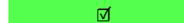


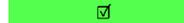
**CURRICULUM B.SC. DATA SCIENCE
DISTANCE LEARNING**



Semester			Module	Course Code	Course	ECTS credits	Type of Exam	
FT	PT I	PT II						
1. Semester	1. Semester	1. Semester	Introduction to Data Science	DLBDSIDS01	Introduction to Data Science	5	Oral Assignment	
			Introduction to Academic Work	DLBCSIW01	Introduction to Academic Work	5	Basic Workbook	
			Introduction to Programming with Python	DLBDSIPWP01	Introduction to Programming with Python	5	Exam	
	2. Semester	2. Semester	3. Semester	Mathematics: Analysis	DLBDSMFC01	Mathematics: Analysis	5	Exam
				Collaborative Work	DLBCSCW01	Collaborative Work	5	Oral Assignment
				Statistics: Probability and Descriptive Statistics	DLBDSPPDS01-01	Statistics: Probability and Descriptive Statistics	5	Exam
2. Semester	3. Semester	4. Semester	Object Oriented and Functional Programming with Python	DLBDSOOFPP01	Object Oriented and Functional Programming with Python	5	Portfolio	
			Mathematics: Linear Algebra	DLBDSMFLA01	Mathematics: Linear Algebra	5	Exam	
			Intercultural and Ethical Decision-Making	DLBCSIDM01	Intercultural and Ethical Decision-Making	5	Case Study	
	3. Semester	4. Semester	5. Semester	Statistics - Inferential Statistics	DLBDSIS01	Statistics - Inferential Statistics	5	Exam
				Database Modeling and Database Systems	DLBDCSDMS01	Database Modeling and Database Systems	5	Case Study
				Project: Build a Data Mart in SQL	DLBDSPPDM01	Project: Build a Data Mart in SQL	5	Portfolio
3. Semester	4. Semester	5. Semester	Business Intelligence	DLBCSEBI01	Business Intelligence	5	Exam	
			Project: Business Intelligence	DLBCSEBI02	Project: Business Intelligence	5	Project Report	
			Machine Learning - Supervised Learning	DLBDSMLS01	Machine Learning - Supervised Learning	5	Exam	
	4. Semester	5. Semester	6. Semester	Machine Learning - Unsupervised Learning and Feature Engineering	DLBDSMLUSL01	Machine Learning - Unsupervised Learning and Feature Engineering	5	Case Study
				Data Science Software Engineering	DLBDSSES01	Data Science Software Engineering	5	Exam
				Project: From Model to Production	DLBDSMTP01	Project: From Model to Production	5	Oral Project Report
4. Semester	5. Semester	6. Semester	Agile Project Management	DLBCSAPM01	Agile Project Management	5	Project Report	
			Big Data Technologies	DLBDSBDT01	Big Data Technologies	5	Exam	
			Data Quality and Data Wrangling	DLBDSQDW01	Data Quality and Data Wrangling	5	Written Assignment	
	6. Semester	7. Semester	8. Semester	Explorative Data Analysis and Visualization	DLBDSEDA01	Explorative Data Analysis and Visualization	5	Written Assignment
				Cloud Computing	DLBDSCC01	Cloud Computing	5	Exam
				Seminar: Ethical Considerations in Data Science	DLBDSSECD01	Seminar: Ethical Considerations in Data Science	5	Research Essay
5. Semester	6. Semester	7. Semester	Time Series Analysis	DLBDSTSA01	Time Series Analysis	5	Exam	
			Neural Nets and Deep Learning	DLBDSNDL01	Neural Nets and Deep Learning	5	Oral Assignment	
			ELECTIVE A**		e.g. Data Engineer	10		
	7. Semester	8. Semester	9. Semester	ELECTIVE B**		e.g. Production Engineering, Automation and Robotics	10	
				ELECTIVE III**		e.g. Data Analyst	10	
				Introduction to Data Protection and Cyber Security	DLBCSIDPITS01	Introduction to Data Protection and Cyber Security	5	Exam
6. Semester	11. Semester	12. Semester	Model Engineering	DLBDSME01	Model Engineering	5	Case Study	
			Bachelor Thesis	DLBBT01 DLBBT02	Bachelor Thesis Colloquium	9 1	Bachelor Thesis Presentation: Colloquium	
Total						180 ECTS credits		



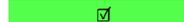
You've already planned out exactly how your course schedule should look? Wonderful! The IU offers you the flexibility to choose any module you like from any semester. You can work on a number of modules at the same time or one by one.



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.



* 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:	Elective B:	Elective C:
Data Engineer	International Marketing and Branding	Data Engineer
Data Analyst	Applied Sales	Data Analyst
AI Specialist	Supply Chain Management	AI Specialist
	Managerial Economics and Corporate Finance and Smart Factory	International Marketing and Branding
	Production Engineering, Automation and Robotics	Applied Sales
	Autonomous Driving	Supply Chain Management
		Managerial Economics and Corporate Finance and Investment
		Smart Factory
		Production Engineering, Automation and Robotics
		Autonomous Driving
		Studium Generale
		Foreign Language German
		Foreign Language Italian
		Foreign Language French
		Foreign Language Spanish
		Mastering Prompts
		Microsoft ERP-Dynamics 365 Business Central - Functional Consultant
		SAP - SAP S/4HANA Business Process Integration - Application Associate
		Career Development

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Only one of the two modules "Mastering Prompts" and "AI Specialist" can be chosen.



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