

Computer Science for Autonomous Systems MSc (2022)
Fall semester

Compulsory subjects													
Code	Subjects	Lecture (L)	Practice (Pr)	Labor	Consultation	Requirement	Credit	Semester	Subject requirement	1st Semester	2nd Semester	3rd Semester	4th Semester
IPM-22AUTCVEG	3D Computer Vision L+Pr.*	2	0	2	2	XE	6	1		2+0+2+2			
IPM-22AUTISPE	Image and Signal Processing L.*	2	0	0	1	E	3	1	IPM-22AUTISPG (weak)	2+0+0+1			
IPM-22AUTISPG	Image and Signal Processing Pr.*	0	0	2	1	PG	3	1		0+0+2+1			
IPM-22AUTIVSEG	Introduction to Vehicles and Sensors L.+Pr.*	2	1	0	1	XE	4	1		2+1+0+1			
IPM-22AUTRMG	Research methodology L+Pr.	1	2	0	2	XPG	5	1		1+2+0+2			
IPM-22AUTAIPAEG	Deep Reinforcement Learning L+Pr.*	2	2	0	2	XPG	6	2			2+2+0+2		
IPM-22AUTDAAE	Design and Analysis of Algorithms L.*	2	0	0	2	E	4	2			2+0+0+2		
IPM-22AUTIDSEG	Introduction to Data Science L+Pr.	2	0	2	2	XE	6	2			2+0+2+2		
IPM-22AUTNMEG	Numerical Methods for Optimization L+Pr.	2	0	2	2	PG	6	2			2+0+2+2		
IPM-22fPRG	Internship						0	2-4					240 hours
	Compulsory subjects credits						43			21	22	0	

Compulsory elective subjects

Code	Subject	Lecture (L)	Practice (Pr)	Labor	Consultation	Requirement	Credit	Semester	Subject requirement	1st Semester	2nd Semester	3rd Semester	4th Semester
IPM-22AUTSCTE	System and Control Theory L.	2	0	0	1	E	3	3	IPM-22AUTSCTG (weak)			2+0+0+1	
IPM-22AUTSCTG	System and Control Theory Pr.	0	0	2	1	PG	3	3				0+0+2+1	
IPM-22AUTPHFTG	Human Factors in Traffic Environment Pr.*	0	2	0	0	PG	2	1,3		0+2+0+0		0+2+0+0	
IPM-22AUTLFADE	Legal Framework for Autonomous Driving L.	2	0	0	0	E	2	1,3		2+0+0+0		2+0+0+0	
IPM-22AUTPREPG	Preparation course for master studies and developing learning skills Pr.*	0	3	0	0	PG	2	1		0+3+0+0			
IPM-22AUTPME	Project Management L.	2	0	0	0	E	2	1,3		2+0+0+0		2+0+0+0	
IPM-22AUTTAMEG	Topics in Applied Mathematics L+Pr.	2	2	0	1	XPG	5	1		2+2+0+1			
IPM-24AUTPAIEG	Principles of artificial intelligence	2	0	2	2	XE	6	1		2+0+2+2			
IPM-22AUTASTE	Advanced Software Technology L.	2	0	0	2	E	4	2			2+0+0+2		
IPM-22AUTAUSLAB1	AUS Lab I.	0	3	0	2	PG	5	2			0+3+0+2		
IPM-25AUTG3DCVEG	Geometry of 3D Computer Vision	2	2	0	2	XE	6	2			2+2+0+2		
IPM-22AUTIVPEG	Image and Video Processing L.+Pr.*	2	2	0	2	XE	6	2			2+2+0+2		
IPM-24AUTIMREG	Intelligent Mobile Robots	2	2	0	2	XPG	6	2			2+2+0+2		
IPM-22AUTCGE	Computer graphics L.	2	0	0	1	E	3	2	IPM-22AUTCGG (weak)		2+0+0+1		
IPM-22AUTCGG	Computer graphics Pr.	0	2	0	1	PG	3	2			0+2+0+1		
IPM-22AUTDAAG	Design and analysis of algorithms Pr.	0	2	0	1	PG	3	2			0+2+0+1		
IPM-22AUTERTSEG	Embedded and Real-Time Systems L+Pr.*	2	0	2	2	XE	6	2			2+0+2+2		

IPM-22AUTSQTE	Software quality and testing L.	2	0	0	1	E	3	2	IPM-22AUTSQTG (weak)		2+0+0+1		
IPM-22AUTSQTG	Software quality and testing Pr.	0	0	2	1	PG	3	2			0+0+2+1		
IPM-23AUTi3DCPAEG	3D point cloud processing and analysis	2	0	2	2	XE	6	3				2+0+2+2	
IPM-22AUTDNDEG	Deep Network Development*	2	0	2	2	XE	6	3				2+0+2+2	
IPM-22AUTSSFEG	3D Sensing and Sensor Fusion L.+Pr.*	2	2	0	2	XE	6	3				2+2+0+2	
IPM-24AUTMLEG	Machine learning L+Pr.	2	0	2	2	XE	6	3				2+0+2+2	
IPM-22AUTADLEG	Advanced Deep Network Development L+Pr.*	2	2	0	2	XE	6	3	IPM-22AUTDNDEG			2+2+0+2	
IPM-22AUTAAE	Advanced Algorithms L.	2	0	0	1	E	3	3	IPM-22AUTAAG (weak)			2+0+0+1	
IPM-22AUTAAG	Advanced Algorithms Pr.	0	0	2	1	PG	3	3				0+0+2+1	
IPM-22AUTAUSLAB2	AUS Lab II	0	3	0	2	PG	5	3				0+3+0+2	
IPM-22AUTIVPEG	Image and Video Processing L.+Pr.*	2	2	0	2	XE	6	2			2+2+0+2		
	Compulsory elective credits						41			9	7	25	
	Compulsory credits						43			21	22		
IPM-22AUTERASMUS	Erasmus mobility						max 24 credits	3				max 24 credits	
	Elective credits						6	2,3			1+0+0	5+0+0	
IPM-24AUTTHESIS	Thesis consultation		5			PG	30	4					signature
	Summa credit in semester									30	30	30	30
	Summa credit						120						

I&E modul													
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IPM-22fI&EBEG	I&E Basics	2	2	0	2	XPG	6	1		2+2+0+2			

IPM-22fi&EBDL1G	Business Development Lab I.	0	2	0	2	PG	4	1		0+2+0+2			
IPM-22fi&EBDL2G	Business Development Lab II.	0	2	0	2	PG	4	2			0+2+0+2		
IPM-22fi&EIAOEEG	Innosocial aspects of the entrepreneurship	2	2	0	2	XPG	6	2			2+2+0+2		
IPM-22fi&ETSSG	Thematic Summer Schools with I&E project	1	1	0	2	XPG	4	2			1+1+0+2		
IPM-22fi&ESTEG	I&E Study	2	2	0	2	XPG	6	3				2+2+0+2	
	Summa credit in semester									30	30	30	30
	Summa credit						120						

PG: Practical Grade E: Exam XPG: Lecture+Practice with Practical Grade XE: Lecture+Practice with Exam

• Az EIT-es hallgatók számára I&E modul mellett a *-gal megjelölt 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.