Table S2.6.4. Form for the preparation of the course information sheets

Name of the subject
Biological processes in the environment - selected chapters

Code of the subject	Status of the subject	Semester	Number of ECTS credits	Class load
	Optional	Autumn, Winter	10	**5**

Study programme for which it is organized PhD Program "Natural sciences and Technology for Sustainable Development", Module Environment protection 3rd degree

Dependency by other subjects No prerequisites

Objectives of studying this subject
Detailed introduction to biological and ecological processes in organisms, populations, communities and ecosystems.

Contents of the subject (teaching units, forms of students' individual work, forms of testing) presented per working weeks in the academic calendar:

Preparatory week	
I week	Characteristics of living things. Prokaryotic cell - structure and biological processes, bacteria and cyanobacteria.
II week	Eukaryotic cell - origin, structure and biological processes, differences between eukaryotes and prokaryotes.
III week	Plant cell, plant tissues and organs - biological processes.
IV week	Animal cells, tissues and organs - biological processes.
V week	Invertebrates - groups and biological processes.
VI week	Vertebrates - groups and biological processes.
VII week	Plants and algae - groups and biological processes.
VIII week	Test 1
IX week	Biological processes at the population level
X week	Biological processes at the level of biocenosis
XI week	Biological processes in natural ecosystems
XII week	Biological processes in anthropogenic and polluted ecosystems (local and global impact)
XIII week	Biological processes in water and soil
XIV week	Test 2
XV week	Test 3

Methods of education

- lectures
- consultations

Students' load

Weekly	In Semester
3 hours lectures 2 hour tutorial 8 hours and 20min individual work including consultations Total: 13 hours and 20 minutes	300 hours Including preparatory and additional work

Students' obligations during the teaching:

Students are required to attend lectures regularly

Literature:

1. Brock TD, Biology of microrganisms, 12th edititon, New Hersey: Prentice-Hall Inc. (2008)
2. Walker C, Hopkins S. P., Principles of Ecotoxicology, Taylor & Francis (2006)
3. Brien Moss, Ecology of Fresh Waters: A View for the Twenty-First Century, Wiley-Blackwell (2011)
4. George Karleskint, Richard Turner and James Small, Introduction to Marine Biology, Cengage Learning; 3 edition (2009)

Learning outcomes (complied with the outcomes for the study programme): After the student passes this exam he will be able to find and explain the connection between structure, function and processes at different levels of living world organization (at the level of molecules, cells, organisms, populations, communities, ecosystems), understand the main cellular processes and recognize differences between eukaryotic and prokaryotic organisms, explain the concepts related to morphology, anatomy and physiology of living beings (from the simplest unicellular to complex multicellular organisms), apply the acquired knowledge about the structure and function of organisms in everyday life and predict how changes in the environment and various abiotic factors can affect them.
Forms of tests and evaluation: • Oral examination, 40% • Written examination 60%
Name and surname of teacher and associate: To be decided
Particularities needed to be emphasized for the subject:
Note (if needed):