Course of Study Computational Science and Engineering (Study Cohort w20)

Sample course plan M 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**			**Software Engineering**		
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	Software Engineering	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	Software Engineering	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**			**Introduction into Medical Technology and Systems**		
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	Introduction into Medical Technology and 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	Introduction into Medical Technology and Systems	PS	2
10	Procedural Programming	PR	2													Introduction into Medical Technology and Systems	HÜ	1
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				Management Tutorial	GÜ	2	Computer Networks and Internet Security	GÜ	1	Embedded Systems	GÜ	1						
16	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	GÜ	2															
17																		
18																		
19	**Mathematics I**			**Mathematics II**			**Mathematics III**			**Seminars Computer Science**			**Computer Architecture**					
20	Linear Algebra I	VL	2	Linear Algebra II	VL	2	Analysis III	VL	2	Introductory Seminar Computer Science II	SE	2	Computer Architecture	VL	2			
21	Linear Algebra I	GÜ	1	Linear Algebra II	GÜ	1	Analysis III	GÜ	1	Introductory Seminar Computer Science I	SE	2	Computer Architecture	PBL	2			
22	Linear Algebra I	HÜ	1	Linear Algebra II	HÜ	1	Analysis III	HÜ	1				Computer Architecture	GÜ	1			
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				**Programming Paradigms**			**Algorithms and Data Structures**											
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.