

# 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.

Legend:

Core qualification Compulsory	Specialisation Compulsory	Focus Compulsory	Thesis Compulsory
Core qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

Subject Specific Focus	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		<b>Discrete Algebraic Structures</b>		<b>Electrical Engineering II: Alternating Current Networks and Basic Devices</b>		<b>Numerical Mathematics I</b>		<b>Signals and Systems</b>		<b>Introduction to Communications and Random Processes</b>	
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		<b>Computability and Complexity Theory</b> 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		Computability and Complexity Theory GÜ 2	
4								Introduction to Communications and Random Processes GÜ 1			
5											
6											
7	<b>Procedural Programming</b>		<b>Automata Theory and Formal Languages</b>		<b>Computer Engineering</b>		<b>Stochastics</b>		<b>Introduction to Control Systems</b>		<b>Bachelor Thesis</b>
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 GÜ 2	Computer Engineering GÜ 1	Stochastics GÜ 2	Introduction to Control Systems GÜ 2						
10	Procedural Programming PR 2										
11											
12											
13	<b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b>		<b>Foundations of Management</b>		<b>Computernetworks and Internet Security</b>		<b>Embedded Systems</b>		<b>Practical Course IIW</b>		
14	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3	Introduction to Management VL 3	Computernetworks and Internet Security VL 3	Embedded Systems VL 3	Practical Course IIW PBL 8						
15	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields HÜ 2	Management Tutorial HÜ 2	Computernetworks and Internet Security GÜ 1	Embedded Systems GÜ 1							
16	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields GÜ 2										
17											
18											
19	<b>Mathematics I</b>		<b>Mathematics II</b>		<b>Mathematics III</b>		<b>Seminars Computer Science and Mathematics</b>		<b>Functional Programming</b>		
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 GÜ 1	Linear Algebra II GÜ 1	Analysis III GÜ 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 GÜ 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								<b>Combinatorial Structures and Algorithms</b>			
27		<b>Objectoriented Programming</b>		<b>Algorithms and Data Structures</b>				Combinatorial Structures and Algorithms VL 3			
28		Objectoriented Programming VL 2		Algorithms and Data Structures VL 4				Combinatorial Structures and Algorithms GÜ 1			
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.

