

Study program: Road Traffic			
Course title: Theory and Regulation of Traffic Flows			
Professor/assistant : Dejan Bogicevic / Milan Stankovic			
Type of course: compulsory			
ECTS credits: 8			
Pre-requisites:			
Aims of the course Acquiring the necessary and specific knowledge about the basic parameters and traffic flow characteristics, about the laws of movement of the traffic flows, about the standards and regulations necessary for the design of vertical, horizontal and light traffic signals and about traffic management.			
Learning outcomes By completion of this course and after passing the exam, the student is able to: <ul style="list-style-type: none"> - establish the basic parameters of the traffic flow on certain roads, - analyze the relationships and dependencies of the parameters of basic traffic flow, - calculate the capacity and level of service at a particular junction at the road, - analyze and solve common traffic situations by applying standards and regulations, - develop projects of vertical, horizontal and signpost signaling - make the work program project of light signals at certain crossroads, - make changes to modes of transport and improve traffic conditions. 			
Syllabus <i>Theoretical part:</i> Basic parameters of the traffic flows. Significant characteristics of the traffic flow and the characteristic values of basic parameters. Theoretical and practical relationships and interdependence of the parameters of basic traffic flow. Capacity and level of service roads. Vertical signalization. Horizontal signalization. Design mode of light signals. Coordination of the light signal. The use of computer programs in traffic management. <i>Practical part:</i> Practical exercises follow the theoretical classes. Determining the practical value of the basic flow parameters, the capacity and level of service at a particular section of the road. Introduction to the basic elements of the transportation project. This course asks for the production of graphic work - Project: Creating a signal plan at a particular intersection, computation indicators of intersection design, distant signals and special signals. Visits to the economy.			
Literature <ol style="list-style-type: none"> 1. Kuzovic LJ., Bogdanovic, V., The Theory of Traffic Flow, Faculty of Technical Science Novi Sad, Novi Sad, 2004. 2. Zdravkovic, P., et al., Elements of Transport design - Vertical signalization, Faculty of Transport and Traffic Engineering Belgrade, Belgrade, 2003. 3. Stanic B., et al., Elements of Transport design - Horizontal signalization, Faculty of Transport and Traffic Engineering Belgrade, Belgrade, 2003. 4. Osoba M., et al, Traffic management by light signals, Faculty of Transport and Traffic Engineering Belgrade, Belgrade, 1999. 5. Djordjevic T., Regulation of Traffic flows by signal light, Highway Institute, Belgrade, 1999. 			
Number of active classes			Other forms of teaching:
Lectures: 45	Practical classes: 60	Research work:	
Teaching methods Classes are held in the form of lectures, auditory, computational and graphical exercises, individual and team presentations. This course asks for preparation of seminar papers - individual and group projects in which students apply their knowledge to solve practical problems.			
Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, 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	10	written exam	25
practical training	10	oral exam	25
colloquium(s)/seminar papers	20		
Sum	50	Sum	50