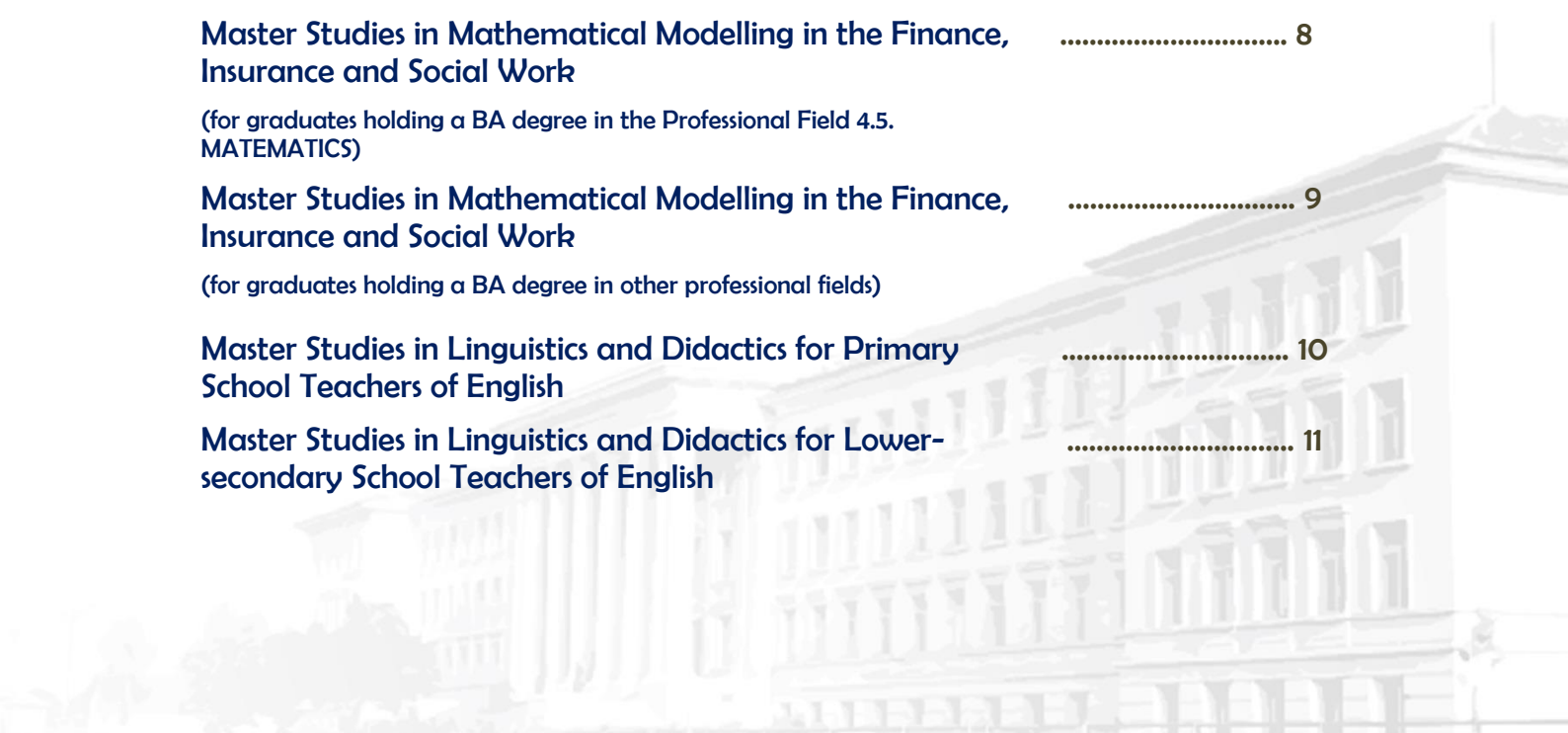




Faculty of Natural Sciences and Education

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Master Studies in Software Engineering

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
0306	Object Oriented Programming	6
0432	Databases	6
0435	Design of Software Systems	6
0618	Computer Systems and Networks	5
0619	Workshop 1	7

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
0620	Programming of Web-components	6
0653	Implementation of Software Systems	6
0667	IT Projects Management	6
0704	Instrumental Environments	5
0705	Workshop 2	7

Winter semester, 2017/2018 academic year		
Code	Course name	ECTS
0710	Workshop 3	15

Master Studies in Informatics

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
0726	Modern Software Engineering	5
0734	Object-oriented and Distributed Databases (DBs)	6
0808	Digital Image Processing	5
0824	Operations Research	5
1727	Multi-agent and Artificial Intelligence Systems	5
0837	Workshop 1	4

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
1116	Management and Analysis of Computer Networks	4
0944	Programming in Network Environment and Data Security	4
1728	Modern Internet Technologies	4
1578	Workshop 2	3

Master Studies in Mathematical Modelling in Engineering

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
S02001	Ordinary Differential Equations	6
S00357	Numerical Analysis	6
S00370	Variational Methods and Optimization	6
S00369	Applied Functional Analysis	6
<i>Elective courses (students elect a course from each group)</i>		
S00364	Introduction to Financial Mathematics	6
S00365	Analytical Dynamics with Matlab	6

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
S03796	Partial Differential Equations	6
S00368	Numerical Methods for Differential Equations with Matlab	6
S00371	Finite Element Methods with Matlab	6
<i>Elective courses (students elect a course)</i>		
S00360	Differential Models in Financial Mathematics	6
S00373	Mechanics of Continuous Media	6
<i>Elective courses (students elect a course)</i>		
S00374	Topological Methods for Differential Equations	6
S00375	Difference Schemes for Interface Problems	6

Winter semester, 2017/2018 academic year		
S00376	Workshop	3
<i>Elective courses (students elect 2 courses from Module A or Module B)</i>		
<i>Module A (Technical Modelling)</i>		
S00378	Nonlinear Vibrations of Mechanical Systems	6
S00390	Numerical Simulations of Semiconductor Devices	6
SM13975	Mathematical Models in Hydromechanics	6
<i>Module A (Economic Modelling)</i>		
S00425	Financial Mathematics	6
S00438	Mathematical Theory of Risk	6
S00460	Credit Risk	6

Master Studies in Informatics and Information Technologies in Education

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
0251	Information Technologies	5
0256	Introduction to Programming	5
0260	Discrete Mathematics	5
0267	Operating Systems	5

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
0297	Object Oriented Programming	6
0298	Computer Graphics	6
0301	Computer Systems and Internet	6
0320	Methods of Teaching Informatics and Information Technologies	6
0322	Databases and Information Systems	5

Winter semester, 2017/2018 academic year		
Code	Course name	ECTS
0325	Programming in Internet	6
0340	Multimedia Systems and Technologies in Education	6
0385	Computer Networks and Communications	6
0386	Data Structures	5
0387	Audio-visual and Information Technologies in Education	3

Summer semester, 2017/2018 academic year		
Code	Course name	ECTS
0396	Programming in Comenius Logo Environment	6
<i>Elective courses (students elect a course)</i>		
0394	Software Engineering	4
0395	Visual Programming	4
0392	Extracurricular Studies in Informatics	4
0393	Desktop Publishing	4

Master Studies in Information Technologies in Mathematics and Informatics Education

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
2305	Computer Systems for Animation	8
2308	Computer Games	4
2312	Information Technologies in Education	5
2333	Visual Studio	8
<i>Elective courses (students elect a course)</i>		
2310	Publishing Systems	5
2311	Distance Learning	5
2313	Research Project 1	5
2314	Combinatorial Algorithms	5
2317	Educational Technologies	5
2318	Digital Image Processing	5
2319	Algebraic Computer Systems For Training	5

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
2320	Dynamic Geometric Software <i>GeoGebra</i>	4
2321	Interactive Methods of Education in Mathematics and Informatics	3
<i>Elective courses (students elect two courses)</i>		
2322	Contemporary "Elementary" Mathematics	4
2323	Methods for Solving Extracurricular problems	4
2325	Mathematical Analysis - Selected Questions	4
2326	Management in Education	4
2327	International Educational Projects	4
2328	Test Theory	4
2329	Psychological-Pedagogical Educational Problems	4
2330	Research Project 2	4
2331	Programing of Mobile Devices	4

Master Studies in Information and Education Technologies

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
1913	Methods of Instruction in Mathematics - Special Questions	6
1917	Multimedia Systems and Technologies in Education	6
1915	Computer Networks and Communications	6
<i>Elective courses (students elect a course from each group)</i>		
Group A		
1916	Operating Systems	6
1939	Digital Image Processing	6
1918	Object-oriented Methods for Creating <i>Windows</i> Applications	6
1919	Software Technologies	6
1920	Research Project 1	6
Group B		
1921	Distance Learning	6
1923	Combinatory Algorithms	6
1924	Software <i>Mathematica</i> - an Application in Education	6
1928	Technologies for Assessment and Research in Education	6
1929	Research Project 2	6

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
1935	Method of Instructions in Creative Work and Research	8
1938	Educational Technologies	8
<i>Elective courses (students elect two courses)</i>		
Group C		
1940	European Project MATHEU	7
1941	Concrete Mathematics	7
1942	Contemporary "Elementary" Mathematics	7
1943	Methods for Solving "Standard" Algebraic Problems	7
Group D		
1945	Management in Education	7
1946	European Educational Projects	7
1952	Innovative Technologies for Extracurricular Activities in Informatics	7

Winter semester, 2017/2018 academic year		
Code	Course name	ECTS
1944	Software for Educational Proposes	7
1914	Internet Technologies and Programming	8

Master Studies in Mathematical Modeling in the Finance, Insurance and Social Work

(for graduates holding a BA degree in the Professional Field 4.5. MATEMATICS)

Winter semester, 2016/2017 academic year			Summer semester, 2016/2017 academic year		
Code	Course name	ECTS	Code	Course name	ECTS
3773	Financial Mathematics*	5	3780	Modeling in Finance*	3
3774	Insurance Mathematics*	5	3781	Modeling in Insurance*	3

* Individual consultations in English

Master Studies in Mathematical Modelling in the Finance, Insurance and Social Work

(for graduates holding a BA degree in the following Professional Fields:
Natural Sciences, Mathematics and Informatics, and also similar disciplines,
related to Finance, Accounting, Financial Analysis, Control and Audit,
Insurance, Economics, Statistics, Econometrics, Business-informatics)

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
3786	Introduction to the Financial Mathematics*	5
3787	Differential Equations*	5
3788	Statistics*	5
3789	Numerical Methods with MatLab*	5
3790	Operations Research*	5
3780	Modelling in Finance*	3
3781	Modelling in Insurance*	3

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
3773	Financial Mathematics*	5
3774	Insurance Mathematics*	5

* Individual consultations in English

Master Studies in Linguistics and Didactics for Primary School Teachers of English

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
2492	English Phonetics and Lexicology	3
2493	Area Studies of Britain and the USA	3
2494	Methods of Instruction of English to Primary School Pupils	5
2496	Lesson Observation	2
<i>Elective courses (students elect a course)</i>		
2497	Practical English Language - Part 1 (for students with either B1 or B2 level of English)	2
2499	Practical English Language - Part 1 (for students with either A1 or A2 level of English)	2

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
2500	English Morphology and Syntax	4
2501	English and American Children's Literature	4
2502	Methods of Intercultural Education at Primary School Level	3
2503	Practical English Language - Part 2	13
2504	Teaching Practice in English Language	2
<i>Elective courses (students elect a course)</i>		
2505	Management of Educational Projects	4

Winter semester, 2017/2018 academic year		
Code	Course name	ECTS
2507	Linguistic Aspects of Acquisition of English by Primary School Pupils	2
2508	Interactive and Multimedia Technologies in the Teaching of English to Primary School Pupils	2
2509	Practical English Language - Part 3	7
2510	Pre-diploma Pedagogical Practice in English Language	2

Master Studies in Linguistics and Didactics for Lower-secondary School Teachers of English

Winter semester, 2016/2017 academic year		
Code	Course name	ECTS
2492	English Phonetics and Lexicology	3
2493	Area Studies of Britain and the USA	3
2515	Methods of Instruction of English to Lower Secondary School Pupils	5
2496	Lesson Observation	2
<i>Elective courses (students elect a course)</i>		
2497	Practical English Language - Part 1 (for students with either B1 or B2 level of English)	2
2499	Practical English Language - Part 1 (for students with either A1 or A2 level of English)	2

Summer semester, 2016/2017 academic year		
Code	Course name	ECTS
2500	English Morphology and Syntax	4
2516	English and American Child and Young Adult Literature	4
2517	Intercultural and Language Training	3
2503	Practical English Language - Part 2	13
2504	Teaching Practice in English Language	2
<i>Elective courses (students elect a course)</i>		
2505	Management of Educational Projects	4

Winter semester, 2017/2018 academic year		
Code	Course name	ECTS
2518	Linguistic Aspects of Acquisition of English by Lower Secondary School Pupils (grades 5 - 8)	2
2535	Interactive and Multimedia Technologies in English Language Lower Secondary School Education	2
2509	Practical English Language - Part 3	7
2510	Pre-diploma Pedagogical Practice in English Language	2