

## Computer Science MSc (Digital Factory specialization 2023, Fall Semester) starting in Autumn with Erasmus Mobility

### Core Courses

Code	Courses	Lecture (L)	Labor	Practice (Pr)	Consultation	Requirement	Credit	Semester	Subject requirement	1st Semester	2nd Semester	3rd Semester	4th Semester
IPMSEK-22fRMEG	Research methodology L+Pr.	1	2	0	2	PG	5	1		2+2+0+1			
IPMSEK-22fASTE	Advanced Software Technology L.	2	0	0	2	E	4	2			2+0+0+2		
IPMSEK-22fDAAE	Design and analysis of algorithms L.	2	0	0	2	E	4	2			2+0+0+2		
IPMSEK-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
IPMSEK-22fi4HBPEG	Hardware based programming L+Pr.	1	0	3	1	XPG	5	1		1+0+3+1			
IPMSEK-22fi4MSLSG	Master studies and learning skills	0	0	3	0	PG	2	1		0+0+3+1			
IPMSEK-22fi4PAIEG	Principles of artificial intelligence	2	0	2	2	XE	6	1		2+0+2+2			
IPMSEK-23fi4PYEG	Python L+Pr.	1	0	2	1	XPG	4	1		1+0+2+1			
IPMSEK-23fi4ERPSEG	ERP Systems L+Pr.	2	0	2	2	XPG	6	2			2+0+2+2		

IPMSEK-22fi4IDEG	Industrial Databases L+Pr.	2	2	0	1	XE	5	2			2+2+0+1		
IPMSEK-22fi4IMLDLEG	Introduction to Machine Learning and Deep Learning L+Pr.	2	0	2	2	XE	6	2			2+0+2+2		
IPMSEK-22fi4ICSE	Introduction to Computer Security	2	0	0	1	E	3	3	IPMSEK-22fi4ICSG (week)			2+0+0+1	
IPMSEK-22fi4ICSG	Introduction to Computer Security	0	2	0	1	PG	3	3				0+2+0+1	
IPMSEK-22fi4DAMEG	Data Mining L+Pr.	2	2	0	2	XE	6	3				2+2+0+2	
IPMSEK-22fi4DFLAB1	Digital Factory Lab I	0	1	0	4	PG	5	3				0+1+0+4	
IPMSEK-22fi4DFLAB2	Digital Factory Lab II.	0	1	0	4	PG	5	3				0+1+0+4	
IPMSEK-22fi4ROBEG	3D technologies and Robotics L+Pr.	2	2	0	1	XPG	5	3				2+2+0+1	
	<b>Compulsory course credits</b>						<b>61</b>				<b>17</b>	<b>17</b>	<b>27</b>
	<b>Compulsory elective courses credits</b>						<b>20</b>				<b>10</b>	<b>10</b>	
<b>IPMSEK-22fERASMUS</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>1,3</b>			<b>3</b>		<b>3</b>
<b>IPMSEK-22fTHCONS</b>	<b>Thesis consultation</b>			<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>25+10</b>	<b>25+10</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
IPMSEK-23fi4PLCEG	PLC programming and communications L+Pr.	2	2	0	1	XPG	5	1		2+2+0+1			
IPMSEK-23fi4TAMEG	Topics in Applied Mathematics L+Pr.	2	0	2	1	XPG	5	1		2+0+2+1			
IPMSEK-23fi4AADEG	Advanced Application Design L+Pr.	2	0	2	1	XPG	5	2			2+0+2+1		

IPMSEK-22fi4ICEG	Industrial communications L+Pr.	2	2	0	1	XPG	5	2			2+2+0+1		
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**PG: Practice Grade E: Exam Grade XPG: Lecture+Practice with Practical Grade XE: Lecture+Practice with Exam**