Mathematics in economics and finance undergraduate study programme, first Bologna cycle

COURSE STRUCTURE of the study programme

The study programme consists of 26 compulsory courses, internal elective courses (1 course), and external elective courses (3 courses). Elective courses are divided into internal and external electives. In terms of content, the courses are organized into four areas, referred to as programme pillars: the mathematical pillar, the economic and financial pillar, the applied mathematical pillar (intermediate pillar), and the practical (support) pillar. The intermediate pillar consists of mathematical courses that incorporate financial and economic elements. Students complete the programme once they have fulfilled their final academic requirement and accumulated a total of 180 ECTS under the European Credit Transfer and Accumulation System (ECTS).

All courses in the study programme carry 6 ECTS.

The following section presents the structure of the study programme by year, as well as the compulsory and internal elective courses and the available study tracks.

Table 1: Structure of the study programme

Year of study	Study obligation	Number	ECTS-credits (ECTS)	
			ECTS	ECTS/Year of study
1.	Compulsory Course	10	60	60
2.	Compulsory Course	8	48	60
	External Elective Course	2	12	
3.	Compulsory Course	8	48	60
	Internal Elective Course	1	6	
	External Elective Course	1	6	

Legend:

ECTS credits (ECTS) = credit points awarded under the European Credit Transfer and Accumulation System (ECTS). The credit system facilitates student mobility and the mutual recognition of completed academic requirements.

ECTS credits represent an average estimate of the time required to complete a course and include both organized forms of instruction (lectures, seminars, seminar and laboratory exercises, fieldwork, practical training, etc.) and the student's independent work (exam preparation and other course-related obligations, etc.). One (1) ECTS credit corresponds to 25 to 30 hours of study workload. Credits are awarded upon the successful completion of the requirements for an individual course.

Table 2: First year of study

No.	Courses	ECTS
1.	Analysis I – Foundations of Analysis	6
2.	Analysis II – Infinitesimal Calculus	6
3.	Algebra I - Matrix Calculus	6
4.	Algebra II – Linear Algebra	6
5.	Discrete Mathematics I – Set Theory	6
6.	Discrete Mathematics II – Combinatorics	6
7.	Mathematical Practicum I	6
8.	Mathematical Topics in English I	6
9.	Computer Science I	6
10.	Computer Practicum	6

Table 3: Second year of study

No.	Courses	ECTS
1.	Analysis III – Functions of Many Variables	6
2.	Algebra III – Abstract Algebra	6
3.	Probability	6
4.	Microeconomics	6
5.	Macroeconomics	6
6.	Introduction to Numerical Calculations	6
7.	Computer Science II	6
8.	Finance	6
9.	External Elective Course I	6
10.	External Elective Course II	6

Tabela 4: Third year of study

No.	Courses	ECTS
1.	Financial Mathematics	6
2.	Game Theory	6
3.	Econometrics	6
4.	Stochastic Processes I	6
5.	Fundamentals of Insurance	6
6.	Modelling in Macroeconomics	6
7.	Statistics	6
8.	Financial Topics in English	6
9.	Internal Elective Course I	6
10.	External Elective Course III	6

ELECTIVE courses

Elective courses are selected by students in the second and third year of study.

Tabela 5: Internal elective courses

Št.	Predmet	KT
1.	Stochastic Processes II	6
2.	Operations Research	6
3.	Risk Management	6
4.	EU Economic Trends	6

Table 5 lists **all internal elective courses** accredited within the Mathematics in Economics and Finance study programme. However, UP FAMNIT **offers only a selection of elective courses** from the broader pool each academic year. In doing so, the faculty takes into account its staffing and financial capacities, as well as student interest in individual courses. The final list of elective courses offered to students for the upcoming academic year is published prior to the start of enrolment for that year.

As internal elective courses, students may also select certain courses from other undergraduate study programmes at UP FAMNIT, namely from the Mathematics programme (all courses that are not compulsory within the Mathematics in Economics and Finance programme) and from the Biopsychology programme (only the course Psychology of Problem Solving).

External elective courses may be selected within accredited study programmes at higher education institutions in Slovenia or abroad. Within the framework of external electives, students may choose courses from programmes in mathematics, financial mathematics, and computer science. Depending on the student's specific interests, external electives may also be selected from programmes in other academic fields. Students may also choose external elective courses from the pool of internal elective courses.

Within the elective component in the third year, students are advised to select an external elective course in the field of economics.

For assistance and guidance in selecting elective courses and study tracks, students may consult the study programme coordinator.

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