CURRICULUM M.Sc. DATA SCIENCE
myStudies, 60 ECTS Credits

IU INTERNATIONAL UNIVERSITY OF APPLIED SCIENCES

Month	Model 1: Programme Start October				Model 2: Programme Start April			
	Courses				Courses			
Oct	Use Case and Evaluation		Advanced Statistics*					
Nov								
Dec								
Jan	Machine Learning*1		Deep Learning*1					
Feb								
Mar								
Apr	Seminar: Current Topics in Data Science	Case Study: Model Engineering*	Elective A Course a	Elective A Course b	Use Case and Evaluation		Advanced Statistics*	
May								
Jun	Lecture-Free Period							
Jul	Master Thesis				Machine Learning*1		Deep Learning*1	
Aug								
Sep	Lecture-Free Period							
Oct					Seminar: Current Topics in Data Science	Case Study: Model Engineering*	Elective A Course a	Elective A Course b
Nov								
Dec								
Jan					Master Thesis			
Feb								
Mar								

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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).

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

Elective A~

Big Data and Software Engineering
    a) Big Data Technologies
    b) Software Engineering for Data Intensive Sciences*

Smart Manufacturing Methods and Industrial Automation
    a) Manufacturing Methods Industry 4.0
    b) Industrial Automation

Applied Autonomous Driving
    a) Architectures of Self-Driving Vehicles
    b) Case Study: Localization, Motion Planning and Sensor Fusion

AI and Mastering AI Prompting
    a) Artificial Intelligence
    b) Project: AI Excellence with Creative Prompting Techniques

~ Electives: Choose one module with two courses from the Elective A.

Note: Those elective modules where the minimum number of participants is not reached will only be offered online (distance learning). However, IU ensures that there are always electives on campus.

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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.

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

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

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

Course Information

Module	Course Code	Course	ECTS Credits	Type of Exam
Use Case and Evaluation	DLMDSUCE01	Use Case and Evaluation	5	Oral Assignment
Advanced Statistics*	DLMDSAS01	Advanced Statistics*	5	Advanced Workbook
Machine Learning*	DLMDSML01	Machine Learning*	5	Exam
Deep Learning*	DLMDSDL01	Deep Learning*	5	Oral Assignment
Seminar: Current Topics in Data Science	DLMDSSCTDS01	Seminar: Current Topics in Data Science	5	Written Assessment: Research Essay
Case Study: Model Engineering*	DLMDSME01	Case Study: Model Engineering*	5	Written Assessment: Case Study
ELECTIVE A~		e.g. Big Data and Software Engineering	10	
Master Thesis		Master Thesis	18	Master Thesis
		Thesis Defense	2	Presentation: Colloquium