

Study Programme: Civil Engineering			
Course Unit Title: Hydrotechnical Facilities and Systems			
Course Unit Code: GG301			
Name of Lecturer(s): Kolaković Srđan, Budinski Ljubomir			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): mandatory			
Semester (winter/ summer): winter			
Language of instruction: english			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 7			
Prerequisites: none			
Course Aims: Introducing students to practical problems and acquiring professional knowledge for the application in practice in the field of water planning and management.			
Learning Outcomes: Acquired knowledge is directly applicable in engineering practice, as well as for understanding and upgrading knowledge from other courses.			
Syllabus. Hydrometrics and hydrology, levelgram, hydrograph, connection between flow and water level, presentable rain and hydrograph, statistic data processing. Hydrotechnical facilities, classification and specificities, water action on hydrotechnical facilities. Building materials, static and dynamic water pressure and influence of seismics, waves, ice action, safety to sliding, turning and rising to the surface. Water filtration beneath facilities, structure instability due to soil structure changes beneath the facility, uplift, measures for uplift decrease. Structure building in the zone of surface water and groundwater action. Hydrotechnical systems, water regulation, flood protection, hydrotechnical melioration, water energy usage, municipal infrastructure systems.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours:2	Lectures: 4	Practical work: 1	
Teaching Methods: Teaching is performed interactively in the form of lectures, auditory and computer practice. At lectures, theoretical part of the course content is presented, followed by the characteristic examples for better understanding. At auditory practice, characteristic exercises are solved and the course content is explained in more detail. Apart from lectures and practice, consultations are regular. A part of the course content that makes a logical unit can be taken during the teaching process in the form of partial examinations. Partial examinations are taken in written form and as tests. Examination grade is made on the basis of: lecture and practice attendance, partial examination grade and written examination grade (combined exercises and theory).			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

