Hydrology and Water Managment - course description

General information

Course name	Hydrology and Water Managment
Course ID	13.9-WB-EPP-H/W-S19
Faculty	Faculty of Biological Sciences
Field of study	Environmental Protection
Education profile	academic
Level of studies	First-cycle studies leading to Bachelor's degree
Beginning semester	winter term 2021/2022

Course information

Semester	4
ECTS credits to win	4
Course type	obligatory
Teaching language	english
Author of syllabus	• dr Olaf Ciebiera

Classes forms

The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	30	2	-	-	Exam
Class	30	2	-	-	Credit with grade

Aim of the course

Water circulation and hydrology in catchment area. The Water Framework Directive.

Prerequisites

Geography, biology, physics.

Scope

The object, opinions, range and division of hydrology.Conceptions:hydrsphere and her properties,groundwaters, surfical waters, hydrological cycle of cactchment (precipitation-evaporation-retention-runoff). The catchment as a hydrological system. The water balance of catchment and water body. Thermal and dynamic processes in the land-locked waters,water movement, processes forming river bed. Basics of thewater economy,legal elements,water management. The Water Framework Directive.

Teaching methods

Lecture, discussion, excercises.

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
Acquired knowledge will allow to understand hydrological processes in the catchment and water bodies and make use of these information connected with water economy, especially in case of implementation of The Water Framework Directive	• K1A_W21	• a pass - oral, descriptive, test and other	• Lecture • Class
Student understand the need of self-education for all life. The student appreciates the importance of the basic knowledge in hydrology for the understanding of other biological sciences and is aware what is the meaning of reliability in hydrological research.	• K1A_W89 • K1A_K09	• a pass - oral, descriptive, test and other	• Lecture • Class
The student is able to analyse and draws a conclusions from literature and landscape managing maps. Understads water circulation in nature and draws conclusions in local scale.	• K1A_U11	• a pass - oral, descriptive, test and other	• Lecture • Class

Assignment conditions

A lecture - pass the exam with a positive mark. The exercises- positive mark of every exercise and positive test result.

Recommended reading

- E.Bajkiewicz-Grabowska, Z.Mikulski; Hydrologia ogólna, Wyd.Nauk. PWN,Warszawa 2006
- Ojha C. et al. 2008. Engineering hydrology
- Davie 2002. Fundamentals of hydrology. Routledge. London

Further reading

- W.Chełmicki, Woda-Zasoby,degradacja,ochrona, Wyd. Nauk.PWN,Warszawa 2001
- M.Ozga-Zielińska, J.Brzeziński, Hydrologia stosowana, Wyd. Nauk.PWN,Warszawa 1994

- U.Soczyńska (red.) Hydrologia dynamiczna, Wyd. Nauk.PWN,Warszawa 1997
- A.Choiński, Zarys limnologii fizycznej, Wyd. Nauk. PWN, Poznań 1995

Notes

Modified by dr Olaf Ciebiera (last modification: 19-05-2021 22:02)