

## CURRICULUM M.SC. DATA SCIENCE

### DISTANCE LEARNING, 120 ECTS

Semester		Module	Course Code	Course	ECTS	Type of Exam
FT	PT I					
1. Semester	1. Semester	1. Semester	Data Science	DLMBDSA01	Data Science	5 Exam
			Advanced Mathematics	DLMDSAM01	Advanced Mathematics	5 Exam
			Seminar: Data Science and Society	DLMSSDS01	Seminar: Data Science and Society	5 Research Essay
2. Semester	2. Semester	2. Semester	Advanced Statistics	DLMDSA01	Advanced Statistics	5 Advanced Workbook
			Use Case and Evaluation	DLMDSUCE01	Use Case and Evaluation	5 Oral Assignment
			Project: Data Science Use Case	DLMDSPPSUC01	Project: Data Science Use Case	5 Portfolio
3. Semester	3. Semester	3. Semester	Programming with Python	DLMDSWP01	Programming with Python	5 Written Assignment
			Machine Learning	DLMDSML01	Machine Learning	5 Exam
			Deep Learning	DLMDSL01	Deep Learning	5 Oral Assignment
			Big-Data-Technologies	DLMDSBDT01	Big-Data-Technologies	5 Oral Assignment
3. Semester	4. Semester	4. Semester	ELECTIVE MODULE A **		e.g. Data Science Specialist	10
			Cyber Security and Data Protection	DLMCSITSDP01	Cyber Security and Data Protection	5 Oral Assignment
			Case Study: Model Engineering	DLMDSME01	Case Study: Model Engineering	5 Case Study
			Software Engineering for Data Intensive Sciences	DLMDSSEDIS01	Software Engineering for Data Intensive Sciences	5 Oral Assignment
			ELECTIVE MODULE B **		e.g. Industrial Automation and Internet of Things	10
4.	6.	8.	Seminar: Current Topics in Data Science	DLMSSCTDS01	Seminar: Current Topics in Data Science	5 Research Essay
			Master Thesis	MMTHE01 MMTHE02	Master Thesis Colloquium	27 3 Master Thesis
Total					120	ECTS



You've already planned out exactly how your course schedule should look? Wonderful! The IU offers you the flexibility to choose any module you like from any semester. You can work on a number of modules at the same time or one by one.



\* Electives: Choose two modules, every elective module can only be chosen once.

FT: Full-Time, 24 months  
PT I: Part-Time I, 36 months  
PT II: Part-Time II, 48 months

#### Elective A

Data Science Specialist  
Technical Project Lead  
Data Engineer  
Business Analyst

#### Elective B

Management  
Sales, Pricing and Brand Management  
Consumer Behaviour and Research  
Corporate Finance  
Innovative and Change  
Cognitive Computing  
Applied Autonomous Driving  
Self Learning Systems  
Industrial Automation and Internet of Things  
AI and Mastering AI Prompting



You can find more information about your degree program in the module handbook on our website.