Master's Programme Curriculum

Data Science and Business Analytics

Academic year 2018/2019

25.04.2018

No	Course code	Course name	Course type		year				Total Hours/ECTS Credits	Form of credit
					I		II			
					1	2	3	4		
A	**General Courses**									
1	2400-FIM1POWI	Intellectual Property Protection	training	hours	6				**6**	Credit
				ECTS	0,5				**0,5**	
2	0000-BHP-OG	Occupational Safety and Health (OSH)	training	hours	4				**4**	Credit
				ECTS	0,5				**0,5**	
3		OGUN (elective from University offer, humanistic profile)	general classes	hours		30	30		**60**	Credit
				ECTS		3	3		**6**	
		Total of hours in the group of courses			**10**	**30**	**30**	**0**	**70**	
		ECTS of credits in the group of courses			***1***	***3***	***3***	***0***	***7***	
B	**Core courses**									
4	2400-DS1AMI	Applied Microeconomics	lecture	hours	45				**45**	written exam
				ECTS	5				**5**	
5	2400-DS1AMA	Applied Macroeconomics	lecture	hours	45				**45**	written exam
				ECTS	5				**5**	
6	2400-DS1AE	Advanced Econometrics	lecture	hours		30			**60**	written exam
			lab			30				
				ECTS		6			**6**	
7	2400-DS2AF	Applied Finance	lecture	hours			30		**45**	written exam
			lab	hours			15			
				ECTS			5		**5**	
		Total of hours in the group of courses			**90**	**60**	**45**	**0**	**195**	
		ECTS of credits in the group of courses			***10***	***6***	***5***	***0***	***21***	
C	**Field -of study courses**									
8	2400-DS1R	R: intro / data cleaning and imputation R / basics of visualisation	lab	hours	15				**15**	written exam
				ECTS	3				**3**	
9	2400-DS1SQL	Python and SQL: intro / SQL platforms	lab	hours	30				**30**	Credit
				ECTS	4				**4**	
10	2400-DS1AL	Algorithms for Data Science	lecture	hours		30			**45**	written exam
			lab	hours		15				
				ECTS		6			**6**	
11	2400-DS1ST	Statistics and Exploratory Data Analysis	lab	hours	30				**30**	Credit
				ECTS	5				**5**	
12	2400-DS1DS	Introduction to Data Science	lecture	hours	15				**15**	written exam
				ECTS	2				**2**	
13	2400-DS1UL	Unsupervised Learning	lab	hours	30				**30**	Credit
				ECTS	3				**3**	
14	2400-DS1WSMS	Webscraping and Social Media Scraping	lab	hours		15			**15**	Credit
				ECTS		3			**3**	
15	2400-DS1APR	Advanced Programming in R	lab	hours		15			**15**	written exam
				ECTS		5			**5**	
16	2400-DS1ML1	Machine Learning 1: classification methods	lab	hours		30			**30**	Credit
				ECTS		4			**4**	
17	2400-DS2AV	Advanced Visualisation in R	lab	hours			30		**30**	Credit
				ECTS			6		**6**	
18	2400-DS2TMS	Text Mining and Social Media Mining	lab	hours			30		**30**	written exam
				ECTS			4		**4**	
19	2400-DS2BDA	Big Data Analytics	lab	hours			15		**15**	Credit
				ECTS			2		**2**	
20	2400-DS2ML2	Machine Learning 2: predictive models, deep learning, neuron network	lab	hours			30		**30**	Credit
				ECTS			4		**4**	
21	2400-DS2RR	Reproducible Research	lab	hours				30	**30**	written exam
				ECTS				4	**4**	
22	2400-DS2WWEF	Elective course (economics or finance)	discussion in lab	hours				30	**30**	Credit
				ECTS				3	**3**	
23	2400-DS2WWIT	Elective course (IT tools)	lab	hours				30	**30**	Credit
				ECTS				3	**3**	
24	2400-DS2WWQM	Elective course (quantitative methods)	discussion in lab	hours				60	**60**	Credit
				ECTS				6	**6**	
		Total of hours in the group of courses		**hours**	**120**	**105**	**105**	**150**	**480**	
		ECTS of credits in the group of courses		***ECTS***	***17***	***18***	***16***	***16***	***67***	

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D	Soft skills courses									
25	2400-DS1CA	Communication and Autopresentation	discussion	hours	30				**30**	written exam
				ECTS	2				**2**	
26	2400-DS2NEG	Negotiations	discussion	hours			30		**30**	written exam
				ECTS			3		**3**	
27	2400-DS2UB	Understanding Business	lecture	hours				30	**30**	Credit
				ECTS				3	**3**	
		Total of hours in the group of courses		hours	**30**	**0**	**30**	**30**	**90**	
		ECTS of credits in the group of courses		*ECTS*	***2***	***0***	***3***	***3***	***8***	
D	Master Thesis Seminar									
28	2400-SU2TS....	Master Thesis Seminar	seminar	hours		30	30	30	**90**	Credit
				ECTS		3	3	3	**9**	
29		Preparation of the thesis for the diploma examination	own work	hours		0	0	0	**0**	
				ECTS				8	***8***	
		Total of hours in the group of courses		hours	**0**	**30**	**30**	**30**	**90**	
		ECTS of credits in the group of courses		ECTS	***0***	***3***	***3***	***11***	***17***	
		Total of hours		**hours**	**250**	**225**	**240**	**210**	**925**	
		TOTAL of ECTS		**ECTS**	**30**	**30**	**30**	**30**	**120**	

Electives:

1) Spatial data in R
2) Interactive applications in Shiny package
3) Credit Risk - methods of scorecards development in R
4) Webb applications for Data Science
5) Time Series in Data Science