

Faculty of Civil Engineering / INFRASTRUCTURES / ROADS DESIGN

Course:	ROADS DESIGN			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
11942	Mandatory	2	6	3+1+1
Programs	INFRASTRUCTURES			
Prerequisites	Geodesy Roads			
Aims	Acquiring basic knowledge of road design.			
Learning outcomes	After passing this exam, the student will be able to: 1. Master entry criteria for road design 2. Understands road design methodology 3. Apply knowledge to the specific task of the Preliminary Design of the road			
Lecturer / Teaching assistant	dr Biljana Ivanović - Associate Professor mr Teodora Popović - Teaching Associate			
Methodology	Lectures, exercises, graphic work, colloquium and consultations.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Planning of rural roads.			
I week exercises	Planning of rural roads.			
II week lectures	Road and traffic (road traffic development, classification of roads).			
II week exercises	Road and traffic (road traffic development, classification of roads).			
III week lectures	Exploitation parameters, relevant speeds, relevant vehicles.			
III week exercises	Exploitation parameters, relevant speeds, relevant vehicles.			
IV week lectures	Cross section of the road (elements of cross sections, standardised cross sections).			
IV week exercises	Cross section of the road (elements of cross sections, standardised cross sections).			
V week lectures	System driver - vehicle - environment.			
V week exercises	System driver - vehicle - environment.			
VI week lectures	Elements of designed geometry of roads.			
VI week exercises	Elements of designed geometry of roads.			
VII week lectures	Colloquium I			
VII week exercises	Colloquium I			
VIII week lectures	Intersections (at-grade junctions) and interchanges (grade-separated-junctions).			
VIII week exercises	Intersections (at-grade junctions) and interchanges (grade-separated-junctions).			
IX week lectures	Accompanying contents for the road users needs, functional contents.			
IX week exercises	Accompanying contents for the road users needs, functional contents.			
X week lectures	Route tracing and shaping (route management principles, tracing technique).			
X week exercises	Route tracing and shaping (route management principles, tracing technique).			
XI week lectures	Road and the environment, synthesis of constraints.			
XI week exercises	Road and the environment, synthesis of constraints.			
XII week lectures	Internal and external harmony of road elements.			
XII week exercises	Internal and external harmony of road elements.			
XIII week lectures	Road route analysis: traffic, driving and geometric analysis.			
XIII week exercises	Road route analysis: traffic, driving and geometric analysis.			
XIV week lectures	Methodology and technology of road design: process and structure of design, evaluation of variant solutions. Project management from the aspect of Investors and Designers.			
XIV week exercises	Methodology and technology of road design: process and structure of design, evaluation of variant solutions. Project management from the aspect of Investors and Designers.			

XV week lectures		Colloquium II				
XV week exercises		Colloquium II				
Student workload		Weekly 6.0 credits x 40/30 = 8 hours Total workload on the subject 6.0x30 =180hours				
Per week			Per semester			
6 credits x 40/30=8 hours and 0 minuts 3 sat(a) theoretical classes 1 sat(a) practical classes 1 excercises 3 hour(s) i 0 minuts of independent work, including consultations			Classes and final exam: 8 hour(s) i 0 minuts x 16 =128 hour(s) i 0 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 8 hour(s) i 0 minuts x 2 =16 hour(s) i 0 minuts Total workload for the subject: 6 x 30=180 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 36 hour(s) i 0 minuts Workload structure: 128 hour(s) i 0 minuts (cources), 16 hour(s) i 0 minuts (preparation), 36 hour(s) i 0 minuts (additional work)			
Student obligations			Attendance in lectures and exercises, doing graphic work, passing colloquiums.			
Consultations			According to the schedule defined at the beginning of the semester.			
Literature			Katanić, Maletin, Andus:Projektovanje puteva i Metodologija projektovanja puteva od Andusa i Maletina.			
Examination methods			- attendance in lectures and exercises from 1 do 3 poens (student gets 1 poen fr 70% of attendance) - graphic work from 7 to 27 poens - two colloquiums 2x20 poens - final exam up to 30 poens - students pass this subject if the cumulative number of points is 50 poens.			
Special remarks						
Comment			Additional information about the subject can be obtained from the subject teacher, associate, head of the study program and from the Vice Dean for Teaching.			
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points