

Faculty of Civil Engineering / INFRASTRUCTURES / TRAFFIC ROADS MODELING

Course:	TRAFFIC ROADS MODELING			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
11946	Mandatory	2	6	2+1+1
Programs	INFRASTRUCTURES			
Prerequisites				
Aims	Getting acquainted with the methodology of application of CAD systems in the design of roads.			
Learning outcomes	After passing this exam, the student will be able to: 1. Manage the procedure for downloading, controlling and processing geodetic data. 2. Manage the procedures of modeling and calculation of line objects using CAD. 3. Manage the procedures of modeling and calculation of surface objects using CAD. 4. Transforms the results of modeling and calculation into standard forms of project documentation.			
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	Introduction. Need, design principles, a global review of several well-known softwares for design. Software environment.			
I week exercises	Introduction. Need, design principles, a global review of several well-known softwares for design. Software environment.			
II week lectures	Computer drawing in 2D.			
II week exercises	Computer drawing in 2D.			
III week lectures	Getting acquainted with the environment of Auto CAD.			
III week exercises	Getting acquainted with the environment of Auto CAD.			
IV week lectures	Drawing basic graphic elements.			
IV week exercises	Drawing basic graphic elements.			
V week lectures	Modification of elements in the drawing. Text and complex objects. Hatching and dimensioning.			
V week exercises	Modification of elements in the drawing. Text and complex objects. Hatching and dimensioning.			
VI week lectures	Processing and correction of drawing.			
VI week exercises	Processing and correction of drawing.			
VII week lectures	Preparing drawings for printing.			
VII week exercises	Preparing drawings for printing.			
VIII week lectures	Colloquium I.			
VIII week exercises	Colloquium I.			
IX week lectures	Technological process of project development using program GCM (GAVRAN CIVIL MODELAR).			
IX week exercises	Technological process of project development using program GCM (GAVRAN CIVIL MODELAR).			
X week lectures	Terrain modeling techniques and algorithms.			
X week exercises	Terrain modeling techniques and algorithms.			
XI week lectures	Designing axle geometry of the road.			
XI week exercises	Designing axle geometry of the road.			
XII week lectures	Designing of elevation.			
XII week exercises	Designing of elevation.			
XIII week lectures	Analysis and preparation of cross section.			
XIII week exercises	Analysis and preparation of cross section.			
XIV week lectures	Auxiliary tools.			

XIV week exercises		Auxiliary tools.				
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 2 sat(a) theoretical classes 1 sat(a) practical classes 1 excercises 4 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			Elektronska dokumentacija programa GCM (sa video dokumentacijom). Elektronska dokumentacija programa AutoCAD.			
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