***Game-Based Problems in Economics and Finance***

***B.1.2.5.1.2***

**Degree:** Bachelor

**Year:** 2

**Semester:** Spring

**General workload:** 2 ECTS credits, 72 hours

**Goals of the course**

* To acquire basic knowledge of and skills related to game theory and its application needed to solve problems that emerge when providing mathematical support to actors engaged in practical economic operations;
* To learn about the appropriate conceptual theoretical basis, to provide appropriate level of algebraic training needed to solve applied problems related to game theory and its application to economic practice.

**Key didactic units**

* Introduction to game theory
* Static games with full information
* Dynamic games with full information

**Place of the discipline within the curriculum**

The prerequisites for the course are the programs in Linear Algebra, Mathematical Analysis, Probability Theory and Mathematical Statistics and Optimal Decision-Making Methods.

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

*Know:*

The fundamentals of game theory needed to solve mathematical, financial and economic problems

Be able to:

Apply the methods of game theory when solving financial and economic problems

*Have:*

Skills needed to apply modern mathematical tools (in particular, game-based models) to solving financial and economic problems; knowledge of the method used when constructing, analyzing and applying game-based models to assessment of the status quo and forecasting of economic phenomena and process development scenarios.

**Course structure:** Lectures

**Summative assessment**: pass/fail examination