

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

Sample course plan M Bachelor Computational Science and Engineering (IIBWS)  
 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	VL 2	Discrete Algebraic Structures		Electrical Engineering II: Alternating Current Networks and Basic Devices	VL 2	Numerical Mathematics I	VL 3	Signals and Systems	VL 3	Introduction to Communications and Random Processes	VL 2
3	GÜ 2	Discrete Algebraic Structures		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	GÜ 2
4				Electrical Engineering II: Alternating Current Networks and Basic Devices						Introduction to Communications and Random Processes	HÜ 1
5				Electrical Engineering II: Alternating Current Networks and Basic Devices						Introduction to Communications and Random Processes	GÜ 1
6											
7		<b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b>		<b>Automata Theory and Formal Languages</b>		<b>Computer Engineering</b>		<b>Stochastics</b>		<b>Introduction to Control Systems</b>	
8	VL 3	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		Automata Theory and Formal Languages	VL 2	Computer Engineering	VL 3	Stochastics	VL 2	Introduction to Control Systems	VL 2
9	GÜ 2	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		Automata Theory and Formal Languages	GÜ 2	Computer Engineering	GÜ 1	Stochastics	GÜ 2	Introduction to Control Systems	GÜ 2
10											Introduction into Medical Technology and Systems
11											Introduction into Medical Technology and Systems
12											Introduction into Medical Technology and Systems
13		<b>Mathematics I</b>		<b>Foundations of Management</b>		<b>Computernetworks and Internet Security</b>		<b>Embedded Systems</b>		<b>Practical Course IIV</b>	
14	VL 2	Linear Algebra I		Introduction to Management	VL 3	Computer Networks and Internet Security	VL 3	Embedded Systems		Practical Course IIV	PBL 8
15	GÜ 1	Linear Algebra I		Management Tutorial	GÜ 2	Computer Networks and Internet Security	GÜ 1	Embedded Systems			
16	HÜ 1	Linear Algebra I						Embedded Systems			
17	VL 2	Analysis I						Embedded Systems			
18	GÜ 1	Analysis I									
19	HÜ 1	Analysis I									
20				<b>Mathematics II</b>		<b>Mathematics III</b>		<b>Seminars Computer Science</b>		<b>Computer Architecture</b>	
21	VL 2	Linear Algebra II		Linear Algebra II	VL 2	Analysis III	VL 2	Introductory Seminar Computer Science II	SE 2	Computer Architecture	VL 2
22	GÜ 1	Linear Algebra II		Linear Algebra II	GÜ 1	Analysis III	GÜ 1	Introductory Seminar Computer Science I	SE 2	Computer Architecture	PBL 2
23	HÜ 1	Linear Algebra II		Linear Algebra II	HÜ 1	Analysis III	HÜ 1			Computer Architecture	GÜ 1
24	VL 1	Procedural Programming for Computer Engineers		Analysis II	VL 2	Differential Equations 1	VL 2				
25	HÜ 1	Procedural Programming for Computer Engineers		Analysis II	HÜ 1	Differential Equations 1	GÜ 1				
26	PR 2	Procedural Programming for Computer Engineers		Analysis II	GÜ 1	Differential Equations 1	HÜ 1				
27				<b>Programming Paradigms</b>		<b>Algorithms and Data Structures</b>					
28	VL 2	Programming Paradigms		Programming Paradigms	VL 2	Algorithms and Data Structures	VL 4				
29	HÜ 1	Programming Paradigms		Programming Paradigms	HÜ 1	Algorithms and Data Structures	GÜ 1				
30	PR 2	Programming Paradigms									
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.

