

Course of Study Data Science (Study Cohort w20)

Sample course plan A Bachelor Data Science (DSBS)
Specialisation Electrical Engineering

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	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 3	Seminar Data Science I	SE 2
3	Discrete Algebraic Structures	UE 2	Automata Theory and Formal Languages	UE 2	Databases	PBL 1	Signals and Systems	UE 2	Introduction to Information Security	UE 2	Seminar Data Science II	SE 2
4	Discrete Algebraic Structures	UE 2	Automata Theory and Formal Languages	UE 2	Databases	PBL 1	Signals and Systems	UE 2	Introduction to Information Security	UE 2	Seminar Data Science II	SE 2
5	Discrete Algebraic Structures	UE 2	Automata Theory and Formal Languages	UE 2	Databases	PBL 1	Signals and Systems	UE 2	Introduction to Information Security	UE 2	Seminar Data Science II	SE 2
6	Discrete Algebraic Structures	UE 2	Automata Theory and Formal Languages	UE 2	Databases	PBL 1	Signals and Systems	UE 2	Introduction to Information Security	UE 2	Seminar Data Science II	SE 2
7	Procedural Programming		Stochastics		Numerical Mathematics I		Foundations of Management		Data Mining		Computability and Complexity Theory	
8	Procedural Programming	VL 1	Stochastics	VL 2	Numerical Mathematics I	VL 2	Introduction to Management	VL 3	Data Mining	VL 2	Computability and Complexity Theory	VL 2
9	Procedural Programming	HÜ 1	Stochastics	UE 2	Numerical Mathematics I	UE 2	Introduction to Management	UE 2	Data Mining	UE 2	Computability and Complexity Theory	UE 2
10	Procedural Programming	HÜ 1	Stochastics	UE 2	Numerical Mathematics I	UE 2	Introduction to Management	UE 2	Data Mining	UE 2	Computability and Complexity Theory	UE 2
11	Procedural Programming	PR 2	Stochastics	UE 2	Numerical Mathematics I	UE 2	Management Tutorial	UE 2	Data Mining	UE 2	Computability and Complexity Theory	UE 2
12	Procedural Programming	PR 2	Stochastics	UE 2	Numerical Mathematics I	UE 2	Management Tutorial	UE 2	Data Mining	UE 2	Computability and Complexity Theory	UE 2
13	Linear Algebra		Mathematical Analysis		Mathematics III		Graph Theory and Optimization		Practical Course Data Science		Bachelor Thesis	
14	Linear Algebra	VL 4	Mathematical Analysis	VL 4	Analysis III	VL 2	Graph Theory and Optimization	VL 2	Practical Course Data Science	PR 8	Bachelor Thesis	
15	Linear Algebra	HÜ 2	Mathematical Analysis	HÜ 2	Analysis III	UE 1	Graph Theory and Optimization	UE 2	Practical Course Data Science	PR 8	Bachelor Thesis	
16	Linear Algebra	HÜ 2	Mathematical Analysis	HÜ 2	Analysis III	UE 1	Graph Theory and Optimization	UE 2	Practical Course Data Science	PR 8	Bachelor Thesis	
17	Linear Algebra	UE 2	Mathematical Analysis	UE 2	Analysis III	HÜ 1	Graph Theory and Optimization	UE 2	Practical Course Data Science	PR 8	Bachelor Thesis	
18	Linear Algebra	UE 2	Mathematical Analysis	UE 2	Differential Equations 1	VL 2	Graph Theory and Optimization	UE 2	Practical Course Data Science	PR 8	Bachelor Thesis	
19	Linear Algebra	UE 2	Mathematical Analysis	UE 2	Differential Equations 1	UE 1	Graph Theory and Optimization	UE 2	Practical Course Data Science	PR 8	Bachelor Thesis	
20	Linear Algebra	UE 2	Mathematical Analysis	UE 2	Differential Equations 1	HÜ 1	Graph Theory and Optimization	UE 2	Practical Course Data Science	PR 8	Bachelor Thesis	
21	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields		Programming Paradigms		Algorithms and Data Structures		Scientific Programming		Ethics in Information Technology		Bachelor Thesis	
22	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	VL 3	Programming Paradigms	VL 2	Algorithms and Data Structures	VL 4	Scientific Programming	VL 3	Ethics in Information Technology	VL 2	Bachelor Thesis	
23	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE 2	Programming Paradigms	HÜ 1	Algorithms and Data Structures	UE 1	Scientific Programming	UE 2	Ethics in Information Technology	SE 2	Bachelor Thesis	
24	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE 2	Programming Paradigms	PR 2	Algorithms and Data Structures	UE 1	Scientific Programming	UE 2	Ethics in Information Technology	SE 2	Bachelor Thesis	
25	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE 2	Programming Paradigms	PR 2	Algorithms and Data Structures	UE 1	Scientific Programming	UE 2	Ethics in Information Technology	SE 2	Bachelor Thesis	
26	Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	UE 2	Programming Paradigms	PR 2	Algorithms and Data Structures	UE 1	Scientific Programming	UE 2	Ethics in Information Technology	SE 2	Bachelor Thesis	
27			Electrical Engineering II: Alternating Current Networks and Basic Devices		Advanced Stochastics		Machine Learning		Introduction to Communications and Random Processes		Bachelor Thesis	
28			Electrical Engineering II: Alternating Current Networks and Basic Devices	VL 3	Advanced Stochastics	VL 2	Machine Learning	VL 2	Introduction to Communications and Random Processes	VL 3	Bachelor Thesis	
29			Electrical Engineering II: Alternating Current Networks and Basic Devices	UE 2	Advanced Stochastics	UE 2	Machine Learning	UE 2	Introduction to Communications and Random Processes	HÜ 1	Bachelor Thesis	
30			Electrical Engineering II: Alternating Current Networks and Basic Devices	UE 2	Advanced Stochastics	UE 2	Machine Learning	UE 2	Introduction to Communications and Random Processes	UE 1	Bachelor Thesis	
31			Electrical Engineering II: Alternating Current Networks and Basic Devices	UE 2	Advanced Stochastics	UE 2	Machine Learning	UE 2	Introduction to Communications and Random Processes	UE 1	Bachelor Thesis	
32			Electrical Engineering II: Alternating Current Networks and Basic Devices	UE 2	Advanced Stochastics	UE 2	Machine Learning	UE 2	Introduction to Communications and Random Processes	UE 1	Bachelor Thesis	

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.