Study programme: Bachelor with honours in Geography Teaching, Geography teaching – Master Academy

Studies

Course title: Potamology and regulation of river and canal systems DG306

Teacher(s): dr Dragoslav Pavić

Status: elective

ECTS: 6

Recuirements: passed examination in Hydrology

## Learning objectives

Acquiring basic potamology concepts and knowledge about the features or river waters, as well as defining the laws referring to river flows in riverbeds, factors and features of river regime. Pointing out hydrotechnical possibilities and importance of regulating natural water flows, canal network and river-canal system construction for water management.

# Learning outcomes

Acquired knowledge on potamological concepts, features of the river water and laws concerning its movement and rive regime. Realistic consideration of hydrotechnical possibilities for regulation of rivers and construction or river-canal systems as well as huge significance of these activities for water management system.

# **Syllabus**

Theoretical part: Topics and tasks of Potamology. River system and river network. Watershed and river basin. River valley and river bed. Features of river waters. Water movement in riverbeds. River regime factors. Elements of the river regime. River regime types. Regulation of natural water flows. Construction of canals. Construction of canal and river canal systems. Role and importance of canal and river-canal systems. Significant river-canal systems in Serbia and the world.

*Practical part:* Methodology of using hydrological annals and statistical data processing referring to rivers. Methodology of defining borders and morphometrical features of the river basin. Methodology of studying the river regime. Methodology of defining morphometrical features of the water course. SONAR – a device used to measure the depth of water. Seminar paper preparation. Fieldwork.

#### Literature

- 1. Davie, T. 2008. Fundamentals of Hydrology. Second Edition. Taylor&Francis Group, 200p.
- 2. Raghunath, H.M. 2006. Hydrology Principles, Analysis, Design. New Age Inernational Publishers, 463p.
- 3. Jobin, W. 2005. Dams and Disease Ecological Design and Health Impacts of Large Dams, Canals and Irrigation Systems. E&FN SPON, Taylor&Francis Group, 581p.
- 4. Basarin, B., Lukić, T., Pavić, D., Wilby, R.L. 2016. Trends and multy-annual variability of water temperatures in the river Danube, Serbia. *Hydrological Processes*, 30(18), 3315–3329.
- 5. Dragićević, S., Nenadović, S., Jovanović, B., Milanović, M., Novković, I., Pavić, D. and Lješević, M. 2010. Degradation of Topciderska River Water Quality (Belgrade). *Carpathian Journal of Earth and Environmental Sciences*, 5(2), 177–184.

Weekly teaching load: 4 (60) Lectures: 3 Exercises: 1

### **Methods of Teaching**

Lectures, Illustration and Demonstration, Fieldwork.

### **Grading method (maximu 100 points)**

Pre-examination assignments	points	Final examination	points
Activities during lectures	0-5	Written examination	
Activities during exercises	0-5	Oral examination	30-45
Colloquia	20-40		
Seminar paper	0-5		