KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego

UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ SPOŁECZNY

Course title	ECTS code
Hydrobiology	7.2.0587

Name of unit administrating study

Faculty of Oceanography and Geography

Studies

faculty	field of study		
Wydział Biologii	Przyroda	type	wszystkie
		form	wszystkie
		specialty	wszystkie
		specialization	wszystkie
Wydział Chemii	Ochrona środowiska	type	pierwszego stopnia
		form	stacjonarne
		specialty	Podstawowa
		specialization	Podstawowa

Teaching staff

prof. UG, dr hab. Katarzyna Palińska; dr Anna Lizińska; prof. UG, dr hab. Waldemar Surosz

Forms of classes, the realization and number of hours

Forms of classes

Auditorium classes, Lecture

The realization of activities

classroom instruction

Number of hours

Lecture: 30 hours, Auditorium classes: 15 hours

ECTS credits

4
classes - 45 h
tutorial classes - 10 h
student's own work - 45 h
TOTAL: 100 h - 4 ECTS

The academic cycle

2022/2023 summer semester

Type of course

obligatory

Language of instruction

polish

Teaching methods

- group work
- multimedia-based lecture

Form and method of assessment and basic criteria for eveluation or examination requirements

Final evaluation

- Graded credit
- Examination

Assessment methods

- written exam with open questions
- (mid-term / end-term) test
- assignment work – project or presentation

The basic criteria for evaluation

The basic criteria for evaluation
Acquiring knowledge in the field of ecological specifics of aquatic environment and related biology and ecology of the organisms inhabiting such environment

Method of verifying required learning outcomes

The method of verifying the acquisition of knowledge:
K_OŚI_W01 - exam Method of verifying the acquisition of skills
K_OŚI_U01; K_OŚI_U04; K_OŚI_U09 - observation during classes; preparation of a presentation on a given topic

The method of verifying the acquisition of social competences
K_OŚI_K05 - observation during classes; preparation of a presentation on a given topic

Required courses and introductory requirements

A. Formal requirements

no formal requirements

B. Prerequisites

none basic requirements.

Aims of education

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Understanding the ecological specificity of the aquatic environment and the biological adaptations of aquatic organisms.
The purpose of the exercises is to learn about the functioning of inland and marine ecosystems with particular emphasis on the biology and ecology of aquatic flora and fauna organisms.

Course contents

Course contents
A. The lecture content:
A.1. Aquatic habitat specificity (physical, chemical, edaphic, biological parameters).
A.2. Biology of aquatic organisms (buoyancy, movement, osmoregulation and ionoregulation, respiration, feeding, reproduction).
A.3. Overview and characteristics of ecological formations: plankton, nekton, pleuston, neuston, benthos.
A.4. Ecobiological characteristics of the aquatic environment in terms of basic types of reservoirs.
A.5. Ecological parameters affecting littoral, sublittoral, bental and pelagic zones.
A.6. Basic data on the productivity of aquatic ecosystems.
A.7. Issues of modern hydrobiology: eutrophication, acidification and saprobization.
B. Exercise/laboratory content:
B.1. Characteristics of plant and animal organisms inhabiting the aquatic environment.
B.2. Detailed recognition of ecological formations, species composition and ecological adaptations.
B.3. Understanding the properties of the aquatic environment that have a major impact on the occurrence and biology of organisms inhabiting there.

Bibliography of literature

Bibliography of literature
Literature required to pass the course
A.1. Literature used during classes:
Pliński M., 1992, Hydrobiologia ogólna, wyd. Uniwersytet Gdański, (i wydania późniejsze)
Odum E., 1982, Podstawy ekologii, PWRiL, Warszawa
A.2. Literature for individual studies:
Starmach K., Wróbel., Pasternak K., 1976. Hydrobiologia, Limnologia, PWN, Warszawa
Thurman U., 1982, Zarys oceanologii, Wydawnictwo Morskie, Gdańsk
Extracurricular readings
Mikulski J., 1982, Biologia wód śródlądowych, PWN, Warszawa
Pliński M., 2008, Biologia organizmów morskich, Uniwersytet Gdański, Gdańsk
Podbielkowski Z., Tomaszewicz H., 1979, Zarys hydrobotaniki, PWN, Warszawa
Starmach K., 1973, Wody śródlądowe. Zarys hydrobiologii, skrypt UJ, Kraków
Kajak Z., 1998, Hydrobiologia – Limnologia, Wyd. Nauk. PWN, Warszawa
Chojnacki J., 1998, Podstawy ekologii wód, Wyd. Akademii Rolniczej w Szczecinie, Szczecin

The learning outcomes (for the field of study and specialization)	Knowledge
K_OŚI_W01 Discusses at an advanced level the concepts of mathematics, physics, chemistry and biology, describes physical, chemical and biological phenomena occurring in nature as well as geological, geomorphological and climatic conditions of the functioning of nature K_OŚI_U01 Performs tasks under supervision and independently in the field of analysis of the natural environment and the functioning of natural and human-changed natural systems K_OŚI_U04 Uses a specialized language in discussion and correctly uses the nomenclature in the field of	Canstructured knowledge in the field of biology and ecology necessary to understand the basic phenomena and processes occurring in the aquatic environment Describes the basic ecological and hydrobiological phenomena and natural processes occurring in the aquatic environment. Explains elementary laws governing the functioning of aquatic ecosystems Characterizes the basic relationships between animate and inanimate elements of the aquatic environment, is aware of the complex nature of aquatic environments, their complexity and natural variability Uses the basic concepts and terms used in the natural sciences, understands and is able to describe the basic concepts in the field of aquatic and marine environment sciences, and explains the knowledge about the development of environmental and

environmental protection and individual disciplines related to it
K_OŚI_U09 Prepares in Polish / English a short description of the research, observation or problem task performed during the classes, using appropriate scientific terminology
K_OŚI_K05 Identifies the level of their knowledge and skills, shows the need to update knowledge about the environment and its protection, shows the need for continuous professional training and personal development

water research - lists the most important directions and the latest research methods
It anticipates potential threats to the aquatic environment resulting from the development of civilization, in particular strong anthroporesia in various types of water reservoirs, especially in the field of eutrophication and saprobization

Skills

Independently analyzes the literature in the field of marine science in Polish
Uses available sources of information, including information technology, multimedia and Internet resources
Assesses the resources used Uses valid scientific terminology in presenting and discussing problems in the field of freshwater and marine ecology
Can prepare in Polish and / or English a documented study, multimedia presentation or poster on a selected problem in the field of marine sciences

Social competence

Develops one own knowledge and learns and improves professionally
Can work as a team and take different roles in the group
Accepts professional challenges set by the supervisor; is active and is characterized by persistence and timeliness in the implementation of individual and team activities
It poses questions and tasks aimed at broadening the knowledge in the field of aquatic environment sciences, both inland and marine

Contact

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