

## Data Science MSc

### Compulsory subjects

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-24ATDNDEG	Deep Network Development L+Pr.		2	2	6	A,S	6			
IPM-24ATIDSEG	Introduction to Data Science L+Pr		2	2	6	A,S	6			
IPM-24ATLEAE	Legal and ethical aspects of DS and AI L.		2	0	4	A	4			
IPM-24ATRMEG	Research methodology L+Pr.		1	2	5	A,S	5			
IPM-24ATTAMEG	Topics in Applied Mathematics L+Pr.		2	2	5	A,S	5			
IPM-24ATDSLAB1	Data Science Lab I.	IPM-24ATIDSEG	0	2	4	A,S		4		
IPM-24ATIDSE	Introduction to Data Security L.		2	0	4	S		4		
IPM-24ATMLEG	Machine Learning L+Pr.	IPM-24ATIDSEG	2	2	6	S		6		
IPM-24ATNMEG	Numerical Methods for Optimization L+Pr.	IPM-24ATTAMEG	2	2	6	S		6		
IPM-24ATAAE	Audio Analysis L.		2	0	3	A			3	
IPM-24ATDSLAB2	Data Science Lab II.	IPM-24ATDSLAB1	0	4	6	A,S			6	
IPM-24ATIAE	Image Analysis L.		2	0	3	A			3	
IPM-24ATOSTEG	Open-source Technologies for Data Science L+Pr		2	2	6	A			6	
IPM-24ATSMEG	Stream Mining L+Pr.		2	2	6	A			6	
IPM-24ATTME	Text Mining L.		2	0	3	A			3	
	<b>Compulsory subject credits in total</b>				<b>73</b>		<b>26</b>	<b>20</b>	<b>27</b>	
	Elective subjects				6			6		
	Compulsory elective subjects **				11		4	4	3	
IPM-24ATTHCONS	<b>Thesis consultation</b>				30	A,S				30
IPM-22fPRG	<b>Internship ***</b>				0					
	<b>Total credits per semester</b>						30	30	30	30
	<b>Total credits</b>				120					

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

\*\* From the list of compulsory elective subjects, students are required to fulfill subjects in the amount of 11 credits.

\*\*\* 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.

(4\*) The accomplishment is mandatory for international students. Credits are counted as compulsory elective subject credits.

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

## Compulsory elective subjects of the Data Science MSc major

Code	Subject	Subject prerequisite	Lecture (L)	Practice (Pr)	Credit	Semester *	Recommended semester			
							1st	2nd	3rd	4th
IPM-24ATPREPG	Preparation course for master studies and developing learning skills Pr. (4*)		0	3	2	A,S	2			
IPM-24ATICNAEG	Introduction to Cloud Native Architectures L+Pr.		2	2	6	A	6			
IPM-24ATIDEEG	Introduction to Data Engineering L+Pr		2	2	6	A	6			
IPM-24ATiSJEG	Statistics for signal processing L+Pr.		2	0	4	A	4			
IPM-24ATCTDSEG	Commercial Technologies for Data Science L+Pr.		1	2	4	S		4		
IPM-24ATDMDBE	Data models and databases L.	(5*)	2	0	3	S		3		
IPM-24ATDMDBG	Data models and databases Pr.		0	2	3	S		3		
IPM-24ATDAAE	Design and analysis of algorithms L.		2	0	4	S		4		
IPM-24ATDOCEAEG	DevOps and Cloud engineering on Azure		2	2	6	S		6		
IPM-24ATRSEG	Recommender Systems L+Pr.		2	2	6	S		6		
IPM-24ATADNDEG	Advanced Deep Network Development L+Pr.	IPM-24ATDNDEG	2	2	6	A			6	
IPM-24ATNSEG	Network Science L+Pr.		2	2	6	A			6	

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