Computer Science MSc (Artificial Intelligence specialization)

Compulsory subjects

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-22fmiDNDEG	Deep Network Developments		2	2	6	A,S	6			
IPM-22fmiMTAAEG	Methods and tools for AI applications		2	2	6	A	6			
IPM-22fmiPAIEG	Principles of artificial intelligence		2	2	6	A	6			
IPM-22fRMEG	Research methodology L+Pr. **		1	2	5	A,S	5			
IPM-22fASTE	Advanced Software Technology L. **		2	0	4	S		4		
IPM-22fmiDRLEG	Deep Reinforcement Learning	IPM-22fmiDNDEG	2	2	6	S		6		
IPM-22fDAAE	Design and analysis of algorithms L. **		2	0	4	S		4		
	Compulsory subject credits in total				**37**		**23**	**14**		
	Elective subjects				6			6		
	Compulsory elective subjects ***				47		7	10	30	
IPM-22fTHCONS	**Thesis consultation**				30	A,S				30
IPM-22fPRG	**Internship (4*)**				0					
	Total credits per semester						30	30	30	30
	Total credits				120					

* Subjects are offered either in the Autumn semester (A) or in the Spring semester (S) or in both (A,S).

** Core subject of the Computer Science MSc study programme regardless the specialization.

*** From the list of compulsory elective subjects, students are required to fulfill subjects in the amount of 47 credits.

(4*) The required duration of the internship is 6 weeks (240 hours). The requirement of internship is fulfilled by the completion of subjects AI Project Lab I&II.

(5*) The accomplishment is mandatory for international students. Credits are counted as compulsory elective subject credits.

(6*) Fulfilment of the practice part is the prerequisite of obtaining a grade in the lecture part.

Compulsory elective subjects of Artificial Intelligence specialization

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-22fmiCVEG	3D Computer Vision		2	2	6	A	6			
IPM-22fmiIDSEG	Introduction to Data Science		2	2	6	A,S	6			
IPM-22fmiPREPG	Preparation course for master studies and developing learning skills (5*)		0	3	2	A,S	2			
IPM-22fmiTAMEG	Topics in Applied Mathematics		2	2	5	A,S	5			
IPM-22fmiGTEG	Game theory		2	2	6	S		6		
IPM-22fmiLPE	Logic programming	(6*)	2	0	3	S		3		
IPM-22fmiLPG	Logic programming		0	2	3	S		3		
IPM-22fmiMLEG	Machine Learning	IPM-22fmiIDSEG	2	2	6	S		6		
IPM-22fmiMASEG	Multi-agent systems		2	2	6	S		6		
IPM-23fmiNLPFMEG	Natural Language Processing and Language-based Foundation Models	IPM-22fmiDNDEG	4	4	12	A,S		12		
IPM-23fmi3DCPAEG	3D point cloud processing and analysis		2	2	6	A			6	
IPM-22fmiAMLEG	Advanced Deep Network Development	IPM-22fmiDNDEG	2	2	6	A			6	
IPM-22fmiACEG	Affective computing	IPM-22fmiDNDEG	2	2	6	A			6	
IPM-22fmiAIPLAB1	AI Project Lab I.	IPM-22fmiIDSEG, IPM-22fmiTAMEG	0	2	4	A			4	
IPM-22fmiAIPLAB2	AI Project Lab II.		0	4	6	A			6	
IPM-22fmiROBEG	AI Robotics		2	2	6	A			6	
IPM-22fmiCOSCEG	Cognitive Science		2	2	6	A			6	
IPM-22fmiCOLLIEG	Collective Intelligence		2	2	6	A			6	
IPM-22fmiCIEG	Computational Intelligence		2	2	6	A			6	
IPM-22fmiEIEG	Embodied Intelligence		2	2	6	A			6	
IPM-23fmiSJEG	Statistics for signal processing L+Pr.		2	2	6	A			4	

From the list of compulsory elective subjects, students are required to fulfill subjects in the amount of 47 credits.

The accomplishment of the following listed subjects is mandatory only for EIT students.
Students do not participating in the EIT Digital Master programme can obtain elective subject credits for fulfilling them:

IPM-22fI&EBEG	I&E Basics
IPM-22fI&EBDL1E	Business Development Lab I.
IPM-22fI&EBDL1G	Business Development Lab I.
IPM-22fI&EBDL2E	Business Development Lab II.
IPM-22fI&EBDL2G	Business Development Lab II.
IPM-22fI&EIAOEEG	Innosocial aspects of entrepreneurship
IPM-22fI&ETSSG	Thematic Summer Schools with I&E project
IPM-22fI&ESTEG	I&E Study