

## Computer Science MSc (Artificial Intelligence Specialization 2022)

### Core Courses

Code	Courses	Lecture (L)	Labor	Practice (Pr)	Consultation	Requirement	Credit	Semester	Subject requirement	1st Semester	2nd Semester	3rd Semester	4th Semester
IPM-22fRMEG	Research methodology L+Pr.	1	2	0	2	XPG	5	1		2+2+0+1			
IPM-22fASTE	Advanced Software Technology L.	2	0	0	2	E	4	2			2+0+0+2		
IPM-22fDAAE	Design and analysis of algorithms L.	2	0	0	2	E	4	2			2+0+0+2		
IPM-22fPRG	Internship						0	2-4					240 hours
	<b>Core course credits</b>						<b>13</b>			<b>5</b>	<b>8</b>		

### Compulsory Courses of the Specialization

Code	Courses	Lecture (L)	Labor	Practice (Pr)	Consultation	Requirement	Credit	Semester	Subject requirement	1st Semester	2nd Semester	3rd Semester	4th Semester
IPM-22fmiDNDEG	Deep Network Developments	2	2	0	2	XE	6	1		2+2+0+2			
IPM-22fmiMTAAEG	Methods and tools for AI applications	2	2	0	2	XE	6	1		2+2+0+2			
IPM-22fmiPAIEG	Principles of artificial intelligence	2	2	0	2	XE	6	1		2+2+0+2			
IPM-22fmiDRLEG	Deep Reinforcement Learning	2	2	0	2	XCA	6	2	IPM-22fmiDNDEG		2+2+0+2		
	<b>Compulsory course credits</b>						<b>24</b>			<b>18</b>	<b>6</b>		
	<b>Compulsory elective courses credits</b>						<b>47</b>			<b>7</b>	<b>11</b>	<b>29</b>	
IPM-22fERASMUS	Erasmus mobility						<b>max 24 credits</b>	<b>3</b>				<b>max 24 credits</b>	
	<b>Optional course</b>						<b>6</b>	<b>2,3</b>			<b>5+0+0</b>	<b>1+0+0</b>	
IPM-22fTHCONS	Thesis consultation			<b>5</b>	<b>10</b>	<b>PG</b>	<b>30</b>	<b>4</b>					<b>signature</b>
	<b>Summa credit in semester</b>									<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>
	<b>Summa credit</b>						<b>120</b>						

### Compulsory elective courses

Code	Courses	Lecture (L)	Labor	Practice (Pr)	Consultation	Requirement	Credit	Semester	Subject requirement	1st Semester	2nd Semester	3rd Semester	4th Semester
IPM-22fmiCVEG	3D Computer Vision	2	2	0	2	XE	6	1		2+2+0+2			
IPM-22fmiIDSEG	Introduction to Data Science	2	2	0	2	XE	6	1		2+2+0+2			
IPM-22fmiPREPG	Preparation course for master studies and developing learning skills	0	0	3	0	PG	2	1		0+0+3+0			
IPM-22fmiTAMEG	Topics in Applied Mathematics	2	0	2	1	PG	5	1		2+0+2+1			
IPM-22fmiGTEG	Game theory*	2	0	2	2	XCA	6	2			2+0+2+2		
IPM-22fmiMLEG	Machine Learning	2	2	0	2	XE	6	2	IPM-22fmiIDSEG		2+2+0+2		
IPM-22fmiMASEG	Multi-agent systems*	2	2	0	2	XE	6	2			2+2+0+2		
IPM-22fmiLPE	Logic programming.*	2	0	0	1	XE	3	2	IPM-22fmiLPG (weak)		2+0+0+1		
IPM-22fmiLPG	Logic programming.*	0	2	0	1	PG	3	2			0+2+0+1		
IPM-22fmiAMLEG	Advanced Deep Network Development	2	0	2	2	XE	6	3	IPM-22fmiDNDEG			2+0+2+2	
IPM-22fmiACEG	Affective computing*	2	2	0	2	XE	6	3	IPM-22fmiDNDEG			2+2+0+2	
IPM-22fmiAIPLAB1	AI Project Lab I.	0	2	0	2	PG	4	3	IPM-22fmiTAMEG, IPM-22fmiIDSEG			0+2+0+2	
IPM-22fmiAIPLAB2	AI Project Lab II.	0	4	0	2	PG	6	3	IPM-22fmiTAMEG, IPM-22fmiIDSEG			0+4+0+2	
IPM-22fmiROBEG	AI Robotics	2	2	0	2	XE	6	3	IPM-22fmiDNDEG			2+2+0+2	
IPM-22fmiCOSCEG	Cognitive Science*	2	0	2	2	XE	6	3				2+0+2+2	
IPM-22fmiCOLLIEG	Collective Intelligence	2	2	0	2	PG	6	3				2+2+0+2	
IPM-22fmiCIEG	Computational Intelligence	2	2	0	2	XE	6	3				2+2+0+2	
IPM-22fmiEIEG	Embodied Intelligence	2	2	0	2	XE	6	3				2+2+0+2	
IPM-23fmiSJEG	Statistics for signal processing	2	0	1	1	XPG	4	3				2+0+1+1	

IPM-23fmi3DCPAEG	3D point cloud processing and analysis	2	0	2	2	XE	6	3				2+0+2+2	
IPM-22fmiNLPEG	Natural Language Processing (Discontinued subject)	2	2	0	2	XE	6	3	IPM-22fmiDNDEG			2+2+0+2	
IPM-23fmiNLPFMEG	Natural Language Processing and Language-based Foundation Models*	4	4	0	4	XE	12	1-4	IPM-22fmiDNDEG	4+4+0+4	4+4+0+4	4+4+0+4	4+4+0+4

I&E modul													
Code	Courses	Lecture (L)	Labor	Practice (Pr)	Consultation	Requirement	Credit	Semester	Subject requirement	1st Semester	2nd Semester	3rd Semester	4th Semester
IPM-22fi&EBEG	I&E Basics	2	0	2	2	XPG	6	1		2+0+2+2			
IPM-22fi&EBDL1G	Business Development Lab I.	0	0	2	2	PG	4	1		0+0+2+2			
IPM-22fi&EBDL2G	Business Development Lab II.	0	0	2	2	PG	4	2			0+0+2+2		
IPM-22fi&EIAOEEG	Innosocial aspects of the entrepreneurship	2	0	2	2	XPG	6	2			2+0+2+2		
IPM-22fi&ETSSG	Thematic Summer Schools with I&E project	1	0	1	2	XPG	4	2			1+0+1+2		
IPM-22fi&ESTEG	I&E Study	2	0	2	2	XPG	6	3				2+0+2+2	
	<b>Summa credit in semester</b>									<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>
	<b>Summa credit</b>						<b>120</b>						

**PG: Practice Grade E: Exam Grade XPG: Lecture+Practice with Practical Grade XE: Lecture+Practice with Exam XCA: Practice with continuous assessment**

- Az EIT-es hallgatók számára I&E modul mellett a \*-gal megjeölt tárgyak elvégzése kötelező.
- Az EIT-s hallgatók az utolsó félévükben végzik a szakmai gyakorlatot a diplomamunka készítésével párhuzamosan

- EIT students are required to complete the Innovation&Entrepreneurship (I&E) module and required to complete all subjects indicated by asterisk (\*) in the sample curriculum of the specialization.
- EIT students fulfill the requirements of the internship and complete their thesis work (parallelly), in the last semester of their academic studies.