

Computer Science MSc (Financial Technology specialization)

Compulsory subjects

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-22fpiDSEG	Introduction to Data Science L+Pr.		2	2	6	A,S	6			
IPM-22fpiIFE	Introduction to Finance L.	(6*)	2	0	2	A	2			
IPM-22fpiIFG	Introduction to Finance Pr.		0	2	3	A	3			
IPM-22fRMEG	Research methodology L+Pr. **		1	2	5	A,S	5			
IPM-22fASTE	Advanced Software Technology L. **		2	0	4	S		4		
IPM-22fpiCISE	Complex information systems L.	(6*)	2	0	3	S		3		
IPM-22fpiCISG	Complex information systems Pr.		0	2	3	S		3		
IPM-22fDAAE	Design and analysis of algorithms L. **		2	0	4	S		4		
IPM-22fpiSESCE	Service Science L.	(6*)	2	0	3	S		3		
IPM-22fpiSESCG	Service Science Pr.		0	2	3	S		3		
IPM-22fpiBIE	Business Intelligence and Data Visualization L.	(6*)	2	0	3	A			3	
IPM-22fpiBIG	Business Intelligence and Data Visualization Pr.		0	2	3	A			3	
IPM-22fpiDFISE	Development of Financial IT Systems L.	(6*)	2	0	3	A			3	
IPM-22fpiDFISG	Development of Financial IT Systems Pr.		2	0	3	A			3	
IPM-22fpiFTLAB1	Fintech Lab I.		0	2	4	A			4	
IPM-22fpiFTLAB2	Fintech Lab II.		0	4	6	A			6	
	Compulsory subject credits in total				58		16	20	22	
	Elective subjects				6			6		
	Compulsory elective subjects ***				26		14	4	8	
IPM-22fTHCONS	Thesis consultation				30	A,S				30
IPM-22fPRG	Internship (4*)				0					
	Total credits per semester						30	30	30	30
	Total credits				120					

* Subjects are offered either in the Autumn semester (A) or in the Spring semester (S) or in both (A,S).

** [Core subject of the Computer Science MSc study programme regardless the specialization.](#)

*** From the list of compulsory elective subjects, students are required to fulfill subjects in the amount of 26 credits.

(4*) The required duration of the internship is 6 weeks (240 hours). The requirement of internship is fulfilled by the completion of subjects FinTech Lab I&II.

(5*) [The accomplishment is mandatory for international students. Credits are counted as compulsory elective subject credits.](#)

(6*) Fulfilment of the practice part is the prerequisite of obtaining a grade in the lecture part.

Compulsory elective subjects of Financial Technology specialization

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-22fpiDNDEG	Deep Network Development L+Pr.		2	2	6	A,S	6			
IPM-24fpiMFCE	Mathematical foundation of cryptocurrencies L.		2	0	4	A	4			
IPM-22fpiPCMSG	Preparation course for master studies and developing learning skills Pr. (5*)		0	3	2	A,S	2			
IPM-22fpiPAIEG	Principles of artificial intelligence L+Pr.		2	2	6	A	6			
IPM-24fpiPETEG	Privacy enhancing technologies L+Pr.		1	1	4	A	4			
IPM-22fpiDMDBE	Data models and databases L.	(6*)	2	0	3	S		3		
IPM-22fpiDMDBG	Data models and databases Pr.		0	2	3	S		3		
IPM-22fpiDRLEG	Deep Reinforcement Learning L+Pr.	IPM-22fpiDNDEG	2	2	6	S		6		
IPM-22fpiMLEG	Machine Learning L+Pr.	IPM-22fpiDSEG	2	2	6	S		6		
IPM-24fpiVASG	Vulnerability analysis seminar Pr.		0	2	4	S		4		
IPM-22fpiADNDEG	Advanced Deep Network Development L+Pr.	IPM-22fpiDNDEG	2	2	6	A			6	
IPM-22fpiACEG	Affective computing L+Pr.	IPM-22fpiDNDEG	2	2	6	A			6	
IPM-22fpiCOSCEG	Cognitive sciences L+Pr.		2	2	6	A			6	
IPM-22fpiCOLLIEG	Collective Intelligence L+Pr.		2	2	6	A			6	
IPM-22fpiCIEG	Computational Intelligence L+Pr.		2	2	6	A			6	
IPM-22fpiNSEG	Network Science L+Pr.		2	2	6	A			6	
IPM-22fpiPME	Project Management L.		2	0	2	A			2	

From the list of compulsory elective subjects, students are required to fulfill subjects in the amount of 26 credits.

The accomplishment of the following listed subjects is mandatory only for EIT students.

Students do not participating in the EIT Digital Master programme can obtain elective subject credits for fulfilling them:

IPM-22fi&EBEG	I&E Basics
IPM-22fi&EBDL1G	Business Development Lab I.
IPM-22fi&EBDL2G	Business Development Lab II.
IPM-22fi&EIAOEEG	Innosocial aspects of entrepreneurship
IPM-22fi&ETSSG	Thematic Summer Schools with I&E project
IPM-22fi&ESTEG	I&E Study