

COURSES IN THE ACADEMIC YEAR 2020/2021

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

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Last change: /

COMPULSORY COURSES
1st YEAR (10 compulsory courses) - BF-19

Numb.	Course	Year	Semester	Language
1	Algebra I - Matrix Calculus	1st	Autumn	English
2	Analysis I - Foundations of Analysis	1st	Autumn	English
3	Programming I	1st	Autumn	English
4	Computer Practicum	1st	Autumn	English
5	Theoretical Computer Science I	1st	Autumn	English
6	Data Programming	1st	Spring	English
7	Organic Chemistry and Biochemistry	1st	Spring	English
8	Analysis II - Infinitesimal Calculus	1st	Spring	English
9	Genetics	1st	Spring	English
10	Algebra II - Linear Algebra	1st	Spring	English

2nd YEAR (11 compulsory courses) - BF-19

Numb.	Course	Year	Semester	Language
1	Data Structures and Algorithms	2nd	Autumn	English
2	Introduction to Database Systems	2nd	Autumn	English
3	Analysis III - Functions of Many Variables	2nd	Autumn	English
4	Foundations of Physics with Biophysics	2nd	Autumn	English
5	Introduction to Machine Learning and Data Mining	2nd	Autumn	English
6	Introduction to Bioinformatics	2nd	Autumn	English
7	Statistics	2nd	Spring	English
8	Programming II - Concepts of Programming Languages	2nd	Spring	English
9	Algorithms in Bioinformatics	2nd	Spring - 3rd quarter	English
10	Physical Chemistry with Cheminformatics	3rd	Spring - 4th quarter	English
11	Nucleotide Sequence Analysis	2nd	Spring - 4th quarter	English

3rd YEAR (7 compulsory, 3 elective courses and Seminar - Final project paper) - BF-17

Numb.	Course	Year	Semester	Language
1	Structures of Biological Molecules	3rd	Autumn - 1rd quarter	English
2	Evolutionary Genetics	3rd	Autumn	English
3	Systems III - Information Systems	3rd	Autumn	English
4	Mathematical Modelling	3rd	Spring	English
5	Bioinformatics Practice	3rd	Spring	English
6	Basic Population Genetics	3rd	Spring - 3rd quarter	English
7	Physical Chemistry with Cheminformatics	3rd	Spring - 4th quarter	English
8	Seminar - Final Project Paper	3rd	Spring	English
9	Internal elective course	3rd		
10	External elective course	3rd		
11	External elective course	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	Plant Biotechnology	6	3rd	internal or external	Matjaž Hladnik	English	Autumn - 2nd quarter
2	Biomolecular Modeling	6	3rd	internal or external	Jure Pražnikar	English	Spring
2	Molecular Modelling	6	3rd	external	Jure Pražnikar	English	Spring - 3rd quarter

SUBSEQUENT CHANGES OF OFFERED COURSES:

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