

Curriculum table for the full-time Master Programme in Artificial Intelligence from 2026/2027 academic year																														
					weekly hours	credits	Semesters																						Prerequisite	
	Code	Subject name	Responsible for subject	Institute			1.					2.					3.					4.								
							lec	sem	lab	req	cr	lec	sem	lab	req	cr	lec	sem	lab	req	cr	lec	sem	lab	req	cr		Subject name		
		Fundamentals of Mathematics and Natural Sciences (10–20 credits)			14	16																								
1	NBXVM0EMNF	Probability Theory and Mathematical Statistics	Gábor CSISZÁR, PhD, habil.	BMI	3	4	2	1	0	ex	4																			
2	NSXAA1EMNF	Algorithms, Data Structures and Discrete Optimization*	Sándor SZÉNÁSI, Prof.	SZFI	5	5	3	0	2	ex	5																			
3	NKXST1EMNF	Statistical Learning and Machine Learning Foundations	Adrienn DINEVA, PhD, habil.	KRI	4	5	1	1	2	ex	5																			
4	OTTPH1EMNF	Physical Training I.	Ákos HIERVARTER	TSI	1	1	0	1	0	m	1																			
5	OTTPH2EMNF	Physical Training II.	Ákos HIERVARTER	TSI	1	1						0	1	0	m	1														
		Core Studies in Informatics and Artificial Intelligence (20–30 credits)			24	25																								
6	NSXMG0EMNF	Foundations of Deep learning	Sándor SZÉNÁSI, Prof.	SZFI	4	4						1	1	2	ex	4													Statistical Learning and Machine Learning Foundations	
7	NSXOG0EMNF	Self-supervised and generative learning	Sándor SZÉNÁSI, Prof.	SZFI	4	4						2	0	2	m	4													Statistical Learning and Machine Learning Foundations	
8	NKXAB1EMNF	Databases and Big Data technologies	Rita FLEINER, PhD, habil.	KRI	4	5	2	0	2	m	5																			
9	NKXFA1EMNF	Cloud Architecture and Management	Róbert LOVAS, Prof.	KRI	4	4	2	0	2	m	4																			
10	NKXFU1EMNF	Artificial Intelligence Development and Operations (AI DevOps)	Róbert LOVAS, Prof.	KRI	4	4						1	1	2	m	4													Cloud Architecture and Management	
11	NKXHM1EMNF	High Performance Computing and Efficient AI	Róbert LOVAS, Prof.	KRI	4	4											2	0	2	m	4								Artificial Intelligence Development and Operations (AI DevOps)	
		Studies Developing Specialized Competences Related to Artificial Intelligence (40–50 credits)			40	43																								
12	NBXJA1EMNF	Ethical, Legal and Auditing Aspects of Artificial Intelligence	Éva DULF, Prof.	BMI	3	5	2	1	0	ex	5																			
13	NBXMM1EMNF	Explainable Artificial Intelligence (XAI)	Éva DULF, Prof.	BMI	3	4						2	0	1	m	4														
14	NBXAR1EMNF	Artificial Intelligence Applications in Robotics	Péter GALAMBOS, Prof.	BMI	4	4																1	0	3	m	4			Foundations of Deep learning	
15	NBXEG1EMNF	Human-Computer Interaction and Cognitive Systems	Éva DULF, Prof.	BMI	3	4						2	0	1	ex	4														
16	NSXPU1EMNF	Predictive Business Data Modeling and Evaluation	Gábor KERTÉSZ, PhD, habil.	SZFI	4	5						2	0	2	ex	5													Algorithms, Data Structures and Discrete Optimization*	
17	NSXTS1EMLF	Natural Language Processing with Large Language Models	Gábor KERTÉSZ, PhD, habil.	SZFI	4	5						2	0	2	ex	5													Algorithms, Data Structures and Discrete Optimization*	
18	NSXKM1EMNF	Modern Artificial Intelligence Technologies	Gábor KERTÉSZ, PhD, habil.	SZFI	4	4																2	0	2	m	4			Self-supervised and generative learning	
		Track A - Data-centric predictive systems			15	12											4	0	11		12									
19	NSXAT1EMNF	Data-driven Scientific Data Modeling	Ákos HAJNAL, PhD	SZFI	5	4											2	0	3	ex	4								Predictive Business Data Modeling and Evaluation	
20	NSXSM1EMNF	Scalable AI Engineering and Infrastructure	Ákos HAJNAL, PhD	SZFI	5	4											2	0	3	m	4								Predictive Business Data Modeling and Evaluation	
21	NSXIMAEMNF	Integrated AI Project	Ákos HAJNAL, PhD	SZFI	5	4											0	0	5	m	4								Predictive Business Data Modeling and Evaluation	
		Track B - Multimodal & agentic AI systems			15	12											4	0	11		12									
22	NBXML1EMNF	Multimodal processing	Lehel DÉNES-FAZAKAS, PhD	BMI	5	4											2	0	3	ex	4								Natural Language Processing with Large Language Models	
23	NBXAA1EMNF	Automation and agentic systems	Lehel DÉNES-FAZAKAS, PhD	BMI	5	4											2	0	3	m	4								Natural Language Processing with Large Language Models	
24	NKXIMBEMNF	Integrated AI Project	Lehel DÉNES-FAZAKAS, PhD	BMI	5	4											0	0	5	m	4								Natural Language Processing with Large Language Models	
		Thesis work			0	30																								
24	NNDDM4EMNF	Thesis work I.	Gábor KERTÉSZ, PhD, habil.	DH		10														m	10								Foundations of Deep learning	
25	NNDDM5EMNF	Thesis work II.	Gábor KERTÉSZ, PhD, habil.	DH		20																			m	20			Thesis work I.	
		Criteria subject			1	0																								
26	NDIPT1EMNF	Mentoring	Johanna SÁJEVICSNÉ SÁPI, PhD, habil.	BMI	1		0	1	0	s	0																			
		Elective courses (min. 6 credits)			0	6																								
27		Elective course I.			0	3															3									
28		Elective course II.			0	3																				3				

									7					8					5					3			
Exam (ex)									4					4					1					0			
Midterm (m)									3					4					4					3			
Signature (s)									1					0					0					0			
Summary							12	5	8	0	29	12	3	12	0	31	6	0	13	0	29	3	0	5	0	31	

*e-learning blended

Subject of the final exam:

Statistical Learning and Machine Learning Foundations

Foundations of Deep learning

Human-Computer Interaction and Cognitive Systems

Predictive Business Data Modeling and Evaluation

Natural Language Processing with Large Language Models