

Study program: Road Traffic Engineering			
Course title: Roads			
Professor/assistant: Nenad Milutinović			
Type of course: Compulsory			
ECTS credits: 6			
Prerequisites: none			
Aims of the course: Acquiring necessary knowledge of roads such as: the role and importance of roads in the organization of transport; categorization and classification of roads; exploitable, construction and technical characteristics of roads; suitability of a roadway construction for traffic; management, maintenance and protection of roads, etc. Gaining basic engineering knowledge about planning, construction, exploitation and maintenance of roads and streets.			
Learning outcomes: The student will be able to organize exploitation, management, protection and maintenance of roads. The student will be familiar with basic techniques of planning, construction, exploitation and maintenance of roads and streets.			
Syllabus: The road as an element of traffic infrastructure. The importance of roads. Road network. Urban and rural roads. Classification and categorization of roads based on their different characteristics. The system driver-vehicle-road. Basic characteristics of vehicle's movement on the road. Characteristics of vehicle's tractive and braking dynamics and their influence on the design of road elements. The basic parameters of the traffic flow. Dependence of basic parameters of the traffic flow. The basic parameters of the traffic flow and technical elements of the road. Exploitable characteristics of the road. The planning of exploitable characteristics of the road. Road tracing (route tracking). Basic elements of road tracing (route tracking). Road structure. Elements of road structure and surfacing of rural roads. Elements of road structure and surfacing of urban roads. Technical elements of roads. Elements of a layout plan. Elements of a network-level plan. Roadway structure. Roadway structure suitability for traffic and construction. Types of roadway structures. Roadway structure materials. The structure of roadway constructions. The maintenance and protection of roads. Road management.			
Literature: <ol style="list-style-type: none"> 1. Mijušković, V.: Putevi I, Saobraćajni fakultet, Beograd, 1990. 2. Cvetković, D., Banić, B.: Osnove saobraćajnica, Građevinski fakultet, Beograd 3. Vukanović, S.: Saobraćajne mreže, Saobraćajni fakultet, Beograd 4. Tubić, V., Maletin M.: Pravilnih o funkcionalnoj klasifikaciji i kategorizaciji putne mreže, JP Putevi Srbije, Beograd, 2007 5. Cvetanović, A.: Održavanje puteva, Građevinski fakultet, Beograd, 1993. 6. Miroslav Božović, Nenad Mulitinović: Putevi (skripta), VTŠSS Kragujevac, 2010. 			
Number of active classes: 60		Lectures: 30	Practical classes: 30
Teaching methods: Theoretical classes: interactive approach. Practical classes: Term papers			
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: 50	Final exam:	Points: 50
Activity during theoretical lectures	max 5	Oral exam	max 50
Practical training	max 5		
Written paper(s)	max 20		
Term papers	max 20		
Minimum requirement for the final exam	30		