

**Computer Science for Autonomous Systems MSc**  
**Fall semester**

**Core Courses**

Code	Courses	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+1+2+1			
IPM-22AUTIVSEG	Introduction to Vehicles and Sensors L.+Pr.*	2	1	0		XE	4	1		2+0+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+2+0+2		
IPM-22AUTNMEG	Numerical Methods for Optimization L+Pr.	2	0	2	2	PG	6	2			2+2+0+2		
IPM-22fPRG	Internship						0	2-4					240 hours
	<b>Core course credits</b>						<b>43</b>			<b>21</b>	<b>22</b>	<b>0</b>	

## Compulsory Elective Courses of the Specialization

Code	Courses	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+2+0+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-22AUTPME	Project Management L.	2	0	0	0	E	2	1,3		2+0+0+0		2+0+0+0	
IPM-22AUTDNDEG	Deep Network Development*	2	0	2	2	XE	6	1		2+0+2+2			
IPM-22AUTPREPG	Preparation course for master studies and developing learning skills Pr.*	0	3	0	0	PG	2	1		0+3+0+0			
IPM-22AUTTAMEG	Topics in Applied Mathematics L+Pr.	2	2	0	1	XPG	5	1		2+2+0+1			
IPM-22AUTASTE	Advanced Software Technology L.	2	0	0	2	E	4	2			2+0+0+2		
IPM-22AUTAUSLAB1	AUS Lab I.	0	0	3	2	PG	5	2			0+0+3+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	2	0	2	XE	6	3				2+2+0+2	

IPM-22AUTSSFEG	3D Sensing and Sensor Fusion L.+Pr.*	2	2	0	2	XE	6	3				2+2+0+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	2	0	1	PG	3	3				0+2+0+1	
IPM-22AUTAUSLAB2	AUS Lab II	0	0	3	2	PG	5	3				0+0+3+2	
IPM-22AUTIVPEG	Image and Video Processing L.+Pr.*	2	2	0	2	XE	6	2			2+2+0+2		
	<b>Compulsory elective courses credits</b>						<b>41</b>				<b>9</b>	<b>7</b>	<b>25</b>
<b>IPM-22AUTERASMUS</b>	<b>Erasmus mobility</b>						<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>1+0+0</b>	<b>5+0+0</b>	
<b>IPM-22AUTTHESIS</b>	<b>Thesis consultation</b>		<b>5</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>Summa credit</b>						<b>120</b>						

<b>I&amp;E modul</b>													
<b>Code</b>	<b>Courses</b>	<b>Lecture (L)</b>	<b>Practice (Pr)</b>	<b>Labor</b>	<b>Consultation</b>	<b>Requirement</b>	<b>Credit</b>	<b>Semester</b>	<b>Subject requirement</b>	<b>1st Semester</b>	<b>2nd Semester</b>	<b>3rd Semester</b>	<b>4th Semester</b>
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	
	<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: 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.