# (Table 5.2) Course unit description

Study program: Economy
Type and level of studies: Doctoral studies
Course unit: Decision Making Analysis
Teacher in charge: Mimović Predrag
Language of instruction: English
ECTS:9
Prerequisites:
Semester: Summer Semester
Course unit objectives

### **Course unit objective:**

Uncertainty and complexity are the main features of managerial decision-making. The decisionmaking analysis provides a framework for the analysis of decision-making problems, structuring them into parts that are easier to manage, through explicit observing of possible alternatives, available information, and relevant preferences. Objective of the course decision making analysis is to acquire the knowledge necessary for independent analysis and implementation of business decisions.

### Learning outcomes of Course unit

Students are enabled to make decisions in terms of uncertainty and risk, to avoid the pitfalls of intuitive decision making, by getting to know the concepts that explain the phenomena of thinking and choice, and through discussion of methods for structuring and modeling decision-making problems and their application in different contexts of managerial and personal decision making.

## Course unit contents

Use to analysis of decision-making in terms of uncertainty (expected value, decision tree, Bayes theorem, expected value of perfect and imperfect information, function of utility and risk-related, sequential analysis); Decision-making in risk management and multiple goals (decision-making, multi-purpose structuring, utility theory, business decision-making analysis, behavioral criticism of utility theory); Multicriteria decision-making (modeling of conflicting goals, multi attribute decision models, complexity and hierarchy as presentation of complexity, hierarchical and network decision models); Applied decision analysis;

## Literature

- 1. Albright, C.S, Winston, W.L., Management Science Modeling, South Western, 2012.
- 2. Render, B., Stair, R.M., Hanna, M.E. Quantitative Analysis for Management, Pearson Education International, 2009.
- 3. Pomerol, J.C., Barba-Romero, S., Multicriterion Decision in Management: Principles and Practice, Kluwer Academic Publisher Group, 2000.
- 4. Saaty, T., Fundamentals of Decision Making and Priority Theory with Analytic Hierarchy Process, Vol. VI of the AHP series, Library of Congress Cataloging in Publication Data, RWS Publications, 2006.
- 5. Saaty, T., Theory and Applications of the Analytic Network Process, Decision Making with Benefits, Opportunities, Costs and Risks, Library of CongressCataloging in Publication Data,

RWS Publications, 2005.									
Number of active teaching hours Other classes									
Lectures Practice		Other for		rms of Independ		nt work			
		classes			_				
Teaching methods									
Examination methods (maximum 100 points)									
Exam prerequisites No.		No. of p	No. of points:		Final exam		No. of points:		
Student's activity during				Oral examination		50	50		
lectures									
practical classes/tests		20							
Seminars/homework		30							
Project									
Other									
Grading System									
Grade			Bo. Of Points:				Description		
10			91-100				Excellent		
9			81-90				Exceptionally good		
8			71-80				Very good		
7			61-70				Good		
6			51-60				Passing		
5			0-50				Failing		