

Decision-Making Methods **B 1.2.4.1**

Degree: Bachelor

Year: 2

Semester: Fall

General workload: 3 ECTS credits, 108 hours

Goals of the course

To acquire theoretical knowledge and practical skills in formalizing the decision-making process and in using mathematical methods in order to choose the optimal decision-making scenario.

Key didactic units

General characteristics of decision-making methods. Decision-making in case of certainty. Linear programming and nonlinear programming. Decision-making and a conflict of interests. Game theory elements. Maximin and minimax. Games with nature. Decision-making in case of uncertainty and risk.

Place of the discipline within the curriculum

The course is part of the university electives (program in Economics).

Upon completing the course, the students should:

Know key classes and types of mathematical models used in the decision-making process.

Be able to use mathematical methods and to assess decision-making process efficiency in the presence of uncertainty and risk.

Have a culture of mathematical thinking and tools needed to examine and assess decision-making process efficiency.

Course structure: lectures, practicals, independent work, tests.

Summative assessment: pass/fail examination