

Course of Study Data Science (Study Cohort w21)

Sample course plan A Bachelor Data Science (DSBS)

Specialisation: Electrical Engineering		Semester 2		Semester 3		Semester 4		Semester 5		Semester 6	
Form Hrs/wk		Form Hrs/wk		Form Hrs/wk		Form Hrs/wk		Form Hrs/wk		Form Hrs/wk	
1	Discrete Algebraic Structures	Automata Theory and Formal Languages	Databases	Signals and Systems	Introduction to Information Security	Seminars Data Science					
2	Discrete Algebraic Structures VL 2	Automata Theory and Formal Languages VL 2	Databases VL 4	Signals and Systems VL 3	Introduction to Information Security VL 2	Seminar Data Science I SE 2					
3	Discrete Algebraic Structures GÜ 2	Automata Theory and Formal Languages GÜ 2	Databases PBL 1	Signals and Systems GÜ 2	Introduction to Information Security GÜ 2	Seminar Data Science II SE 2					
4											
5											
6											
7	Procedural Programming for Computer Engineers	Stochastics	Numerical Mathematics I	Foundations of Management	Data Mining	Bachelor Thesis					
8	Procedural Programming for Computer Engineers VL 1	Stochastics VL 2	Numerical Mathematics I VL 2	Introduction to Management VL 3	Data Mining VL 2						
9	Procedural Programming for Computer Engineers HÜ 1	Stochastics GÜ 2	Numerical Mathematics I GÜ 2	Management Tutorial GÜ 2	Data Mining GÜ 2						
10	Procedural Programming for Computer Engineers PR 2										
11											
12											
13	Mathematics I (EN)	Programming Paradigms	Algorithms and Data Structures	Graph Theory and Optimization	Practical Course Data Science						
14	Analysis I VL 2	Programming Paradigms VL 2	Algorithms and Data Structures VL 4	Graph Theory and Optimization VL 2	Practical Course Data Science PR 8						
15	Analysis I HÜ 1	Programming Paradigms HÜ 1	Algorithms and Data Structures GÜ 1	Graph Theory and Optimization GÜ 2							
16	Analysis I GÜ 1	Programming Paradigms PR 2									
17	Linear Algebra I VL 2										
18	Linear Algebra I HÜ 1										
19	Linear Algebra I GÜ 1										
20		Mathematics II (EN)	Statistics	Scientific Programming	Ethics in Information Technology						
21	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	Analysis II VL 2	Statistics VL 3	Scientific Programming VL 3	Ethics in Information Technology VL 2						
22	Electrical Engineering I: Direct Current Networks VL 3	Analysis II HÜ 1	Statistics GÜ 1	Scientific Programming GÜ 2	Ethics in Information Technology SE 2						
23	and Electromagnetic Fields	Analysis II GÜ 1									
24	Electrical Engineering I: Direct Current Networks GÜ 2	Linear Algebra II VL 2									
25	and Electromagnetic Fields	Linear Algebra II HÜ 1									
26		Linear Algebra II GÜ 1	Mathematics III (EN)	Machine Learning	Functional Programming						
27			Analysis III VL 2	Machine Learning VL 2	Functional Programming VL 2						
28			Analysis III HÜ 1	Machine Learning GÜ 2	Functional Programming HÜ 2						
29			Analysis III GÜ 1		Functional Programming GÜ 2						
30			Differential Equations 1 VL 2								
31			Differential Equations 1 HÜ 1								
32			Differential Equations 1 GÜ 1								
33					Mechanics III (Dynamics)						
34					Mechanics III VL 3						
35					Mechanics III GÜ 2						
36					Mechanics III HÜ 1						

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.

