



TITLE OF THE COURSE:	Hydraulic structures
Course code:	VŽHSB020
Course group:	C
Faculty:	Faculty of Water and Land Management
Study program:	Hydraulic Engineering
Level:	Bachelor
Semester:	Spring
ECTS credits:	8
Language of instruction	English
Course lecturer/s:	Lect. Alvydas Žibas
Short course description:	Course objective is to form engineering thinking for students, capabilities to use innovative technical and technological solutions in hydraulic engineering. Students will be able to analyze environmental conditions, to select suitable hydraulic structures, design, construct, operate these hydraulic structures, to carry out investigation of conditions of hydraulic structures. Students will understand interaction between hydraulic structures and environment.
Course content:	<ol style="list-style-type: none">1. Dams, their main parts and parameters;2. Conditions for construction of embankment dam;3. Filtration calculations of embankment dams;4. Dams of various materials;5. Spillways;6. Hydraulic calculations of spillways;7. Auxiliary spillways;8. Concrete dams;9. Hydraulic structures of open channels;10. Hydraulic structures of aquaculture systems;11. Spillway gates and their equipment.
Learning outcomes:	<ol style="list-style-type: none">1. Be able to define hydraulic structures, their purpose, international and national problems in the field of hydraulic engineering;2. To know the structures and elements of embankment dams, to be able properly select the



	<p>parameters of embankment dam elements and to apply calculation methods;</p> <ol style="list-style-type: none">3. To know the structures and elements of spillways, to be able properly select the parameters of their elements and to apply calculation methods;4. To know the structures and elements of concrete dams, to be able properly select the parameters of their elements and to apply calculation methods;5. Be able to select channel hydraulic structures and hydraulic structures for aquaculture systems.
<i>Grading and evaluating student work in class and/or at the final exam:</i>	Practicums – 20 %, Laboratory works – 20 %, Exam – 60 %.
<i>Required reading and additional study material</i>	<ol style="list-style-type: none">1. Hydraulic structures / P. Novak ... [et al.]. 4th ed. Abingdon ; New York (N.Y.) : Taylor & Francis, 2007, 700 p.2. Chen, Sheng-Hong. Hydraulic structures / Sheng-Hong Chen. Berlin : Springer, 2015, 1029 p.
<i>Additional information (if applicable)</i>	-