

Study program:	Civil Engineering		
Level of study:	Master academic studies		
Course title:	MANAGEMENT AND MAINTENANCE OF ROADS		
Teacher:	Igor Jokanović		
Course Status:	Elective		
Credits (ECTS):	6		
Prerequisite:	N/A		
Course objective(s):	Introduction to the methodology of maintenance management of roads and structures on them. Detailed elaboration of the methodology for the assessment of pavement, techniques and strategies of pavement maintenance, models for decision-making and management systems with the use of information technology.		
Course outcome(s):	The realization of the planned objectives.		
Course Content:			
1 st week	Introductory lecture on management. Road life cycle and the role of maintenance. History. The concept and the area of management systems. Decision levels.		
2 nd week	Analysis of the processes and activities of road maintenance. IDEF0 and IDEF1X methodology for modeling processes and data.		
3 rd week	Information systems in the management of the road network.		
4 th week	The relational model. Reference system. Databases on the road network.		
5 th week	Database of roads, bridges and traffic.		
6 th week	Methodological basis of structures management systems. Elements of the description, the maintenance and inspection of the structures.		
7 th week	Pavement damaging processes, influence factors, distress catalogue.		
8 th week	Pavement damaging processes, influence factors, distress catalogue.		
9 th week	Monitoring and assessment of the condition, the definition of pavement failure, condition indicators and threshold values.		
10 th week	Devices and methods for data acquisition on the road network.		
11 th week	Maintenance works at the road network, modern methods and equipment, organization.		
12 th week	Alternative strategies.		
13 th week	Models for decision making.		
14 th week	Examples of models for decision-making (CSM).		
15 th week	Examples of models for decision-making (CSM).		
Literature:	<ol style="list-style-type: none"> 1. Radojković, Z., Sistemi upravljanja kolovozima, Građevinska knjiga, Beograd, 1990. 2. Cvetanović, A., Održavanje puteva, Direkcija za puteve, Beograd, 1993. 3. Uzelac, Đ., Baze podataka o putevima, mostovima i saobraćaju u okviru integrisanog informacionog sistema o putnoj mreži, Građevinski kalendar, 1999, Savez građevinskih inženjera i tehničara Jugoslavije, 1998. 4. Uzelac, Đ., Upravljanje održavanjem objekata, sa primerima primene kod puteva i mostova (in preparation) 		
Number of hours:			Other classes: 0
Lectures: 2	Exercises: 2	Other forms of teaching: 0	Individual research work: 0
Teaching methods: lectures, exercises, seminars, colloquiums, consultations			
Evaluation of knowledge (maximum 100 points)			
Pre-exam activities	points	Final exam	points
Activity during the lectures	5	Written exam	-
Activity during the exercises		Oral exam	25
Seminar paper	20	-	-
Colloquia	50 (2 x 25)	-	-