science und Mathematics 2	SE	2	Functional Programming	HÜ	2			
22	Linear Algebra I	HÜ	1	Linear Algebra II	HÜ	1	Analysis III	HÜ	1	Seminar Computer Science und Mathematics 3	SE	2	Functional Programming	UE	2			
23	Analysis I	VL	2	Analysis II	VL	2	Differential Equations 1	VL	2									
24	Analysis I	UE	1	Analysis II	HÜ	1	Differential Equations 1	UE	1									
25	Analysis I	HÜ	1	Analysis II	UE	1	Differential Equations 1	HÜ	1				**Combinatorial Structures and Algorithms**					
26													Combinatorial Structures and Algorithms	VL	3			
27				**Objectoriented Programming**			**Algorithms and Data Structures**						Combinatorial Structures and Algorithms	UE	1			
28				Objectoriented Programming	VL	2	Algorithms and Data Structures	VL	4									
29				Objectoriented Programming	HÜ	1	Algorithms and Data Structures	UE	1									
30				Objectoriented Programming	PR	2												
31																		
32																		
	Nontechnical Complementary 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.