

Title:	General Aquatic Ecology
Lecture hours:	30
Study period: (summer/winter)	winter?
Number of credits:	3
Assessment methods:	exam
Language of instruction:	English
Prerequisites:	basic knowledge of ecology, biology and geography
Course content:	Inland water ecology as a science – hydrobiology, limnology. Inland water resources on a global scale. Physical and chemical properties of water. Vertical gradients: light, temperature, density, thermocline. Oxygen vs carbon dioxide – solubility, acidity, pH, oxidation-reduction potential (redox). Ion dissociation – major ions. Hydrodynamics, hydrology, hydrochemistry. Aquatic organisms – adaptations to the environment. Physiological and ecological groups – plankton, nekton, pleuston, neuston, periphyton, benthos. Anthropogenic pressure and changes in aquatic ecosystems. Threats to aquatic ecosystems resulting from human activities. Research methods, ecosystem health diagnostics.
Learning outcomes:	After completing the course, the participant: Understands the physical and chemical properties of different types of water bodies and can describe the processes and phenomena occurring in them; Knows the ecological relationships and connections between groups of hyrobionts (plankton, benthos, periphyton, nekton) inhabiting various types of aquatic ecosystems; Has knowledge about the importance, threats (trophic and non-trophic) and ways of protecting aquatic ecosystems; Assesses human pressure on aquatic ecosystems and seeks solutions to global and local problems related to the protection of these ecosystems.
Name of lecturer	dr hab. Paweł Napiórkowski prof.
Contact (email address):	pnapiork@ukw.edu.pl
Literature:	Limnology and limnetic ecology [ed.Reynolds and O’Sullivan] The lakes ha, Handbook Volume 1, Blackwell Science Ltd 2004 Limnoecology. Lampert and Sommer. Oxford University Press 2007 Lake Ecology Overview. (Chapter 1, Horne, A.J. and C.R. Goldman. 1994. Limnology. 2nd edition. McGraw-Hill Co., New York, New York, USA.) https://paulhumphriesriverecology.wordpress.com/2012/02/15/a-bried-history-of-how-scientists-think-rivers-work-part-1 Hydrobiologia-Limnologia. Górniak A., Kajak Z., PWN Warszawa 2020