Study Programme: PhD in Geosciences (Geography)

Level: PhD

Course title: Global climate changes and water management

Lecturer(s): dr Dragoslav Pavić, dr Stevan Savić

Status: elective

ECTS: 11

Requirements: None

Learning objectives

Adoption of basic knowledge about global climate changes and water management as part of the economy whose main task is sustainable using of surface and underground water and protection from the negative effects and pollution. The main goal is to understand the connection between global climate changes and main water management issues in Serbia, the region and globally.

Learning outcomes

Students will be competent for complex and comprehensive analysis of water management issues on Earth caused by intensive global climate changes. Furthermore, student will get knowledge related to the importance of mitigation global climate changes, as well as the significance of sustainable water management in everyday life and society.

Syllabus

Theoretical part

Global climate changes – theory, causes and consequences; Water management – concept and division; Using and management of water and water gang; Protection of water sources; Global climate changes and water supply; Global climate changes and irrigation of arid areas; Global climate changes and flood protection; Global climate changes and hydropower; Global climate changes and navigation; Global climate changes and erosion and torrents

Practical part

Visit Vode Vojvodine enterprise in order to introduce students to the essential measures of sustainable water management (flood protection, drainage, irrigation etc.).

Field work

Preparation of the scientific paper.

Recommended literature

1. Kernan, M., Battarbee, R.W., Moss, B.R. (2010): Climate change impacts on freshwater ecosystems. Wiley-Backwell, 328 pp.
2. McIlveen, R. (2010): Fundamentals of weather and climate. OUP Oxford, 632 pp.
3. Shelton, M.L. (2009): Hydroclimatology – Perspectives and Applications. Cambridge University Press, 438 pp.
4. van Dam, J.C. (2003): Impacts of Climate Change and Climate Variability on Hydrological Regimes (International Hydrology)(International Hydrology Series). Cambridge University Press, 160 pp.
5. Walter Leal Filho (Ed.) (2012): Climate Change and the Sustainable Use of Water Resources. Springer: 823 pp.
6. Дукић Д, Гавриловић Љ. (2005): Водопривреда. У: Хидрологија, Универзитет у Београду, Научна књига, Београд: 323-371.

Weekly teaching load	Lectures: 4(60)	Student research:

Teaching methodology

Didactic teaching (monologue), dialogue, disscusion, illustration and demonstration methods (multimedial presentations), field work.

Grading method (maximal number of points 100)

Pre-exam obligations	points	Final exam	points
Seminar paper	50	Oral exam	50