

Master Studies-Mathematics, module Applied Mathematics (2MP)

Duration of Studies: 1 Year (2 semesters)

Total Number of ECTS: 60

This studying program is active starting from the academic year 2022/23

Notation:

- L – number of hours of lectures
- E – number of hours of excersises
- IRW – number of hours of individual research student’s work
- ECTS – number of credits
- **Fall Semester**
- **Spring Semester**
- **Spring or Fall Semester**

1 st YEAR				
	L	E	IRW	ECTS
Course from Elective block 2MP*	3	2	2	8
Course from Elective block 2MP*	3	2	2	8
Course from Elective block 2MP*	3	2	2	8
Individual Research Work 1	0	0	6	6
Practical work (Internship)	0	0	6	4
Course from Elective block 2MP*	3	2	2	8

1 st YEAR				
Individual Research Work 2	0	0	6	6
Master thesis	0	0	12	12
				60

*** It is necessary that a student chooses 2-4 courses from Elective block MP–Group A and 0-2 courses from Elective block – Group B**

Elective block 2MP –Group A	L	E	IRW	ECTS
Mathematical Modeling	3	2	2	8
Finite Element Method	3	2	2	8
Numerical Linear Algebra	3	2	2	8
Numerical methods of Optimization A	3	2	2	8
Numerical methods of Optimization B	3	2	2	8
Numerical Methods for Conservation Laws	3	2	2	8
Selected Topics in Numerical Mathematics	3	2	2	8
Combinatorial Optimization	3	2	2	8
Metaheuristic Methods	3	2	2	8
Optimal Control	3	2	2	8
Algorithms on Graphs and Applications	3	2	2	8
Selected Topics in Optimization	3	2	2	8

Elective block 2MP –Group A	L	E	IRW	ECTS
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Special Course	3	2	2	8
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Elective block 2MP-Group B	L	E	IRW	ECTS
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Stochastic Models in Operations Research	3	2	2	8
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Risk Theory	3	2	2	8
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Introduction to Bioinformatics	2	3	2	8
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Scientific Computing	2	3	2	8
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Construction and Analysis of Algorithms 2	2	3	2	8
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Cryptography	2	3	2	8
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Digital Image Processing	2	3	2	8
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Programming Paradigms	3	2	2	8
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Artificial Intelligence	3	2	2	8
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Elective course from other module/studying program	2	3	2	8
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