Faculty of Economic Sciences, University of Warsaw
Master's Programme Curriculum
Field of study: **Data Science and Business Analytics** - full-time studies
Academic year 2026/2027

For those students, who did not get respective credits during undergraduate studies (obligation to complete in the first year):

Occupational Safety and Health (OSH) **(there is a possibility of using credits received within the last five years at selected UW faculties)**	hours	4	ECTS	0,5	
Intellectual Property Protection (IPP)	hours	6	ECTS	0,5	

No	Course name	Course type	hours / ECTS	year				Total Hours/ECTS Credits	Form of credit
				I		II			
				1	2	3	4		
A	**General Courses**								
1	General elective course (OGUN) humanistic profile	Lecture/ Seminar classes	hours		30	30		60	Credit
			ECTS		3	3		6	
	Total of hours in the group of courses			0	30	30	0	60	
	ECTS of credits in the group of courses			*0*	*3*	*3*	*0*	*6*	
B	**Core courses**								
2	Applied Microeconomics	Lecture	hours	45				45	Exam
			ECTS	5				5	
3	Applied Macroeconomics	Lecture	hours	30				45	Exam
		Practical classes		15					
			ECTS	5				5	
4	Advanced Econometrics	Lecture	hours		30			60	Exam
		Practical classes			30				
			ECTS		6			6	
5	Applied Finance	Lecture	hours			30		45	Exam
		Practical classes	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**								
6	R: intro / data cleaning and imputation R / basics of visualisation	Practical classes	hours	30				30	Exam
			ECTS	3				3	
7	Python and SQL: intro / SQL platforms	Practical classes	hours	30				30	Test/Project
			ECTS	4				4	
8	Algorithms for Data Science	Lecture	hours		30			45	Exam
		Practical classes	hours		15				
			ECTS		6			6	
9	Statistics and Exploratory Data Analysis	Practical classes	hours	30				30	Exam/Project
			ECTS	5				5	
10	Introduction to Data Science	Lecture	hours	15				15	Exam
			ECTS	3				3	
11	Unsupervised Learning	Practical classes	hours	30				30	Project
			ECTS	3				3	
12	Webscraping and Social Media Scraping	Practical classes	hours		15			15	Exam/Project
			ECTS		3			3	
13	Advanced Programming in R	Practical classes	hours		30			30	Exam
			ECTS		5			5	
14	Machine Learning 1: classification methods	Practical classes	hours		30			30	Credit
			ECTS		4			4	
15	Advanced Visualisation in R	Practical classes	hours			30		30	Project
			ECTS			6		6	
16	Text Mining and Social Media Mining	Practical classes	hours			30		30	Test/Project
			ECTS			4		4	
17	Big Data Analytics	Practical classes	hours			15		15	Credit
			ECTS			2		2	
18	Machine Learning 2: predictive models, deep learning, neural network	Practical classes	hours			30		30	Project
			ECTS			4		4	
19	Reproducible Research	Practical classes	hours				30	30	Project
			ECTS				4	4	
20	Elective course (economics and finance)	Seminar classes	hours				30	30	Credit
			ECTS				3	3	
21	Elective course (IT tools)	Practical classes	hours				30	30	Credit
			ECTS				3	3	
22	Elective course (quantitative methods)	Seminar classes	hours				60	60	Credit
			ECTS				6	6	
	Total of hours in the group of courses		hours	135	120	105	150	510	
	ECTS of credits in the group of courses		ECTS	*18*	*18*	*16*	*16*	*68*	

D	**Soft skills courses**								
23	Communication and Autopresentation	Seminar classes	hours	30				30	Credit
			ECTS	2				2	
24	Negotiations	Seminar classes	hours			30		30	Exam
			ECTS			3		3	
25	Understanding Business	Lecture	hours				30	30	Project
			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**								
26	Diploma Seminar A/B/C	Seminar	hours		30	30	30	90	Credit
			ECTS		3	3	11	17	
	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**	**255**	**240**	**240**	**210**	**945**	
	TOTAL of ECTS		**ECTS**	**30**	**30**	**30**	**30**	**120**	