PLAN OF FULL-TIME STUDIES
Degree course: MATHEMATICS - second-cycle course
Course delivery method: full-time course

Recruitment in the academic year 2022/2023
Duration: 4 semesters

University of Zielona Góra
Faculty of Mathematics, Computer Science and Econometrics

No.		COURSE NAME	Hours per semester	ECTS	Form of assign ment	SEMESTER 1							SEMESTER 2							SEMESTER 3							SEMESTER 4						
						Form of classes							Form of classes							Form of classes							Form of classes						
						L	C	Lab	P	S	Pra	Form of assign ment / ECTS	L	C	Lab	P	S	Pra	Form of assign ment / ECTS	L	C	Lab	P	S	Pra	Form of assign ment / ECTS	L	C	Lab	P	S	Pra	Form of assign ment / ECTS
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		Real and 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								

					SEMESTER 1			SEMESTER 2			SEMESTER 3			SEMESTER 4		
					Form of classes		ECTS	Form of classes		ECTS	Form of classes		ECTS	Form of classes		ECTS
	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						ECTS	Form of classes						ECTS	Form of classes						ECTS	Form of classes						ECTS
			L	C	Lab	P	S	Pra	Form of assign ment	L	C	Lab	P	S	Pra	Form of assign ment	L	C	Lab	P	S	Pra	Form of assign ment	L	C	Lab	P	S	Pra	Form of assign ment
1	ADDITIONAL	Combinatorial Analysis								30	30					OO 5								30	30					OO 5
2		Web Applications and PHP 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

Recommended:
Resolution No. 17 of the Mathematics Discipline Council of 02 March 2022

Approved by Faculty Education Council at the Faculty of Mathematics, Computer Science and Econometrics:
Resolution no 2 of 03 March 2022