Faculty of Economic Sciences, University of Warsaw

Master's Programme Curriculum

Field of study: **Data Science and Business Analytics** - full-time studies

Academic year 2025/2026

For those students, who did not get respective credits during undergraduate studies:

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, neuron 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	Master Thesis Seminar	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**	