KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI
Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego
UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ SPOŁECZNY

Course title	ECTS code
Ecology	7.2.0578

Name of unit administrating study

null

Studies

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

Teaching staff

dr Agnieszka Ożarowska; mgr Katarzyna Stępniewska; dr Brygida Manikowska-Ślepowrońska

Forms of classes, the realization and number of hours

Forms of classes

Auditorium classes, Field classes, Lecture

The realization of activities

classes outside UG premises, classroom instruction, online classes

Number of hours

Lecture: 30 hours, Field classes: 15 hours, Auditorium classes: 15 hours

ECTS credits

6
lectures - 60 h
tutorship - 15 h
unassisted work of a student - 75 h
TOTAL: 150 h - 6 ECTS

The academic cycle

2022/2023 summer semester

Type of course

obligatory

Language of instruction

polish

Teaching methods

- Teaching methods

Lecture including multimedia presentations

Field labs – data collection according to field methods applied in ecology

Data analyses, case studies
Simulation games
Group working
- discussion
- group work
- multimedia-based lecture
- problem solving
- simulation games

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
- assignment work – completing a specific practical assignment
- written exam (test)
- graded course credit based on individual grades obtained during the semester
- oral exam

The basic criteria for evaluation

	The basic criteria for evaluation Lecture: • exam covers topics presented during lectures, • written exam with open and test questions scored according to percentage index (cf. „Regulations of the Study Courses at UG") Indoor laboratory – final grade is based on the sum of component grades obtained during the semester (12 points) and final test (26 points). The collected number of points is recalculated into final grade based on the percentage index given in the Regulations of the Study Courses at UG. Component tests evaluate most of all systematic work of a student. Final test evaluates education outcomes in gained knowledge and skills. Moreover final grade considers also conscientiousness and activity of a student during the lectures and laboratories, i.e., includes quality of individual and group reports prepared during the course. Field laboratory – final grade is based on the reports presenting data collected during the field laboratories, their analysis and interpretation reflecting ecological relationships of the studied environment. Written reports prepared in electronic format using the Microsoft Office package (Excel, Word, Power Point) are evaluated in the accordance with the guidelines given by the lecturer and their merit content. Final grade is an average of the grades of two reports. In case of excused absence or failure to submit the report following the aforementioned criteria, there is an option to set an additional, unassisted field task for a student and evaluate the report based on it.

Method of verifying required learning outcomes

Required courses and introductory requirements

A. Formal requirements

none

B. Prerequisites

Required courses and introductory requirements
Basic knowledge of biology

Aims of education

Aims of education
Lecture:
1. To learn and understand basic ecological processes and relationships.
2. To emphasize the relationship of ecology and other branches of science.
3. To develop awareness of human impact on nature functioning.

Indoor laboratory:
1. To understand the principles of population and ecosystem functioning based on the applied methods and case studies.
2. To understand the principles of biological resources' management.
3. To gain skills in the application of basic statistical tools to describe selected ecological states.

Field laboratory:
1. To gain skills in the selection of proper methods in plant and animal monitoring.
2. To gain skills in the perception and defining the relationships between organisms and environment.
3. To gain skills in the documentation and description of scientific data collected in the field.

Course contents

Course contents

A. Lecture contents:

Main ecological processes at different levels of organic life. Definitions and basic ecological concepts. Ecological interactions (organism-environment, individual-individual, species-species). Relationship of ecology and other branches of science. Characteristics of selected environments, geographic and ecological issues. Anthropogenization. Introduction to applied ecology.

B. Indoor laboratory contents:

Assessment methods of basic population parameters (abundance, spatial, age and sex structure of population).
Population number dynamics. Interspecific interactions in biocenosis. Population exploitation. Ecological bioenergetics.
C. Field laboratory contents:
Methods of plant and animal population monitoring. Research of the relationship between habitat conditions and structure of animal groups, and growth form and distribution of plants. Analysis and presentation of biological and monitoring data. Influence of meteorological conditions on

organisms' distribution.

Bibliography of literature

Bibliography of literature

Literature required to pass the course

1. Weiner J. – Życie i ewolucja biosfery. PWN W-wa 1999
2. Krebs C.J. – Ekologia – eksperymentalna analiza rozmieszczenia i liczebności. PWN W-wa 1996

Extracurricular readings

1. Begon M., Mortimer M., Thompson D.J.. Ekologia populacji : studium porównawcze zwierząt i roślin. Wydawnictwo. Naukowe PWN. 1999
2. Kozłowski S. 2000. Ekorozwój : wyzwanie XXI wieku. Wydaw. Naukowe PWN, 2000
3. Mackenzie A., Ball A.S., Virdee S.R. – Ekologia. Krótkie wykłady. PWN W-wa 2000
4.Pullin A.S.. Biologiczne podstawy ochrony przyrody. Wydawnictwo Naukowe PWN. 2004

The learning outcomes (for the field of study and specialization)	**Knowledge**
	Skills
	Social competence

Contact

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