

## **Mathematical Support for Financial Decision-Making Process**

**Degree:** Master

**Year:** 2019

**Semester:** module 3-4

**General workload:** 4 ECTS credits, 144 hours

### **Goals and objectives of the course**

To acquire knowledge and basic skills needed for using various information sources when making financial calculations in the financial decision-making process.

### **Key didactic units**

Financial instruments. Portfolio analysis. Statistical basis of financial operations. Securities pricing models.

### **Place of the discipline within the curriculum**

A module of disciplines that is common for the program that reflects the university field of specialization.

### **Upon completing the course, the students should:**

- Know the basic mathematical methods and models used for forecasting trends in financial decision-making; be able to apply innovative technologies to making financial models of the applied economic problems;
- Know the basic methods and models for ranking strategic and tactical goals when making financial decisions; be able to rank strategic and tactical goals when making financial decisions;
- Know the methods and principles of financial decision-making in the presence of uncertainty; be able to make financial calculations and make decisions in the presence of uncertainty;
- Know the basic methods of making conclusions in the form of methodologies and analysis based on the examination of the financial decision-making process; be able to make conclusions in the form of methodologies and analytical materials based on the examination of the financial decision-making process;
- Know the mathematical investment, payment and financial risk management methods; be able to apply theoretical and practical investment, payment and financial risk management methods;
- Know the content of the basic decision-making scenarios used for financing investment projects and their characteristics; be able to apply mathematical methods for financing investment projects;
- Know new research methods in the field of financial decision-making; be able to conduct research in the field of financial decision-making;

- Know new methods and techniques of research, including new types of professional activity; be able to apply new methods and techniques of research, including new types of professional activity;
- Know the basic methods and techniques of making hypotheses when making financial decisions; be able to independently make hypotheses when making financial decisions;
- Know the rules for presenting research findings in the form of analytical reports, reports and research articles on financial decision-making; be able to present research findings in the form of analytical reports, reports and research articles on financial decision-making.

**Course structure:** lectures, seminars, independent student work

**Summative assessment:** examination.