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

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

Semester 1

LP	Course	Form	Hrs/wk
1–6	**Discrete Algebraic Structures**		
	Discrete Algebraic Structures	VL	2
	Discrete Algebraic Structures	UE	2
7–12	**Procedural Programming**		
	Procedural Programming	VL	1
	Procedural Programming	UE	1
	Procedural Programming	PR	2
13–18	**Electrical Engineering I: Direct Current Networks and Electromagnetic Fields**		
	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL	3
	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE	2
19–32	**Mathematics I**		
	Linear Algebra I	VL	2
	Linear Algebra I	UE	1
	Linear Algebra I	HÜ	1
	Analysis I	VL	2
	Analysis I	UE	1
	Analysis I	HÜ	1

Semester 2

Course	Form	Hrs/wk
Electrical Engineering II: Alternating Current Networks and Basic Devices		
Electrical Engineering II: Alternating Current Networks and Basic Devices	VL	3
Electrical Engineering II: Alternating Current Networks and Basic Devices	UE	2
Objectoriented Programming, Algorithms and Data Structures		
Objectoriented Programming, Algorithms and Data Structures	VL	4
Objectoriented Programming, Algorithms and Data Structures	UE	1
Logic, Automata and Formal Languages		
Logic, Automata Theory and Formal Languages	VL	2
Logic, Automata Theory and Formal Languages	UE	2
Foundations of Management		
Introduction to Management	VL	4
Project Entrepreneurship	PBL	2
Mathematics II		
Linear Algebra II	VL	2
Linear Algebra II	UE	1
Linear Algebra II	HÜ	1
Analysis II	VL	2
Analysis II	HÜ	1
Analysis II	UE	1

Semester 3

Course	Form	Hrs/wk
Engineering Mechanics I		
Engineering Mechanics I	VL	3
Engineering Mechanics I	UE	2
Numerical Mathematics I		
Numerical Mathematics I	VL	2
Numerical Mathematics I	UE	2
Computer Engineering		
Computer Engineering	VL	3
Computer Engineering	UE	1
Computernetworks and Internet Security		
Computer Networks and Internet Security	VL	3
Computer Networks and Internet Security	UE	1
Mathematics III		
Analysis III	VL	2
Analysis III	UE	1
Analysis III	HÜ	1
Differential Equations 1	VL	2
Differential Equations 1	UE	1
Differential Equations 1	HÜ	1

Semester 4

Course	Form	Hrs/wk
Engineering Mechanics II		
Engineering Mechanics II	VL	3
Engineering Mechanics II	UE	2
Signals and Systems		
Signals and Systems	VL	3
Signals and Systems	HÜ	1
Embedded Systems		
Embedded Systems	VL	3
Embedded Systems	UE	1
Graph Theory and Optimization		
Graph Theory and Optimization	VL	2
Graph Theory and Optimization	UE	2
Operating Systems		
Operating Systems	VL	2
Operating Systems	UE	2

Semester 5

Course	Form	Hrs/wk
Seminars Computer Science and Mathematics		
Seminar Computational Engineering Science	SE	2
Seminar Computational Mathematics/Computer Science	SE	2
Seminar Engineering Mathematics/Computer Science	SE	2
Introduction to Control Systems		
Introduction to Control Systems	VL	2
Introduction to Control Systems	UE	2
Computational Geometry		
Computational Geometry	VL	2
Computational Geometry	UE	2
Distributed Systems		
Distributed Systems	VL	2
Distributed Systems	UE	2

Semester 6

Course	Form	Hrs/wk
Stochastics		
Stochastics	VL	2
Stochastics	UE	2
Introduction into Medical Technology and Systems		
Introduction into Medical Technology and Systems	VL	2
Introduction into Medical Technology and Systems	PBL	4
Compiler Construction		
Compiler Construction	VL	2
Compiler Construction	UE	2
Bachelor Thesis		

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.