

**CURRICULUM M.Sc. DATA SCIENCE****Campus Studies, 120 ECTS Credits**

Model 1: Programme Start October		Model 2: Programme Start April								
Month	Courses			Courses						
Oct	Data Science	Use Case and Evaluation	Programming with Python							
Nov										
Dec										
Jan	Advanced Mathematics	Project: Data Science Use Case*	Software Engineering for Data Intensive Sciences*							
Feb										
Mar										
Apr	Advanced Statistics*	Big Data Technologies	Cyber Security and Data Protection	Data Science	Use Case and Evaluation	Programming with Python				
May										
Jun										
Jul	Lecture-Free Period									
Aug	Machine Learning*1	Deep Learning*1	Seminar: Data Science and Society	Advanced Mathematics	Project: Data Science Use Case*	Software Engineering for Data Intensive Sciences*				
Sep										
Oct										
Nov	Lecture-Free Period									
Dec	Case Study: Model Engineering*	Elective A Course a	Advanced Statistics*	Big Data Technologies	Cyber Security and Data Protection					
Jan										
Feb										
Mar	Elective A Course b	Elective B Course c	Machine Learning*1	Deep Learning*1	Seminar: Data Science and Society					
Apr										
May										
Jun	Lecture-Free Period									
Jul	Master Thesis			Elective A Course b	Elective B Course c					
Aug										
Sep										
Oct	Lecture-Free Period									
Nov				Seminar: Current Topics in Data Science	Elective B Course d					
Dec										
Jan										
Feb				Master Thesis						
Mar										

**Elective A-***Data Science Specialist*

- a) Manufacturing Methods Industry 4.0
- b) Project: Data Science for Industry 4.0\*

*Technical Project Lead*

- a) IT Project Management
- b) Project: Technical Project Planning\*

*Data Engineer*

- a) Data Engineering
- b) Project: Data Engineering\*

*Business Analyst*

- a) Business Intelligence I
- b) Project: Business Intelligence\*

*Internship***Elective B-***Management*

- c) Leadership
- d) Strategic Management

*Sales, Pricing and Brand Management*

- c) Global Brand Management
- d) Sales and Pricing

*Consumer Behaviour and Research*

- c) International Consumer Behavior
- d) Applied Marketing Research

*Corporate Finance*

- c) Corporate Finance
- d) Advanced Corporate Finance

*Innovate and Change*

- c) Change Management
- d) Innovation and Entrepreneurship

*Cognitive Computing*

- c) NLP and Computer Vision\*
- d) Advanced NLP and Computer Vision\*

*Applied Autonomous Driving*

- c) Architectures of Self-Driving Vehicles
- d) Case Study: Localization, Motion Planning & Sensor Fusion

*Self Learning Systems*

- c) Reinforcement Learning\*
- d) Inference and Causality\*

*Industrial Automation and Internet of Things*

- c) Industrial Automation
- d) Internet of Things

*AI and Mastering AI Prompting*

- c) Artificial Intelligence
- d) Project: AI Excellence with Creative Prompting Techniques

*Internship*

INTERNATIONAL  
UNIVERSITY OF  
APPLIED SCIENCES



Here you see the order in which you study your courses in presence depending on your personal study start in October or April. Each semester consists of two blocks. In each block, you attend classes on campus for usually three courses to deepen the content in direct exchange with your fellow students and lecturers.

You have lecture-free periods in both June and September, which you can spend reviewing and preparing for exams. Attending the courses on campus is mandatory and will be verified due to Visa regulations (not valid for DACH students).

Each block concludes with a two-week exam preparation phase. You can defer those exams to a later date that you do not want to take during this period. This way, your exam phases are always spread evenly over the year. Exceptions to this are courses that count as admission requirements for other courses.



Attention: Attendance times may vary slightly depending on public holidays and the federal state holidays the campus is located in.

Note: You can already start with your thesis earlier than the designated block, once you have met the minimum amount of credit points required to enter.

- Electives: Choose one module with two courses from the Elective A and one module from the Elective B.



\* This course comes with admissions requirements. Please consult the module handbook for more information.

1 These courses take place one after another within the same quarter.