

CURRICULUM B.Sc. APPLIED ARTIFICIAL INTELLIGENCE

myStudies, 180 ECTS

Month	Model 1: Programme Start October			Model 2: Programme Start April		
	Courses			Courses		
Oct	Artificial Intelligence	Introduction to Academic Work	Mathematics: Analysis			
Nov						
Dec						
Jan	Introduction to Programming with Python	Collaborative Work	Statistics - Probability and Descriptive Statistics			
Feb						
Mar						
Apr	Object Oriented and Functional Programming with Python	Mathematics: Linear Algebra	Statistics - Inferential Statistics	Artificial Intelligence	Introduction to Academic Work	Mathematics: Analysis
May						
Jun						
Jul	Semester Break					
Aug	Cloud Programming	Machine Learning - Supervised Learning	Machine Learning - Unsupervised Learning & Feature Engineering	Introduction to Programming with Python	Collaborative Work	Statistics - Probability and Descriptive Statistics
Sep	Semester Break					
Oct	Cloud Computing	Neural Nets and Deep Learning	Data Science Software Engineering	Object Oriented and Functional Programming with Python	Mathematics: Linear Algebra	Statistics - Inferential Statistics
Nov						
Dec						
Jan	Introduction to Computer Vision	Project: Computer Vision	Introduction to Reinforcement Learning	Cloud Programming	Machine Learning - Supervised Learning	Machine Learning - Unsupervised Learning & Feature Engineering
Feb						
Mar						
Apr	Introduction to NLP	Project: NLP	Agile Project Management	Introduction to NLP	Project: NLP	Agile Project Management
May						
Jun						
Jul	Semester Break					
Aug	Introduction to Data Protection & Cyber Security	User Experience	UX-Project ¹	Introduction to Data Protection & Cyber Security	User Experience	UX-Project ¹
Sep	Semester Break					
Oct	Introduction to Robotics	Intercultural and Ethical Decision-Making	Elective (online)	Elective (online)	Cloud Computing	Neural Nets and Deep Learning
Nov						
Dec						
Jan	Seminar: Ethical Considerations in Data Science	Elective (online)	Elective (online)	Introduction to Computer Vision	Project: Computer Vision	Introduction to Reinforcement Learning
Feb						
Mar						
Apr	Project: From Model to Production	Elective (online)	Elective (online)	Project: From Model to Production	Elective (online)	Elective (online)
May						
Jun						
Jul	Semester Break					
Aug	Bachelor Thesis			Bachelor Thesis		
Sep	Semester Break					
Oct				Introduction to Robotics	Intercultural and Ethical Decision-Making	Elective (online)
Nov						
Dec						
Jan				Seminar: Ethical Considerations in Data Science	Elective (online)	Elective (online)
Feb						
Mar						



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 semester breaks in June and September. 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.

If you are studying Model 2, you will have to start your Bachelor Thesis before completing your final courses.

Elective A*

Autonomous Driving Self-Driving Vehicles Seminar: Current Topics and Trends in Self-Driving Technology
Production Engineering, Automation and Robotics Production Engineering Automation and Robotics
Data Engineer Data Engineering Project: Data Engineering
Digital Signal Processing and Sensor Technology Digital Signal Processing Sensor Technology
Database Developer Database Modeling and Database Systems Project: Build a Data Mart in SQL
Business Intelligence Business Intelligence Project: Business Intelligence
Data Analyst Advanced Data Analysis Project: Data Analysis
Augmented, Mixed and Virtual Reality Augmented, Mixed and Virtual Reality X-Reality Project

Elective C*

Autonomous Driving Self-Driving Vehicles Seminar: Current Topics and Trends in Self-Driving Technology
Production Engineering, Automation and Robotics Production Engineering Automation and Robotics
Data Engineer Data Engineering Project: Data Engineering
Digital Signal Processing and Sensor Technology Digital Signal Processing Sensor Technology
Database Developer Database Modeling and Database Systems Project: Build a Data Mart in SQL
Business Intelligence Business Intelligence Project: Business Intelligence
Data Analyst Advanced Data Analysis Project: Data Analysis
Augmented, Mixed and Virtual Reality Augmented, Mixed and Virtual Reality X-Reality Project
International Marketing and Branding International Marketing International Brand Management

Elective B*

International Marketing and Branding International Marketing International Brand Management
Applied Sales Applied Sales I Applied Sales II
Supply Chain Management Supply Chain Management I Supply Chain Management II
IT project and architecture management IT Project Management IT Architecture Management
Psychology of Human Computer Interaction Experience Psychology Human Computer Interaction

* Electives: Choose one module with two courses from the Elective A, one module from the Elective B and one module from the Elective C. Every elective module can only be chosen once.

Note: The Electives are only offered in distance learning (online)

¹ Alternatively, you can choose the course "Project: Edge AI".

Course Information

Module	Course Code	Course	ECTS	Type of Exam
Artificial Intelligence	DLBDSEAI01	Artificial Intelligence	5	Exam
Introduction to Academic Work	DLBCSIAW01	Introduction to Academic Work	5	Basic Workbook
Mathematics: Analysis	DLBDSMFC01	Mathematics: Analysis	5	Exam
Introduction to Programming with Python	DLBDSIPWP01	Introduction to Programming with Python	5	Exam
Collaborative Work	DLBDCSW01	Collaborative Work	5	Oral Assignment
Statistics - Probability and Descriptive Statistics	DLBDSPPD01	Statistics - Probability and Descriptive Statistics	5	Exam
Object Oriented and Functional Programming with Python	DLBDSOFP01	Object Oriented and Functional Programming with Python	5	Portfolio
Mathematics: Linear Algebra	DLBDSMLA01	Mathematics: Linear Algebra	5	Exam
Statistics - Inferential Statistics	DLBDSISI01	Statistics - Inferential Statistics	5	Exam
Cloud Programming	DLBSEPCP01_E	Cloud Programming	5	Portfolio
Machine Learning - Supervised Learning	DLBDSMLS01	Machine Learning - Supervised Learning	5	Exam
Machine Learning - Unsupervised Learning and Feature Engineering	DLBDSMLUSL01	Machine Learning - Unsupervised Learning and Feature Engineering	5	Case Study
Cloud Computing	DLBDSCC01	Cloud Computing	5	Exam
Neural Nets and Deep Learning	DLBDSNNDL01	Neural Nets and Deep Learning	5	Oral Assignment
Data Science Software Engineering	DLBDSDSSE01	Data Science Software Engineering	5	Exam
Introduction to Computer Vision	DLBAICV01	Introduction to Computer Vision	5	Exam
Project: Computer Vision	DLBAICPV01	Project: Computer Vision	5	Project Report
Introduction to Reinforcement Learning	DLBAIRL01	Introduction to Reinforcement Learning	5	Exam
Introduction to NLP	DLBAIINLP01	Introduction to NLP	5	Exam
Project: NLP	DLBAIINLP01	Project: NLP	5	Project Report
Agile Project Management	DLBCSAPM01	Agile Project Management	5	Project Report
Introduction to Data Protection and Cyber Security	DLBDSIDP01	Introduction to Data Protection and Cyber Security	5	Exam
User Experience	DLBDMUEX01_E	User Experience	5	Exam
UX-Project ¹	DLBDMUEX02_E	UX-Project	5	Project Report
Project: Edge AI ¹	DLBAIEAI01	Project: Edge AI	5	Project Report
Introduction to Robotics	DLBROI01_E	Introduction to Robotics	5	Exam/Written Assignment
Intercultural and Ethical Decision-Making	DLBCSIDM01	Intercultural and Ethical Decision-Making	5	Case Study
Seminar: Ethical Considerations in Data Science	DLBDSSECD01	Seminar: Ethical Considerations in Data Science	5	Research Essay
Project: From Model to Production	DLBDSMTP01	Project: From Model to Production	5	Oral Project Report
ELECTIVE A*		e.g. Autonomous Driving	10	
ELECTIVE B*		e.g. Psychology of Human Computer Interaction	10	
ELECTIVE C*		e.g. Production Engineering, Automation and Robotics	10	
Bachelor Thesis		Bachelor Thesis	9	Bachelor Thesis
		Thesis Defense	1	Presentation: Colloquium