Course of Study Computational Science and Engineering (Study Cohort w17)

Sample course plan M Bachelor Computational Science and Engineering (IIWBS)
Specialisation Computer Science

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**			**Engineering Mechanics I**			**Engineering Mechanics II**			**Seminars Computer Science and Mathematics**			**Stochastics**		
2	Discrete Algebraic Structures	VL	2	Electrical Engineering II: Alternating Current Networks and Basic Devices	VL	3	Engineering Mechanics I	VL	3	Engineering Mechanics II	VL	3	Seminar Computational Engineering Science	SE	2	Stochastics	VL	2
3	Discrete Algebraic Structures	UE	2	Electrical Engineering II: Alternating Current Networks and Basic Devices	UE	2	Engineering Mechanics I	UE	2	Engineering Mechanics II	UE	2	Seminar Computational Mathematics/Computer Science	SE	2	Stochastics	UE	2
4													Seminar Engineering Mathematics/Computer Science	SE	2			
5																		
6																		
7	**Procedural Programming**			**Objectoriented Programming, Algorithms and Data Structures**			**Numerical Mathematics I**			**Signals and Systems**			**Introduction to Control Systems**			**Solvers for Sparse Linear Systems**		
8	Procedural Programming	VL	1	Objectoriented Programming, Algorithms and Data Structures	VL	4	Numerical Mathematics I	VL	2	Signals and Systems	VL	3	Introduction to Control Systems	VL	2	Solvers for Sparse Linear Systems	VL	2
9	Procedural Programming	HÜ	1	Objectoriented Programming, Algorithms and Data Structures	UE	1	Numerical Mathematics I	UE	2	Signals and Systems	UE	2	Introduction to Control Systems	UE	2	Solvers for Sparse Linear Systems	UE	2
10	Procedural Programming	PR	2															
11																		
12																		
13	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**			**Automata Theory and Formal Languages**			**Computer Engineering**			**Embedded Systems**			**Numerics and Computer Algebra**			**Mathematical Statistics**		
14	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL	3	Automata Theory and Formal Languages	VL	2	Computer Engineering	VL	3	Embedded Systems	VL	3	Numerical Mathematics and Computer Algebra	VL	2	Mathematical Statistics	VL	3
15	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE	2	Automata Theory and Formal Languages	UE	2	Computer Engineering	UE	1	Embedded Systems	UE	1	Numerical Mathematics and Computer Algebra	UE	1	Mathematical Statistics	UE	1
16													Numerics and Computer Algebra	SE	2			
17																		
18																		
19	**Mathematics I**			**Foundations of Management**			**Computernetworks and Internet Security**			**Graph Theory and Optimization**			**Combinatorial Structures and Algorithms**			**Bachelor Thesis**		
20	Linear Algebra I	VL	2	Introduction to Management	VL	3	Computer Networks and Internet Security	VL	3	Graph Theory and Optimization	VL	2	Combinatorial Structures and Algorithms	VL	3			
21	Linear Algebra I	UE	1	Project Entrepreneurship	PBL	2	Computer Networks and Internet Security	UE	1	Graph Theory and Optimization	UE	2	Combinatorial Structures and Algorithms	UE	1			
22	Linear Algebra I	HÜ	1															
23	Analysis I	VL	2															
24	Analysis I	UE	1															
25	Analysis I	HÜ	1	**Mathematics II**			**Mathematics III**			**Mathematics IV**								
26				Linear Algebra II	VL	2	Analysis III	VL	2	Complex Functions	VL	2						
27				Linear Algebra II	UE	1	Analysis III	UE	1	Complex Functions	UE	1						
28				Linear Algebra II	HÜ	1	Analysis III	HÜ	1	Complex Functions	HÜ	1						
29				Analysis II	VL	2	Differential Equations 1	VL	2	Differential Equations 2	VL	2						

30		Analysis II	HÜ	1	Differential Equations 1	UE	1	Differential Equations 2	UE	1
		Analysis II	UE	1	Differential Equations 1	HÜ	1	Differential Equations 2	HÜ	1
31										
32										

Nontechnical Complementary Courses for Bachelors (from catalogue) - 6LP

The choice of courses from the catalogue is flexible (depends on the semestral work load), provided the necessary number of required credits is reached.