

Study program: Road Traffic Engineering			
Course title: Decision-making methods			
Professor/assistant: Nenad Vulović			
Type of course: Compulsory			
ECTS credits: 6			
Prerequisites: None			
Aims of the course: Introducing students to: mathematical methods and techniques in the decision-making process; possible ways of applying them in different decision-making conditions; by creating a set of actions suitable for applying the method; the choice of the most favorable alternative by a decision maker.			
Learning outcomes: The student will be able to: form a mathematical model for a decision-making process; apply different decision-making methods to the model depending on the conditions in which decision-making is carried out; use a support system for decision-making.			
Syllabus: <i>Theoretical Classes</i> A decision-making process; A decision-maker and his preferences; A decision-making model; Decision-making in conditions of uncertainty; Decision-making in terms of risk and the concept of utility; Additional information and its price; Sequential decision-making; The choice between complex alternatives; Group decision-making; <i>Practical Classes</i> The concepts of good and bad decision; The relation of preference and indifference and the use of preferences; A decision table and elements of a decision; Dominant and dominated actions; A decision tree; Methods of selection under the conditions of uncertainty; The application of probability in a decision theory; Methods of choice in the conditions of risk; The application of the concept of utility; Decision-making phases in risk conditions; The choice of a decision-making method; A model of multi-attributable decision-making; Methods of group decision-making.			
Literature: 1. Pavličić, D. (2015): Teorija odlučivanja, CID, Ekonomski fakultet, Beograd 2. Čupić, M., Tummale, R. & Sunković, M. (2010): Odlučivanje – formalni pristup, FONID, Beograd			
Number of active classes: 60		Lectures: 30	Practical classes: 30
Teaching methods: Lectures, exercises, practical lessons.			
Grading system (maximum 100 points) grading scale from 5 to 10: below 51 points – student fails the exam, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.			
Pre-exam obligations:	Points:	Final exam:	Points:
Activity during theoretical lectures	max 5	Written exam	50
Practical training	max 5		
Written test(s)	max 40		
Minimum requirement for the final exam	30		