

UP FAMNIT

STUDY PROGRAMME: **MATHEMATICS (1st bologna cycle)**, in English
COMPULSORY AND ELECTIVE COURSE IN THE ACADEMIC YEAR 2025/26

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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	Internal elective course ²	2nd		
10	External elective course	2nd		

3rd YEAR (2 compulsory and 8 elective courses) ¹

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

ELECTIVE COURSES

NUMB.	COURSE	ECTS CREDITS	AVAILABLE FOR THE YEAR OF STUDY ³	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	Miklavic Štefko	English	Autumn
4	Stochastic Processes	6	3rd	internal or external	Marko Orel	Slovene	Autumn
5	Functional Analysis	6	3rd	internal or external	Marko Orel	English	Autumn
6	Graph Theory	6	3rd	internal or external	Martin Milanič	English	Autumn
7	Permutation Groups	6	3rd	internal or external	Istvan Kovacs	English	Autumn
8	Cryptography and Computer Safety	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	Measure Theory	6	3rd	internal or external	Marko Orel	English	Spring
13	Symmetric-key Cryptography	6	3rd	internal or external	Pasalic Enes	English	Spring
14	Coding Theory	6	2nd, 3rd	internal or external	Pasalic Enes	English	Spring
15	Game Theory	6	3rd	internal or external	Aljaž Ule	Slovene	Spring
16	Differential Equations	6	3rd	internal or external	Jasna Prezelj	English	Spring
17	Algebraic Graph Theory	6	3rd	internal or external	Ademir Hujdurović	English	Spring
18	Practical Training in the Workplace (3 weeks) ⁴	6	3rd	external	Marko Orel (coordinator)		

NOTES:

[1] On completing the 2nd year, students can opt for a **STUDY FIELD**. In the academic year 2025/26 students can choose only: General Mathematics.
More on Faculty website: <https://www.famnit.upr.si/en/education/undergraduate/math-first/#heading5>

[2] Internal elective courses must include **at least 5 MATHEMATICAL COURSES**, 4 of which must be from the core of courses which belong to the chosen study field.
More on Faculty website: <https://www.famnit.upr.si/en/education/undergraduate/math-first/#heading5>

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.