Course of Study Data Science (Study Cohort w22)

Legend

Core Qualification Compulsory	Specialisation Compulsory	Focus Compulsory	Thesis Compulsory
Core Qualification Elective Compulsory	Specialisation Elective Compulsory	Focus Elective Compulsory	Interdisciplinary complement

Sample course plan J Bachelor Data Science (DSBS)

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

LP						
1	**Discrete Algebraic Structures** Discrete Algebraic Structures VL 2 Discrete Algebraic Structures GÜ 2	**Automata Theory and Formal Languages** Automata Theory and Formal Languages VL 2 Automata Theory and Formal Languages GÜ 2	**Databases** Databases VL 3 Databases - Exercise GÜ 2	**Signals and Systems** Signals and Systems VL 3 Signals and Systems GÜ 2	**Introduction to Information Security** Introduction to Information Security VL 2 Introduction to Information Security GÜ 2	**Ethics in Information Technology** Ethics in Information Technology VL 2 Ethics in Information Technology SE 2
2						
3						
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7	**Procedural Programming for Computer Engineers** Procedural Programming for Computer Engineers VL 2 Procedural Programming for Computer Engineers HÜ 1 Procedural Programming for Computer Engineers PR 2	**Stochastics** Stochastics VL 2 Stochastics GÜ 2	**Numerical Mathematics I** Numerical Mathematics I VL 2 Numerical Mathematics I GÜ 2	**Graph Theory and Optimization** Graph Theory and Optimization VL 2 Graph Theory and Optimization GÜ 2	**Data Mining** Data Mining VL 2 Data Mining PBL 2	**Logistics Management** Logistics Economics PBL 3 Introduction into Production Logistics VL 2
8						
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13	**Mathematics I (EN)** Mathematics I VL 4 Mathematics I HÜ 2 Mathematics I GÜ 2	**Foundations of Management** Introduction to Management VL 3 Management Tutorial GÜ 2	**Algorithms and Data Structures** Algorithms and Data Structures VL 4 Algorithms and Data Structures GÜ 1	**Seminars Computer Science** Introductory Seminar Computer Science II SE 2 Introductory Seminar Computer Science I SE 2	**Machine Learning II** Machine Learning II VL 2 Machine Learning II GÜ 3	**Bachelor Thesis**
14						
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19		**Programming Paradigms** Programming Paradigms VL 2 Programming Paradigms HÜ 1 Programming Paradigms PR 2	**Statistics** Statistics VL 3 Statistics GÜ 1	**Scientific Programming** Scientific Programming VL 3 Scientific Programming GÜ 2	**Introduction to Communications and Random Processes** Introduction to Communications and Random Processes VL 3 Introduction to Communications and Random Processes HÜ 1 Introduction to Communications and Random Processes GÜ 1	
20						
21	**Introduction to Data Science** Introduction to Data Science VL 2 Introduction to Data Science SE 1					
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25		**Mathematics II (EN)** Mathematics II VL 4 Mathematics II HÜ 2 Mathematics II GÜ 2	**Mathematics III (EN)** Analysis III VL 2 Analysis III HÜ 1 Analysis III GÜ 1 Differential Equations 1 VL 2 Differential Equations 1 HÜ 1 Differential Equations 1 GÜ 1	**Machine Learning I** Machine Learning I VL 2 Machine Learning I GÜ 3	**Image Processing** Image Processing VL 2 Image Processing GÜ 2	
26						
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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.