COURSE PROGRAMME

1.	**Field of study**	**Mathematics**
2.	Academic year of entry	2016/2017 (winter term) *The number and date of a Faculty Council's resolution: 55 (20.06.2017 r.)*
3.	Level of qualifications/degree	second-cycle studies
4.	Degree profile	general academic
5.	Mode of study	full-time
6.	ISCED code	0541 (Mathematics)

Learning outcomes

7.	Description of learning outcomes	Attachment no. 1
8.	Model learning outcomes	

Programme of study

9.	Connection between the field of study and university development strategy, including the university mission	The course in mathematics offers postgraduate studies aimed at educating the graduate who will be able to undertake further training for a Ph.D. degree at all research centres at home and abroad, or working as a mathematician in various branches of the global economy based on creativity. The staff guarantee the highest quality of the learning process, as they take into consideration the constantly increasing educational requirements and pass on to the students the mathematical ideas and principles; yet simultaneously making their own contribution to mathematics by conducting international scientific research and involving the brightest students therein. The studies offer areas of specialization from the first term in order to sustain the students' personal interests, guarantee the highest course quality, and ensure relevance of the human capital. The offered areas of specialization are suited to the demands of the labour market and are continuously updated with a view to innovation and according to the knowledge triangle: education – research – economy.
10.	Number of semesters	4
11.	Degree	magister (Master's Degree)
12.	Area (or areas - for joint or interdisciplinary studies) of education to which the programme is assigned and the leading discipline of art or science for the POL-on system	science studies [mathematics]

13.	Areas, fields and disciplines of art or science to which the learning outcomes of the field of study are related, indicating the **percentage** shares in which the programme of study refer to the various fields of science	• science studies
		  • mathematics - 100%
		  • mathematics

14.	Specializations	Biomathematics Industrial Mathematics

		Mathematical Methods in Computer Science mathematical methods in computer science Mathematical Modelling Mathematics for Finance and Economics Teaching Mathematics at the Third and Fourth Level of Education Theoretical Mathematics
15.	Number of ECTS credits required to achieve the qualification equivalent to the level of study	Biomathematics: 120, Industrial Mathematics: 120, Mathematical Methods in Computer Science: 120, Mathematical Modelling: 120, Mathematics for Finance and Economics: 120, Teaching Mathematics at the Third and Fourth Level of Education: 120, Theoretical Mathematics: 120, mathematical methods in computer science: 120
16.	Percentage of the ECTS credits for each of the areas to which the learning outcomes are related to the total number of ECTS credits	Biomathematics science studies - 100% Industrial Mathematics science studies - 100% Mathematical Methods in Computer Science science studies - 100% Mathematical Modelling science studies - 100% Mathematics for Finance and Economics science studies - 100% Teaching Mathematics at the Third and Fourth Level of Education science studies - 100% Theoretical Mathematics science studies - 100% mathematical methods in computer science science studies - 100%
17.	Percentage of the ECTS credits for optional modules in relation to the total number of ECTS credits	Biomathematics: 59%, Industrial Mathematics: 59%, Mathematical Methods in Computer Science: 59%, Mathematical Modelling: 59%, Mathematics for Finance and Economics: 59%, Teaching Mathematics at the Third and Fourth Level of Education: 59%, Theoretical Mathematics: 59%,

		mathematical methods in computer science: 59%
18.	Total number of ECTS credits that a student must obtain in the modules taught	Biomathematics: 120, Industrial Mathematics: 120, Mathematical Methods in Computer Science: 120, Mathematical Modelling: 120, Mathematics for Finance and Economics: 120, Teaching Mathematics at the Third and Fourth Level of Education: 118, Theoretical Mathematics: 120, mathematical methods in computer science: 120
19.	Number of ECTS credits that a student must obtain in modules from humanities or social science areas of education (not less than 5 ECTS) - in the case of fields of study assigned to areas other than, respectively, the humanistic or social studies	Biomathematics: 5, Industrial Mathematics: 5, Mathematical Methods in Computer Science: 5, Mathematical Modelling: 5, Mathematics for Finance and Economics: 5, Teaching Mathematics at the Third and Fourth Level of Education: 5, Theoretical Mathematics: 5, mathematical methods in computer science: 5
20.	Modules description (including learning outcomes, number of ECTS credits and assessment methods of the learning outcomes)	Attachment no. 2
21.	Course structure	Attachment no. 3
22.	Graduation requirements for a particular specialization	Biomathematics Industrial Mathematics mathematical methods in computer science Mathematical Methods in Computer Science Mathematical Modelling Mathematics for Finance and Economics Teaching Mathematics at the Third and Fourth Level of Education Theoretical Mathematics

23.	Organization of the process of obtaining a degree	
24.	Internships (hours and conditions) in the case of practical programmes and in general university programme - if such requires internship	
25.	Total number of ECTS credits that a student must obtain in internships	Biomathematics: 0, Industrial Mathematics: 0, Mathematical Methods in Computer Science: 0, Mathematical Modelling: 0, Mathematics for Finance and Economics: 0, Teaching Mathematics at the Third and Fourth Level of Education: 2, Theoretical Mathematics: 0, mathematical methods in computer science: 0
26.	Number of ECTS credits - higher than 50% of the total number of credits - that a student must obtain: • in general university programmes within a module connected with research carried out in the area to develop his/her knowledge and research skills; • in practical programmes within a module connected with vocational preparation to allow a student to develop practical and social skills	Biomathematics: 99, Industrial Mathematics: 83, Mathematical Methods in Computer Science: 83, Mathematical Modelling: 99, Mathematics for Finance and Economics: 99, Teaching Mathematics at the Third and Fourth Level of Education: 76, Theoretical Mathematics: 83, mathematical methods in computer science: 99
27.	Minimum staff resources and staff to student ratio	Attachment minimum staff

Additional information

28.	General description of the programme	Postgraduate mathematical studies (Course in Mathematics) aim to educate the graduate who possesses comprehensive and deepened mathematical knowledge which will enable him or her to enroll in doctoral programmes ; or work as a mathematician and use mathematical tools in IT, financial, commercial or manufacturing sectors; or alternatively be qualified to teach mathematics at school. The postgraduate of the course in mathematics: • possesses deepened knowledge in the realm of mathematics and its applications • has the ability to construct mathematical reasonings and test the validity of mathematical hypotheses • can present advanced mathematical contents both in the oral and written form • can construct, extend and use complex mathematical models indispensable in applications • uses advanced IT tools in solving theoretical and practical mathematical problems

		• has the ability to broaden and improve mathematical knowledge within the scope of current research results • is prepared to continue education at doctoral studies
29.	General description of the specialization	Biomathematics Industrial Mathematics mathematical methods in computer science Mathematical Methods in Computer Science Mathematical Modelling Mathematics for Finance and Economics Teaching Mathematics at the Third and Fourth Level of Education Theoretical Mathematics
30.	Learning outcomes coverage matrix	Attachment no. 4

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(pieczęć i podpis Dziekana)