Załącznik nr 1a_a do Uchwały nr 122 Senatu UZ z 26.03.2025 r.

PLAN OF FULL-TIME STUDIES

Degree course: MATHEMATICS - second-cycle course

Course delivery method: full-time course

Recruitment in the academic year 2025/2026

Duration: 4 semesters

University of Zielona Góra

Faculty of Exact and Natural Sciences

No.		COURSE NAME	Hours per semester	ECTS	Form of assignment	SEMESTER 1								SEMESTER 2								SEMESTER 3								SEMESTER 4							
						Form of classes						Form of assign	ECTS	Form of classes						Form of assign	ECTS	Form of classes						Form of assign	ECTS	Form of classes						Form of assign	ECTS
						L	C	Lab	P	S	Pra			L	C	Lab	P	S	Pra			L	C	Lab	P	S	Pra			L	C	Lab	P	S	Pra		
1	Compulsory subjects module (general, basic and course)	English 1	30	2	O			30				O	2																								
2		English 2	30	2	E											30				E	2																
3		Functional Analysis	60	6	EO									30	30					EO	6																
4		Complex Analysis	60	7	EO	30	30					EO	7																								
5		Topology	60	7	EO	30	30					EO	7																								
6		Differential Geometry	60	7	EO	30	30					EO	7																								
7		Discrete Mathematics and Mathematical Foundations of Computer Science	60	7	EO	30	30					EO	7																								
8		Partial Differential Equations	90	10	EOO																									30	30	30				EOO	10
9		Diploma Seminar 1	30	3	O													30		O	3																
10		Diploma Seminar 2	60	6	O																					60		O	6								
11		Diploma Seminar 3	60	9	Z																													60		Z	9
1	Specialty - Mathematical Computer Science	Combinatorial Analysis	60	5	OO									30	30					OO	5																
2		Data Warehouse	45	5	OO									15		30				OO	5																
3		Specialist Laboratory Class	30	3	O																											30				O	3
4		Algorithmical Methods	45	6	EO																	15		30				EO	6								
5		Specialist Seminar 1	30	2	O													30		O	2																
6		Specialist Seminar 2	30	2	O																					30		O	2								
7		Specialist Seminar 3	30	2	Z																													30		Z	2
8		Topics in Discrete Mathematics 1	60	7	EO									30	30					EO	7																
9		Topics in Discrete Mathematics 2	60	7	EO																	30	30					EO	7								
10		Monographic Lecture	30	4	E																	30						E	4								
1	Specialty – Mathematics and Computer Science in Economics	Operations Research	45	6	EO																	15		30				EO	6								
2		Econometrics	90	8	OOO																	30	30	30				OOO	8								
3		Mathematical Economics 2	60	7	EO									30	30					EO	7																
4		Mathematical Programming	90	10	EOO									30	30	30				EOO	10																
5		Specialist Seminar 1	30	2	O													30		O	2																
6		Specialist Seminar 2	30	2	O																					30		O	2								
7		Specialist Seminar 3	30	2	Z																													30		Z	2
8		Game Theory in Economics	45	6	EO																	30	15					EO	6								
1	Specialty – Mathematics and Computer Science in Finance and Insurance	Financial Engineering	60	8	EOO																	30	15	15				EOO	8								
2		Actuarial Methods	60	7	EO									30	30					EO	7																
3		Stochastic Processes 1	60	7	EO									30	30					EO	7																
4		Stochastic Processes 2	60	7	EO																	30	30					EO	7								
5		Specialist Seminar 1	30	2	O													30		O	2																
6		Specialist Seminar 2	30	2	O																					30		O	2								
7		Specialist Seminar 3	30	2	Z																													30		Z	2
8		Time Series	90	8	OOO																									30	30	30				OOO	8
1	Specialty - Mathematical Modelling	Qualitative Theory of Differential Equations	60	8	EOO																	30	15	15				EOO	8								
2		Stochastic Processes 1	60	7	EO									30	30					EO	7																
3		Specialist Seminar 1	30	2	O													30		O	2																
4		Specialist Seminar 2	30	2	O																					30		O	2								
5		Specialist Seminar 3	30	2	Z																													30		Z	2
6		Control Theory 1	60	7	EO									30	30					EO	7																
7		Control Theory 2	60	7	EO																	30	30					EO	7								
8		Selected Problems of Mathematical Modelling	90	8	OOO																	30	30	30				OOO	8								

Compulsory subjects module	600	66	7 E	270	4 E	30	120	2 E	11	60	0 E	6	150	1 E	19
Specialty - Mathematical Computer Science	420	43	4 E	0	0 E	0	195	1 E	19	165	3 E	19	60	0 E	5
Specialty – Mathematics and Computer Science in Economics	420	43	4 E	0	0 E	0	180	2 E	19	210	2 E	22	30	0 E	2
Specialty – Mathematics and Computer Science in Finance and Insurance	420	43	4 E	0	0 E	0	150	2 E	16	150	2 E	17	120	0 E	10
Specialty - Mathematical Modeling	420	43	4 E	0	0 E	0	150	2 E	16	240	2 E	25	30	0 E	2
Total (specialty - Mathematical Computer Science)	**1020**	**109**	**11 E**	**270**	**4 E**	**30**	**315**	**3 E**	**30**	**225**	**3 E**	**25**	**210**	**1 E**	**24**
Total (specialty – Mathematics and Computer Science in Economics)	**1020**	**109**	**11 E**	**270**	**4 E**	**30**	**300**	**4 E**	**30**	**270**	**2 E**	**28**	**180**	**1 E**	**21**
Total (specialty – Mathematics and Computer Science in Finance and Insurance)	**1020**	**109**	**11 E**	**270**	**4 E**	**30**	**270**	**4 E**	**27**	**210**	**2 E**	**23**	**270**	**1 E**	**29**
Total (specialty - Mathematical Modelling)	**1020**	**109**	**11 E**	**270**	**4 E**	**30**	**270**	**4 E**	**27**	**300**	**2 E**	**31**	**180**	**1 E**	**21**

Total without practices	**1020**	**109**

Additional subjects offered for degree course: MATHEMATICS

No.		COURSE NAME	SEMESTER 1								SEMESTER 2								SEMESTER 3								SEMESTER 4							
			Form of classes						Form of assign	ECTS	Form of classes						Form of assign	ECTS	Form of classes						Form of assign	ECTS	Form of classes						Form of assign	ECTS
			L	C	Lab	P	S	Pra			L	C	Lab	P	S	Pra			L	C	Lab	P	S	Pra			L	C	Lab	P	S	Pra		
1	ADDITIONAL	Combinatorial Analysis									30	30					OO	5									30	30					OO	5
2		Web Applications									30		30				OO	4									30		30				OO	4
3		Operations Research																	15		30				EO	6								
4		Econometrics																	30	30	30				OOO	8								
5		Mathematical Economics 2									30	30					EO	7									30	30					EO	7
6		History of Mathematics																									30	15					OO	4
7		Data Warehouse									15		30				OO	5									15		30				OO	5
8		Financial Engineering																	30	15	15				EOO	8								
9		Qualitative Theory of Differential Equations																	30	15	15				EOO	8								
10		Computer Image Processing																	15			30			OO	4								
11		Specialist Laboratory Class																											30				O	3
12		LaTeX											30				O	2																
13		Actuarial Methods									30	30					EO	7									30	30					EO	7
14		Algorithmical Methods																	15		30				EO	6								
15		Numerical Methods 2																	30	30	30				EOO	10								
16		Mathematical Modelling 1																	30		30				EO	7								
17		Mathematical Modelling 2																									30		30				EO	7
18		Modelling in Finance 2																	30		30				EO	6								
19		Mathematical Workshop 2										30					O	5										30					O	5
20		Stochastic Processes 1									30	30					EO	7									30	30					EO	7
21		Stochastic Processes 2																	30	30					EO	7								
22		Quantum Computing																									30		30				OO	5
23		Mathematical Programming									30	30	30				EOO	10									30	30	30				EOO	10
24		Specialist Seminar 1													30		O	2																
25		Specialist Seminar 2																					30		O	2								
26		Specialist Seminar 3																													30		Z	2
27		Computer Networks									30		30				EO	5									30		30				EO	5
28		Time Series																									30	30	30				OOO	8
29		Game Theory in Economics																	30	15					EO	6								
30		Control Theory 1									30	30					EO	7									30	30					EO	7
31		Control Theory 2																	30	30					EO	7								
32		Selected Problems of Mathematical Modelling																	30	30	30				OOO	8								
33		Topics in Discrete Mathematics 1									30	30					EO	7									30	30					EO	7
34		Topics in Discrete Mathematics 2																	30	30					EO	7								
35		Monographic Lecture																	30						E	4								
1	HUMANITIES	English for Specific Purposes																		30					O	3		30					O	3
2		Practical Stylistics										30					O	3										30					O	3
1	SOCIAL	Pedagogy 2										30					O	2										30					O	2
2		Psychology 2										30					O	2										30					O	2