

<b>Course title: MUNICIPAL HYDROTECHNICS</b>				
<b>Course code</b>	<b>Course status</b>	<b>Semester</b>	<b>Number of ECTS credits</b>	<b>Hours</b>
	<b>mandatory</b>	<b>II</b>	<b>5</b>	<b>3P+1V+1L</b>
<b>Study programs for which it is organized:</b> Master's / Master's study program Construction - Infrastructure, Module 2 Hydraulic Engineering, duration 4 semesters and 120 ECTS credits.				
<b>Conditionality to other subjects:</b> No conditionality				
<b>Objectives of the course:</b> Introduction to the principles of design and construction of water supply and sewerage systems in settlements.				
<b>Learning outcomes:</b> After passing the exam in this course, students will be able to: for independent participation in the design, construction and maintenance of water supply and sewerage systems in settlements and facilities				
<b>Teacher and assistant : Dr Goran Sekulic</b>				
<b>Teaching method:</b> Lectures, exercise, graphic works, field work, colloquium				
<b>Course content:</b>				
I week of classes	Water supply of populated areas and industries Historical development.			
II week of classes	Components of water supply systems and their role in systems in different conditions, classifications of water supply systems.			
III week of classes	Basics of planning: period, water needs, consumption variations, required water quality. Sources of supply in nature, protection of springs.			
IV week of classes	Buildings for the capture of groundwater, springs, surface atmospheric water.			
V Sunday classes	Pumping plants. Tanks.			
VI week of classes	Supply pipelines and distribution network. Hydraulic calculation, mathematical models. Pipes, fittings and fittings.			
VII week of classes	Plumbing installations in buildings. Monitoring and control systems in water supply systems.			
VIII week of classes	COLLOQUIUM I			
IX week of classes	Sewage systems of populated areas and industries. Introduction - purpose and historical development. Types of wastewater.			
X week of classes	Sewage systems: parts, disposition solutions. Quantities of wastewater Qualitative properties of wastewater. Conditions for discharging wastewater into public sewers and receivers.			
XI week of classes	Drainage of atmospheric wastewater from the streets.			
XII week of classes	Sewerage network: position and depth of the channel, channel falls, flow velocities, shapes of channel profiles ., hydraulic calculation, mathematical modeling of sewer network			
XIII week of classes	.Types of duct pipes and performance. Special facilities and devices in the sewer. Maintenance and cleaning			
XIV week of classes	.Sewage installations in buildings			
XV week of classes	COLLOQUIUM I			
<b>Student obligations during classes:</b> Attendance at lectures and exercises, making graphic works, taking the colloquium.				
<b>STUDENT WORKLOAD</b>				
<b>weekly</b>	<b>During the semester</b>			
<b>5 credits x 40/30 = 6.67 hours</b>	<b>Teaching and final exam: (6.67 hours) x 16 = 106.67 hours</b>			
<b>Structure:</b>	Necessary preparations before the beginning of the semester (administration, enrollment, certification)			
<b>2 hours of lectures</b>	2 x (6.67 hours) = 13.33 hours			
<b>2 hours of exercise</b>	<b>Total load for the subject 5x30 = 150 hours</b>			
<b>2.67 hours of independent work, including consultations</b>	Additional work for exam preparation in the remedial exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total workload for the course 150 hours)			
	<b>Load structure:</b> 106.67 hours (Teaching) +13.33 hours (Preparation) +30 hours (Additional work)			
<b>Literature:</b>				
1. G, Sekulić. I. Čipranić, <b>Komunalna hidrotehnika</b> , Građevinski fakultet, Podgorica, 2015.				
2. M. Milojević : <b>Snabdijevanje vodom i kanaliziranje naselja</b> , Beograd, 2002.				
3. Ljubisavljević D., Đukić A., Babić B., Jovanović B., <b>Komunalna hidrotehnika, Primeri iz teorije i prakse</b> . Građevinski fakultet Beograd 2001.				
<b>Forms of knowledge assessment and grading:</b>				
The knowledge test is performed continuously during the semester and at the final exam. A maximum of a student can earn 100 points during the semester. The following is evaluated:				
Attendance continues: 2 to 5 (70% attendance 2 points, 100% attendance 5 points, <70% attendance 0 points)				
- Graphic works: 5x (2.0 to 5.0) = 10 to 25 (for positively evaluated graphic work min 2.0 points are obtained)				
Colloquia: 2 x 19 to 35				
Final exam: up to 50				
- A minimum sufficient number of points and a maximum number of points are given. Colloquia and the final exam are done in writing. A passing grade is obtained if 50 points are collected, as well as if at least 19 points are won in both the first and the second colloquium.				
<b>Special indications for the subject:</b>				
<b>Name and surname of the teacher who prepared the data: Dr. Goran Sekulić</b>				
<b>Note:</b> Additional information can be obtained with the subject teachers, assistants, head of the study program and the Vice Dean for Academic Affairs.				