

Course of Study Computational Science and Engineering (Study Cohort w16)

Sample course plan R Bachelor Computational Science and Engineering (IIWBS)
Specialisation Engineering Sciences

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	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
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		Engineering Mechanics I VL 3	Engineering Mechanics II VL 3		Stochastics VL 2
3	Discrete Algebraic Structures UE 2		Engineering Mechanics I UE 2	Engineering Mechanics II UE 2	Seminar Computational Engineering Science SE 2	Stochastics UE 2
4		Electrical Engineering II: Alternating Current Networks and Basic Devices VL 3			Seminar Computational Mathematics/Computer Science SE 2	
5		Electrical Engineering II: Alternating Current Networks and Basic Devices UE 2			Seminar Engineering Mathematics/Computer Science SE 2	
6						
7	Procedural Programming	Objectoriented Programming, Algorithms and Data Structures	Numerical Mathematics I	Signals and Systems	Introduction to Control Systems	Introduction into Medical Technology and Systems
8	Procedural Programming VL 1		Numerical Mathematics I VL 2	Signals and Systems VL 3	Introduction to Control Systems VL 2	
9	Procedural Programming HÜ 1	Objectoriented Programming, Algorithms and Data Structures VL 4	Numerical Mathematics I UE 2	Signals and Systems HÜ 1	Introduction to Control Systems UE 2	Introduction into Medical Technology and Systems VL 2
10	Procedural Programming PR 2					Introduction into Medical Technology and Systems PS 2
11		Objectoriented Programming, Algorithms and Data Structures UE 1				Introduction into Medical Technology and Systems HÜ 1
12						
13	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	Logic, Automata and Formal Languages	Computer Engineering	Embedded Systems	Introduction to Communications and Random Processes	Algebra and Control
14			Computer Engineering VL 3	Embedded Systems VL 3		Algebra and Control VL 2
15	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields VL 3	Logic, Automata Theory and Formal Languages VL 2	Computer Engineering UE 1	Embedded Systems UE 1	Introduction to Communications and Random Processes VL 3	Algebra and Control UE 2
16		Logic, Automata Theory and Formal Languages UE 2			Introduction to Communications and Random Processes HÜ 1	
17	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields UE 2					
18						
19	Mathematics I	Foundations of Management	Computernetworks and Internet Security	Graph Theory and Optimization	Measurements: Methods and Data Processing	Bachelor Thesis
20	Linear Algebra I VL 2	Introduction to Management VL 3		Graph Theory and Optimization VL 2	Measurements: Methods and Data Processing VL 2	
21	Linear Algebra I UE 1	Project Entrepreneurship PBL 2	Computer Networks and Internet Security VL 3	Graph Theory and Optimization UE 2	Measurements: Methods and Data Processing UE 1	
22	Linear Algebra I HÜ 1		Computer Networks and Internet Security UE 1		EE Experimental Lab PR 2	
23	Analysis I VL 2					
24	Analysis I UE 1					
25	Analysis I HÜ 1					
26		Mathematics II	Mathematics III	Mathematics IV		
27		Linear Algebra II VL 2	Analysis III VL 2	Complex Functions VL 2		
28		Linear Algebra II UE 1	Analysis III UE 1	Complex Functions UE 1		
29		Linear Algebra II HÜ 1	Analysis III HÜ 1	Complex Functions HÜ 1		
30		Analysis II VL 2	Differential Equations 1 VL 2	Differential Equations 2 VL 2		
		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	
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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.