

# Course of Study Computational Science and Engineering (Study Cohort w14)

Sample course plan M 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	FormHrs/wk	Semester 2	FormHrs/wk	Semester 3	FormHrs/wk	Semester 4	FormHrs/wk	Semester 5	FormHrs/wk	Semester 6	FormHrs/wk
1	<b>Discrete Algebraic Structures</b>		<b>Electrical Engineering II: Alternating Current Networks and Basic Devices</b>		<b>Engineering Mechanics I</b>		<b>Engineering Mechanics II</b>		<b>Seminars Computer Science and Mathematics</b>		<b>Stochastics</b>	
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: VL 3						Seminar Computational Engineering Science SE 2		
5				Alternating Current Networks and Basic Devices						Seminar Computational Mathematics/Computer Science SE 2		
6				Electrical Engineering II: UE 2						Seminar Engineering Mathematics/Computer Science SE 2		
				Alternating Current Networks and Basic Devices								
7	<b>Procedural Programming</b>		<b>Objectoriented Programming, Algorithms and Data Structures</b>		<b>Numerical Mathematics I</b>		<b>Signals and Systems</b>		<b>Introduction to Control Systems</b>		<b>Electrical Machines</b>	
8		Procedural Programming VL 1				Numerical Mathematics I VL 2		Signals and Systems VL 3		Introduction to Control VL 2		Electrical Machines VL 3
9		Procedural Programming UE 1		Objectoriented Programming, VL 4		Numerical Mathematics I UE 2		Signals and Systems HÜ 1		Systems		Electrical Machines HÜ 2
10		Procedural Programming PR 2		Algorithms and Data Structures						Introduction to Control UE 2		
11				Objectoriented Programming, UE 1								
12				Algorithms and Data Structures								
13	<b>Electrical Engineering I: Direct Current Networks and Electromagnetic Fields</b>		<b>Logic, Automata and Formal Languages</b>		<b>Computer Engineering</b>		<b>Embedded Systems</b>		<b>Technical Thermodynamics II</b>		<b>Fluid Dynamics</b>	
14						Computer Engineering VL 3		Embedded Systems VL 3		Technical Thermodynamics VL 2		Fluid Mechanics VL 3
15		Electrical Engineering I: VL 3		Logic, Automata Theory and VL 2		Computer Engineering UE 1		Embedded Systems UE 1		II		Fluid Mechanics HÜ 2
16		Direct Current Networks and		Formal Languages						Technical Thermodynamics HÜ 1		
17		Electromagnetic Fields		Logic, Automata Theory and UE 2						II		
18		Electrical Engineering I: UE 2		Formal Languages						Technical Thermodynamics UE 1		
		Direct Current Networks and Electromagnetic Fields								II		
19	<b>Mathematics I</b>		<b>Foundations of Management</b>		<b>Computernetworks and Internet Security</b>		<b>Graph Theory and Optimization</b>		<b>Mechanics III (GES)</b>		<b>Bachelor Thesis</b>	
20		Linear Algebra I VL 2		Introduction to Management VL 4				Graph Theory and VL 2		Mechanics III HÜ 1		
21		Linear Algebra I UE 1		Project Entrepreneurship PBL 2		Computer Networks and VL 3		Optimization		Mechanics III UE 2		
22		Linear Algebra I HÜ 1				Internet Security		Graph Theory and UE 2		Mechanics III VL 3		
23		Analysis I VL 2				Computer Networks and UE 1		Optimization				
24		Analysis I UE 1				Internet Security						
25		Analysis I HÜ 1										
26			<b>Mathematics II</b>		<b>Mathematics III</b>		<b>Technical Thermodynamics I</b>					
27				Linear Algebra II VL 2		Analysis III VL 2		Technical Thermodynamics I VL 2				
28				Linear Algebra II UE 1		Analysis III UE 1		Technical Thermodynamics I HÜ 1				
29				Linear Algebra II HÜ 1		Analysis III HÜ 1		Technical Thermodynamics I UE 1				
30				Analysis II VL 2		Differential Equations 1 VL 2						
31				Analysis II HÜ 1		Differential Equations 1 UE 1						
32				Analysis II UE 1		Differential Equations 1 HÜ 1						

#### 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.