Study programmes: BACHELOR STUDIES - Mathematics

Course name: CODE S1.01 - Introduction to financial mathematics

Lecturers: Miljan Knežević, Bojana Milošević

Status: Compulsory

ECTS: 5

Attendance prerequisites: There is no prerequisites.

Course aims: Acquisition of basic knowledge in financial mathematics

Course outcome: Upon completion of the course, the students have basic knowledge in financial mathematics and are familiar with basic concepts and models in finance. Students can independently, within the existing model, draw conclusions. They are capable to follow advanced courses in financial analysis and modeling.

Course content:

1. Financial markets - Mechanisms
2. Evaluation of projects - NPV, IRR
3. Debt instruments
4. Modeling the yield curve
5. Financial Instruments - Options, Swaps
6. Binomial option models - Introduction to BS model
7. Protection against loss of value
8. CAPM - Model
9. Arbitrage

Literature:

1. Lionel Martellini, Philippe Priaulet, and Stphane Priaulet, 2003, Fixed-Income Securities: Valuation, Risk Management and Portfolio Strategies, The Wiley Finance Series.

Number of hours: 4	**Lectures**: 2	**Tutorials**: 2	**Laboratory**: -	**Research**: -

Teaching and learning methods: Frontal / Tutorial

Assessment (maximal 100 points)

Course assignments	points	Final exam	points
Lectures	-	Written exam	30
Exercises / Tutorials	-	Oral exam	40
Colloquia	15+15	Written-oral exam	-
Essay / Project	-		