

Course of Study Data Science (Study Cohort w23)

Sample course plan H Bachelor Data Science (DSBS)

Specialisation I. Mathematics/Computer Science, Specialisation II. Application

	Core Qualification Compulsory		Specialisation Compulsory		Focus Compulsory		Thesis Compulsory					
	Core Qualification Elective Compulsory		Specialisation Elective Compulsory		Focus Elective Compulsory		Interdisciplinary complement					
1	Discrete Algebraic Structures		Automata Theory and Formal Languages		Databases		Signals and Systems		Introduction to Information Security		Ethics in Information Technology	
2	Discrete Algebraic Structures	VL 2	Automata Theory and Formal Languages	VL 2	Databases	VL 3	Signals and Systems	VL 3	Introduction to Information Security	VL 2	Ethics in Information Technology	VL 2
3	Discrete Algebraic Structures	GÜ 2	Automata Theory and Formal Languages	GÜ 2	Databases - Exercise	GÜ 2	Signals and Systems	GÜ 2	Introduction to Information Security	GÜ 2	Ethics in Information Technology	SE 2
4												
5												
6												
7	Procedural Programming for Computer Engineers		Stochastics		Numerical Mathematics I		Graph Theory and Optimization		Data Mining		Computability and Complexity Theory	
8	Procedural Programming for Computer Engineers	VL 2	Stochastics	VL 2	Numerical Mathematics I	VL 2	Graph Theory and Optimization	VL 2	Data Mining	VL 2	Computability and Complexity Theory	VL 2
9	Procedural Programming for Computer Engineers	HÜ 1	Stochastics	GÜ 2	Numerical Mathematics I	GÜ 2	Graph Theory and Optimization	GÜ 2	Data Mining	PBL 2	Computability and Complexity Theory	GÜ 2
10	Procedural Programming for Computer Engineers	PR 2										
11												
12												
13	Mathematics I (EN)		Foundations of Management		Algorithms and Data Structures		Seminars Computer Science		Machine Learning II		Bachelor Thesis	
14	Mathematics I	VL 4	Introduction to Management	VL 3	Algorithms and Data Structures	VL 4	Introductory Seminar Computer Science II	SE 2	Machine Learning II	VL 2		
15	Mathematics I	HÜ 2	Management Tutorial	GÜ 2	Algorithms and Data Structures	GÜ 1	Introductory Seminar Computer Science I	SE 2	Machine Learning II	GÜ 3		
16	Mathematics I	GÜ 2										
17												
18												
19												
20			Programming Paradigms		Statistics		Scientific Programming		Functional Programming			
21	Introduction to Data Science		Programming Paradigms	VL 2	Statistics	VL 3	Scientific Programming	VL 3	Functional Programming	VL 2		
22	Introduction to Data Science	VL 2	Programming Paradigms	HÜ 1	Statistics	GÜ 1	Scientific Programming	GÜ 2	Functional Programming	HÜ 2		
23	Introduction to Data Science	SE 2	Programming Paradigms	PR 2					Functional Programming	GÜ 2		
24												
25			Mathematics II (EN)		Mathematics III (EN)		Machine Learning I		Engineering Mechanics I (Stereostatics)			
26			Mathematics II	VL 4	Analysis III	VL 2	Machine Learning I	VL 2	Engineering Mechanics I	VL 2		
27			Mathematics II	HÜ 2	Analysis III	HÜ 1	Machine Learning I	GÜ 3	Engineering Mechanics I	GÜ 2		
28			Mathematics II	GÜ 2	Analysis III	GÜ 1			Engineering Mechanics I	HÜ 1		
29					Differential Equations 1	VL 2						
30					Differential Equations 1	HÜ 1						
31					Differential Equations 1	GÜ 1						
32												

Non-technical 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.

