CURRICULUM B.SC. DATA SCIENCE

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	emest PT I	er	Module	Course Code	Course	ECTS	Type of Exam
1. Semester	F11		Introduction to Data Science	DLBDSIDS01	Introduction to Data Science	5	Oral Assignment
	1. Semester	Semester	Introduction to Academic Work	DLBCSIAW01	Introduction to Academic Work	5	Workbook
		1. Se	Introduction to Programming with Python	DLBDSIPWP01	Introduction to Programming with Python	5	Exam
		_	Mathematics: Analysis	DLBDSMFC01	Mathematics: Analysis	5	Exam
		Semester	Collaborative Work	DLBCSCW01	Collaborative Work	5	Oral Assignment
		2. Se	Statistics - Probability and Descriptive Statistics	DLBDSSPDS01	Statistics - Probability and Descriptive Statistics	5	Exam
2. Semester	2. Semester	ъ	Object Oriented and Functional Programming with Python	DLBDSOOFPP01	Object Oriented and Functional Programming with Python	5	Portfolio
		Semester	Mathematics: Linear Algebra	DLBDSMFLA01	Mathematics: Linear Algebra	5	Exam
		3. S.	Intercultural and Ethical Decision-Making	DLBCSIDM01	Intercultural and Ethical Decision-Making	5	Case Study
	Semester	70	Statistics - Inferential Statistics	DLBDSSIS01	Statistics - Inferential Statistics	5	Exam
7		4. Semester	Database Modeling and Database Systems	DLBCSDMDS01	Database Modeling and Database Systems	5	Case Study
			Project: Build a Data Mart in SQL	DLBDSPBDM01	Project: Build a Data Mart in SQL	5	Portfolio
	4. Semester 3. Se	5. Semester	Business Intelligence	DLBCSEBI01	Business Intelligence	5	Exam
			Project: Business Intelligence	DLBCSEBI02	Project: Business Intelligence	5	Project Report
ester			Data Science Software Engineering	DLBDSDSSE01	Data Science Software Engineering	5	Exam
. semester		ļ.	Project: From Model to Production	DLBDSMTP01	Project: From Model to Production	5	Oral Project Report
*)		Semester	Machine Learning - Unsupervised Learning and Feature Engineering	DLBDSMLUSL01	Machine Learning - Unsupervised Learning and Feature Engineering	5	Case Study
		6. S	Machine Learning - Supervised Learning	DLBDSMLSL01	Machine Learning - Supervised Learning	5	Exam
	6. Semester 5. Seme	p.	Agile Project Management	DLBCSAPM01	Agile Project Management	5	Project Report
4. Semester		Semester	Big Data Technologies	DLBDSBDT01	Big Data Technologies	5	Exam
		7. S	Data Quality and Data Wrangling	DLBDSDQDW01	Data Quality and Data Wrangling	5	Written Assignment
		je.	Explorative Data Analysis and Visualization	DLBDSEDAV01	Explorative Data Analysis and Visualization	5	Written Assignment
1		Semester	Cloud Computing	DLBDSCC01	Cloud Computing	5	Exam
		8.8	Seminar: Ethical Considerations in Data Science	DLBDSSECDS01	Seminar: Ethical Considerations in Data Science	5	Research Essay
5. Semester		Semester	Time Series Analysis	DLBDSTSA01	Time Series Analysis	5	Exam
			Neural Nets and Deep Learning	DLBDSNNDL01	Neural Nets and Deep Learning	5	Oral Assignment
		9.8	ELECTIVE A**		e.g. Data Engineer	10	
		Ġ.	ELECTIVE B**		e.g. Automation and Robotics	10	
6. Semester	7. Semester	10.	ELECTIVE III**		e.g. Data Analyst	10	
	Semester		Introduction to Data Protection and IT Security	DLBCSIDPITS01	Introduction to Data Protection and IT Security	5	Exam
		=	Model Engineering	DLBDSME01	Model Engineering	5	Case Study
	8.5	77	Bachelor Thesis	DLBBT01 DLBBT02	Bachelor Thesis	9	Bachelor Thesis



You've already planned out exactly how your course schedule should look? Wonderfull 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.

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At the beginning, choose modules that particularly interest you or that you can use directly in your job. This motivates you and gives you success right from the start.

A module with two courses consists of an introduction and a consolidation. In order to successfully complete a module, you must successfully pass both the introduction and the consolidation of the module within the framework of a module examination.

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

FT: Full-Time, 36 months PT I: Part-Time I, 48 months PT II: Part-Time II, 72 months

Elective A: Data Engineer Data Analyst AI Specialist

International Marketing and Branding Applied Sales Supply Chain Management Financial Services Management Smart Factory Automation and Robotics Autonomous Driving

Elective C:

Elective C:

Data Engineer
Data Analyst
Al Specialist
International Marketing and Branding
Applied Sales
Supply Chain Management
Financial Services Management
Smarf Ractory
Automation and Robotics
Autonomous Driving
Foreign Language

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