

Computer Science MSc (Data Science specialization)

Compulsory subjects

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-22fatDNDEG	Deep Network Development L+Pr.		2	2	6	A,S	6			
IPM-22fatDSEG	Introduction to Data Science L+Pr.		2	2	6	A,S	6			
IPM-22fRMEG	Research methodology L+Pr. **		1	2	5	A,S	5			
IPM-22fatTAMEG	Topics in Applied Mathematics L+Pr.		2	2	5	A,S	5			
IPM-22fASTE	Advanced Software Technology L. **		2	0	4	S		4		
IPM-22fatDSLALB1	Data Science Lab I	IPM-22fatDSEG	0	2	4	A,S		4		
IPM-22fDAAE	Design and analysis of algorithms L. **		2	0	4	S		4		
IPM-22fatMLEG	Machine Learning L+Pr.	IPM-22fatDSEG	2	2	6	S		6		
IPM-22fatODSEG	Numerical Methods for Optimization L+Pr.		2	2	6	S		6		
IPM-22fatDSLALB2	Data Science Lab II	IPM-22fatDSEG	0	4	6	A,S			6	
IPM-22fatOSTEG	Open-source Technologies for Data Science L+Pr.		2	2	6	A			6	
IPM-22fatSMEG	Stream Mining L+Pr.		2	2	6	A			6	
	Compulsory subject credits in total				64		22	24	18	
	Elective subjects				6				6	
	Compulsory elective subjects ***				20		8	6	6	
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 20 credits.

(4*) The required duration of the internship is 6 weeks (240 hours). The requirement of internship is fulfilled by the completion of subjects Data Science 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 Data Science specialization

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-22fatPREPG	Preparation course for master studies and developing learning skills Pr. (5*)		0	3	2	A,S	2			
IPM-22fatTPE	Theory of programming L.	(6*)	2	0	3	A	3			
IPM-22fatTPG	Theory of programming Pr.		0	2	3	A	3			
IPM-22fatCISE	Complex information systems L.	(6*)	2	0	3	S		3		
IPM-22fatCISG	Complex information systems Pr.		0	2	3	S		3		
IPM-22fatDMDBE	Data models and databases L.	(6*)	2	0	3	S		3		
IPM-22fatDMDBG	Data models and databases Pr.		0	2	3	S		3		
IPM-22fatAMLEG	Advanced Deep Network Development L+Pr.	IPM-22fatDNDEG	2	2	6	A			6	
IPM-22fatNSEG	Network Science L+Pr.		2	2	6	A			6	

From the list of compulsory elective subjects, students are required to fulfill subjects in the amount of 20 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&EBDL1E	Business Development Lab I.
IPM-22fi&EBDL1G	Business Development Lab I.
IPM-22fi&EBDL2E	Business Development Lab II.
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