

Study programme: Security studies			
Course title: Decision theory			
Lecturer: Mirjana Radovanović			
Course status: Elective			
ECTS: 6			
Requirement: /			
Course aims Modeling the state of the business system and application of a representative model class and decision-making methods in terms of certainty, risk and uncertainty. Working with methods and models of individual and group multi-criteria decision making, in order to find the most acceptable alternative, as business decisions and strategies.			
Course outcomes Acquiring knowledge in the field of business decision making, formal decision-making models, methods, techniques, rules and skills, in order to make an adequate business decision in order to achieve a defined goal.			
Course content <i>Theory classes</i> 1. Basics of decision theory 2. Deciding on certainty and risk 3. Analysis of decision making 4. Sampling decision analysis 5. Risk analysis 6. Decision tree and sequential decision making 7. Theory of utility 8. Multitributive utility 9. Fuzzy systems 10. Rough set theory 11. Multi-criteria decision making 12. Multi-criteria analysis 13. Group decision making 14. Business negotiation 15. Selected (special) chapters in decision making theories <i>Practice classes</i> Multitributable decision methods. Repetition exercises. LDR and IKOR methods. AHP methods. Repeat Exercises 2. Promethee Method. Method Electre. Repetition exercises 3. Multicellular decision methods. Methods of group decision making. Models of group decision making. Repetition exercises. Target linear programming, STEM method. ID3 method and its application in decision making. Repetition exercises.			
Literature 1. Grupa autora: Teorija odlučivanja – skripta, Fakultet organizacionih nauka, Beograd, 2015. 2. Čupić M., Suknović M.: Odlučivanje, FON, Beograd, 2008. 3. Čupić, M., Tumala, V. M.: Savremeno odlučivanje, metoda i primena, FON, Beograd, 1997. 4. Giovanni Parmigiani, Lurdes Inoue: Decision Theory: Principles and Approaches 1st Edition, Willey, 2009.			
Number of active teaching classes: 7	Theory classes: 3		Practice classes: 4
Teaching methods Classical lectures and exercises. Case studies. Repetition exercises in small groups.			
Knowledge assessment (max 100 points)			
Pre-exam tasks	Points	Final exam	Points
In-class activity		written exam	
Practice classes	10	oral exam	40
Mid-term tests	50		
Seminar papers			
The above listed knowledge assessment means are just a few among different options (written exam, oral exam, project presentation, seminar papers etc)			
* Maximum one page A4 in length			