

CURRICULUM M.Sc. COMPUTER SCIENCE

Campus Studies, 120 ECTS Credits

	Model 1: Programme Start October				Model 2: Programme Start April					
Month	Courses				Courses					
Oct	Semester 1	Advanced Mathematics	Algorithmics	Cyber Security and Data Protection						
Nov										
Dec										
Jan		Seminar: Computer Science and Society	Software Engineering: Software Processes	Programming with Python						
Feb										
Mar										
Apr	Semester 2	Data Science	Big Data Technologies	Advanced Statistics*	Semester 1	Data Science	Big Data Technologies	Programming with Python		
May										
Jun										
Jul		Artificial Intelligence	Project: Software Engineering*	Networks and Distributed Systems		Software Engineering: Software Processes		Advanced Mathematics		
Aug										
Sep										
Oct	Semester 3	Project: Computer Science Project	Elective A Course a		Semester 2	Advanced Statistics*		Algorithmics	Cyber Security and Data Protection	
Nov										
Dec										
Jan		Elective A Course b	Elective B Course c			Seminar: Computer Science and Society		Artificial Intelligence	Project: Software Engineering*	
Feb										
Mar										
Apr	Semester 4	Seminar: Current Topics in Computer Science		Elective B Course d		Semester 3	Seminar: Current Topics in Computer Science		Elective A Course a	
May										
Jun		Master Thesis								
Jul										
Aug										
Sep										
Oct					Semester 4	Project: Computer Science Project		Elective B Course d		
Nov										
Dec										
Jan						Master Thesis				
Feb										
Mar										

Specialization (Elective Tracks) ~

	Elective A	Elective B
Specialized Tracks:		
Artificial Intelligence	<i>Artificial Intelligence</i>	<i>Artificial Intelligence</i>
	a) Machine Learning*	c) Computer Vision for Autonomous Systems
	b) Deep Learning*	d) NLP and LLM*
Data Science	<i>Data Science</i>	<i>Data Science</i>
	a) Machine Learning*	c) Project: Data Engineering*
	b) Data Engineering	d) Explainable and Interpretable Machine Learning Models*
Business Analytics	<i>Business Analytics</i>	<i>Business Analytics</i>
	a) Business Intelligence I	c) Relational and NoSQL Databases
	b) Project: Business Intelligence*	d) Corporate Governance of IT, Compliance, and Law
Non-Specialized Tracks:		
Additional Elective modules	a) IT Project Management	c) DevOps
	b) IT Architecture Management	d) Project: Container Orchestration
Internship	<i>Internship</i>	<i>Internship</i>



Here you see the order in which you study your courses in presence depending on your personal study start in October or April. You attend campus lectures during each semester and learn in direct exchange with your fellow students and lecturers. In addition, you will have lecture-free periods, 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 EU citizen).

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



~ **Specializations:** During a specialization, you have the opportunity to deepen your knowledge in a subject area of your choice. Specializations consist of 2 blocks of Elective modules, specifically tailored to your topic of choice.

Internships: Opting for an internship allows you to gain practical work experience in your chosen field, which takes place during the 2 Elective module blocks. You have a choice of **either** a specialization **or** internship, but cannot receive credits for both.

Please note: If you choose an internship, we advise you to start researching and applying for internships early to increase your chances of obtaining one in time for the designated Internship block.