

UP FAMNIT

STUDY PROGRAMME: **MATHEMATICS** (1st bologna cycle), in **English**  
COMPULSORY AND ELECTIVE COURSE IN THE ACADEMIC YEAR **2024/205**

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Last change: /

**1st YEAR (10 compulsory courses)**

NUMB.	COURSE	YEAR	SEMESTER	LANGUAGE
1	Analysis I – Foundations of Analysis	1st	Autumn	English
2	Algebra I - Matrix Calculus	1st	Autumn	English
3	Computer Science I	1st	Autumn	English
4	Discrete Mathematics I – Set Theory	1st	Autumn	English
5	Computer Practicum	1st	Autumn	English
6	Mathematical Practicum I	1st	Spring	English
7	Algebra II – Linear Algebra	1st	Spring	English
8	Analysis II – Infinitesimal Calculus	1st	Spring	English
9	Mathematical Topics in English I	1st	Spring	English
10	Discrete Mathematics II – Combinatorics	1st	Spring	English

**2nd YEAR (8 compulsory and 2 elective courses)**

NUMB.	COURSE	YEAR	SEMESTER	LANGUAGE
1	Physics	2nd	Autumn	English
2	Algebra III – Abstract Algebra	2nd	Autumn	English
3	Analysis III – Functions of Many Variables	2nd	Autumn	English
4	Introduction to Numerical Calculations	2nd	Autumn	English
5	Computer Science II	2nd	Spring	English
6	Probability	2nd	Spring	English
7	Analysis IV – Real Analysis	2nd	Spring	English
8	Algebra IV – Algebraic Structures	2nd	Spring	English
9	<i>Internal elective course</i>	2nd		
10	<i>External elective course</i>	2nd		

**3rd YEAR (2 compulsory and 8 elective courses)**

NUMB.	COURSE	YEAR	SEMESTER	LANGUAGE
1	Statistics	3rd	Autumn	English
2	Mathematical Modelling	3rd	Spring	English
3	<i>Internal elective course</i>	3rd		
4	<i>Internal elective course</i>	3rd		
5	<i>Internal elective course</i>	3rd		
6	<i>Internal elective course</i>	3rd		
7	<i>Internal elective course</i>	3rd		
8	<i>Internal elective course</i>	3rd		
9	<i>External elective course</i>	3rd		
10	<i>External elective course</i>	3rd		

**ELECTIVE COURSES**

NUMB.	COURSE	ECTS CREDITS	AVAILABLE FOR THE YEAR OF STUDY	INTERNAL/ EXTERNAL ELECTIVE	COURSE LEADER	LANGUAGE	SEMESTER
1	Data Structures and Algorithms	6	2nd	internal or external	Andrej Brodnik	English	Autumn
2	Geometry	6	2nd	internal or external	Istvan Kovacs	English	Autumn
3	Number Theory	6	3rd	internal or external	Miklavič Štefko	English	Autumn
4	Measure Theory	6	3rd	internal or external	Marko Orel	English	Autumn
5	Stochastic Processes	6	3rd	internal or external	Marko Orel	Slovene	Autumn
6	Permutation Groups	6	3rd	internal or external	Istvan Kovacs	English	Autumn
7	Cryptography and Computer Safety	6	3rd	internal or external	Pasalic Enes	English	Autumn
8	Symmetric-key Cryptography	6	3rd	internal or external	Pasalic Enes	English	Autumn
9	Galois Theory	6	3rd	internal or external	Lavrauw, Michel	English	Autumn
10	Complex Analysis	6	3rd	internal or external	Bojan Kuzma	English	Spring
11	Topology	6	2nd, 3rd	internal or external	Russ Woodroofe	English	Spring
12	Coding Theory	6	2nd, 3rd	internal or external	Pasalic Enes	English	Spring
13	Game Theory	6	3rd	internal or external	Aljaž Ule	Slovene	Spring
14	Functional Analysis	6	3rd	internal or external	Marko Orel	English	Spring
15	Differential Equations	6	3rd	internal or external	Jasna Prezelj	English	Spring
16	Graph Theory	6	3rd	internal or external	Martin Milanič	English	Spring
17	Algebraic Graph Theory	6	3rd	internal or external	Ademir Hujdurovič	English	Spring

**SUBSEQUENT CHANGES OF OFFERED COURSES:**

Possible subsequent changes of the offered courses will be published on Faculty website. Please follow the published information on the Faculty website.