

Faculty of Civil Engineering / INFRASTRUCTURES / HYDROTECHNIC CONSTRUCTION

Course:	HYDROTECHNIC CONSTRUCTION			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
11948	Mandatory	2	5	2+1+1
Programs	INFRASTRUCTURES			
Prerequisites	No conditionality			
Aims	Enabling students to participate in the design and construction of hydro-technical structures.			
Learning outcomes	Students will be able for independent participation in design, construction and maintenance of hydro-technical structures.			
Lecturer / Teaching assistant	Dr Jelena Pejović			
Methodology	Lectures, exercises, semester works, fieldwork			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Introduction. Introduction to hydro-technical structures. Basic types of hydro-technical structures.			
I week exercises	Introduction. Introduction to hydro-technical structures. Basic types of hydro-technical structures.			
II week lectures	Loads. Loads analysis and seismic impacts.			
II week exercises	Loads. Loads analysis and seismic impacts.			
III week lectures	Hydro-technical materials. Geo-technical characteristics of the environment for hydro-technical structure foundation.			
III week exercises	Hydro-technical materials. Geo-technical characteristics of the environment for hydro-technical structure foundation.			
IV week lectures	Dams. Classification and basic characteristics of various types of dams. Dam data and dam type selection.			
IV week exercises	Dams. Classification and basic characteristics of various types of dams. Dam data and dam type selection.			
V week lectures	Gravity and lightweight concrete dams. Disposition with water evacuation facilities.			
V week exercises	Gravity and lightweight concrete dams. Disposition with water evacuation facilities.			
VI week lectures	Stability of concrete gravity dams. General stability calculation.			
VI week exercises	Stability of concrete gravity dams. General stability calculation.			
VII week lectures	Arch dams. Disposition. Terms and conditions of design. Review of calculation methods.			
VII week exercises	Arch dams. Disposition. Terms and conditions of design. Review of calculation methods.			
VIII week lectures	Earth and Rock-fill Dams.			
VIII week exercises	Earth and Rock-fill Dams.			
IX week lectures	Water evacuation buildings. Bypass tunnels and canals. Overflows, drains, rapids and waterfalls.			
IX week exercises	Water evacuation buildings. Bypass tunnels and canals. Overflows, drains, rapids and waterfalls.			
X week lectures	Testing of knowledge.			
X week exercises	Testing of knowledge.			
XI week lectures	Hydraulic structures for water abstraction. Entrance structures. Surface and depth construction.			
XI week exercises	Hydraulic structures for water abstraction. Entrance structures. Surface and depth construction.			
XII week lectures	Water transport buildings. Channels. Hydraulic tunnels. Pipelines.			
XII week exercises	Water transport buildings. Channels. Hydraulic tunnels. Pipelines.			
XIII week lectures	Facilities on the Water transport buildings. Crossing objects.			
XIII week exercises	Facilities on the Water transport buildings. Crossing objects.			
XIV week lectures	Visit to the HE Perućica and Piva.			

XIV week exercises	Visit to the HE Perućica and Piva.					
XV week lectures	Testing of knowledge.					
XV week exercises	Testing of knowledge.					
Student workload	Weekly 5 credits x 40/30 = 6.67 hours Structure: 2 hours of lectures 2 hours of exercise 2.67 hours of independent work, including consultations.					
Per week			Per semester			
5 credits x 40/30=6 hours and 40 mins 2 sat(a) theoretical classes 1 sat(a) practical classes 1 excercises 2 hour(s) i 40 mins of independent work, including consultations			Classes and final exam: 6 hour(s) i 40 mins x 16 =106 hour(s) i 40 mins Necessary preparation before the beginning of the semester (administration, registration, certification): 6 hour(s) i 40 mins x 2 =13 hour(s) i 20 mins Total workload for the subject: 5 x 30=150 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) 30 hour(s) i 0 mins Workload structure: 106 hour(s) i 40 mins (courses), 13 hour(s) i 20 mins (preparation), 30 hour(s) i 0 mins (additional work)			
Student obligations			Attendance at lectures and exercises, making semester works.			
Consultations						
Literature			1. Lj, Savić: Uvod u hidrotehničke građevine, Građevinski fakultet, Beograd, 2003. 2. P. Stojić: Hidrotehnicke građevine I, Sveučilište u Splitu, Građevinski fakultet, 1997. 3. P. Stojić: Hidrotehnicke građevine II, Sveučilište u Splitu, Građevinski fakultet, 1998. 4. P. Stojić: Hidrotehnicke građevine II, Sveučilište u Splitu, Građevinski fakultet, 1999.			
Examination methods			Knowledge and understanding shown during the exercises 0 do 15; Semesteral work 0 do 15; Theoretical part of the final exam 0 do 30; Analytical part of the final exam 0 do 40.			
Special remarks						
Comment			Additional information about the subject can be obtained from the teacher, teaching assistant, head of the study program and 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