

COURSES IN THE ACADEMIC YEAR 2020/2021

STUDY PROGRAMME AT UP FAMNIT: **MATHEMATICS** (1st bologna cycle), in **English**

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Last change: /

COMPULSORY COURSES

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	Mathematical Practicum I	1st	Autumn	English, Slovene
6	Computer Practicum	1st	Autumn	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
8	Analysis IV - Real Analysis	2nd	Spring	English
9	Algebra IV - Algebraic Structures	2nd	Spring	English
7	Internal elective course I	2nd		
10	External elective course I	2nd		

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

Numb.	Course	Year	Semester	Language
1	Statistics	3rd	Autumn	English
2	Mathematical Modelling	3rd	Spring	English
3	Internal elective course I	3rd		
4	Internal elective course II	3rd		
5	Internal elective course III	3rd		
6	Internal elective course IV	3rd		
7	Internal elective course V	3rd		
8	Internal elective course VI	3rd		
9	External elective course II	3rd		
10	External elective course III	3rd		

ELECTIVE COURSES

Numb.	Course	ECTS-credits	Course will be available on the course schedule for the year of study	Internal/external elective course	Course leader	Language	Semester
1	Data Structures and Algorithms	6	2nd	internal or external	Andrej Brodnik	English	Autumn
2	Solving Equations: from al-Khwarizmi to Galois	6	3rd	internal or external	Luke Morgan	English	Autumn
3	Mathematical Topics in English II	6	2nd	internal or external	Istvan Kovacs	English	Autumn
4	Differential Equations	6	3rd	internal or external	Jasna Prezelj	English	Autumn
5	Stochastic Processes I	6	3rd	internal or external	Marko Orel	Slovene	Autumn
6	Complex Analysis	6	3rd	internal or external	Jasna Prezelj	English	Autumn
7	Optimization Methods	6	3rd	internal or external	Martin Milanič	English	Autumn
8	Permutation Groups	6	3rd	internal or external	Istvan Kovacs	English	Autumn
9	Number Theory	6	3rd	internal or external	Miklavič Štefko	English	Autumn
10	Functional Analysis	6	3rd	internal or external	Marko Orel	English	Spring
11	Coding Theory	6	3rd	internal or external	Pasalic Enes	English	Spring
12	Symmetric-key Cryptography	6	3rd	internal or external	Pasalic Enes	English	Spring
13	Graph Theory	6	3rd	internal or external	Martin Milanič	English	Spring
14	Algebraic Graph Theory	6	3rd	internal or external	Ademir Hujdurović	English	Spring
15	Topology	6	2nd, 3rd	internal or external	Russ Woodroffe	English	Spring
16	Measure Theory	6	3rd	internal or external	Marko Orel	English	Spring

SUBSEQUENT CHANGES OF OFFERED COURSES:

Possible subsequent changes of the offered courses will be published in this document and marked red.