

Computer Science MSc (Cybersecurity 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
	Core course credits						13			5	8		

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-22fkbCGE	Cryptography *	2	0	0	0	E	2	1	IPM-22fkbCGG (week)	2+0+0+0			
IPM-22fkbCGG	Cryptography *	0	0	2	1	PG	3	1		0+0+2+1			
IPM-22fkbICSE	Introduction to Computer Security*	2	0	0	0	E	3	1	IPM-22fkbICSG (week)	2+0+0+0			
IPM-22fkbICSG	Introduction to Computer Security*	0	2	0	1	PG	3	1		0+2+0+1			
IPM-22fkbDSEG	Introduction to Data Science	2	2	0	2	XE	6	1		2+2+0+2			

IPM-22fkbSQTE	Software quality and testing	2	0	0	1	E	3	2	IPM-22fkbSQTG (week)		2+0+0+1		
IPM-22fkbSQTG	Software quality and testing	0	2	0	1	PG	3	2			0+2+0+1		
IPM-22fkbCRPE	Cryptographyc protocols*	2	0	0	1	E	3	3	IPM-22fkbCRPG (week)			2+0+0+1	
IPM-22fkbCRPG	Cryptographyc protocols*	0	2	0	1	PG	3	3				0+2+0+1	
	Compulsory course credits						29			17	6	6	
	Compulsory elective course credits						42			8	16	18	
	Optional course						6	3				6+0+0	
IPM-22fERASMUS	Erasmus mobility						max 24 credits	3				max 24 credits	
IPM-20fTHCONS	Thesis consultation			5	10	PG	30	4					signature
	Summa credit in semester									30	30	30	30
	Summa credit						120						

Compulsory Elective 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-22fkbPCMSG	Preparation course for master studies and developing learning skills.*	0	0	3	0	PG	2	1		0+0+3+0			
IPM-22fkbDFISE	Development of Financial IT Systems	2	0	0	1	E	3	1,3	IPM-22fkbDFISG (week)	2+0+0+1		2+0+0+1	
IPM-22fkbDFISG	Development of Financial IT Systems	0	2	0	1	PG	3	1,3		0+2+0+1		0+2+0+1	
IPM-22fkbISPEG	Information security and privacy*	2	2	0	2	XE	6	2			2+2+0+2		

IPM-22fkbMLEG	Machine Learning	2	2	0	2	XE	6	2	IPM-22fkbDSEG		2+2+0+2		
IPM-22fkbNSSE	Network and System Security*	2	0	0	1	E	3	2	IPM-22fkbNSSG (week)		2+0+0+1		
IPM-22fkbNSSG	Network and System Security*	0	2	0	1	PG	3	2			0+2+0+1		
IPM-22fkbODSEG	Numerical Methods for Optimization	2	2	0	2	XPG	6	2			2+2+0+2		
IPM-22fkbPQCE	Post-quantum cryptography	2	0	0	1	E	3	2			2+0+0+1		
IPM-22fkbTCG	Topics in cryptography seminar	0	0	2	1	PG	3	2			0+0+2+1		
IPM-22fkbACRE	Advanced cryptography*	2	0	0	1	E	3	3	IPM-22fkbACRG (week)			2+0+0+1	
IPM-22fkbACRG	Advanced cryptography*	0	0	2	1	PG	3	3				0+0+2+1	
IPM-22fkbSCLAB1	Cyber Security Lab I.*	0	2	0	2	PG	4	3				0+2+0+2	
IPM-22fkbSCLAB2	Cyber Security Lab II.	0	4	0	2	PG	6	3				0+4+0+2	
IPM-22fkbCRAE	Provably secure modular design of cryptographic protocols*	2	0	0	1	E	3	3	IPM-22fkbCRAG (week)			2+0+0+1	
IPM-22fkbCRAG	Provably secure modular design of cryptographic protocols*	0	0	2	1	PG	3	3				0+0+2+1	

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		
	Summa credit in semester										30	30	30	30
	Summa credit						120							

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

- Az EIT-es hallgatók számára I&E modul mellett a *-gal megjeölt tárgyak elvégzése kötelező.
- A hallgatók a Cyber Security Lab I.és II. teljesítésével kiváltják a szakmai gyakorlatot.
- Az EIT-s hallgatók az utolsó félévükben végzik a szakmai gyakorlatot a diplomamunka készítésével párhuzamosan

- EIT students are required to complete the Innovation&Entrepreneurshop (I&E) module and required to complete all subjects indicated by asterisk (*) in the sample curriculum of the specialization.
- Computer Science Master course students with Cybersecurity specialization are entitled to fulfill the requirements of the internship by the completion of Cyber Security Lab I. and Lab II. courses
- EIT students fulfill the requirements of the internship and complete their thesis work (parallelly), in the last semester of their academic studies.