



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Biodiversity [S1Bioinf1>BIODIV]

Course

Field of study
Bioinformatics

Year/Semester
1/1

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

dr inż. Agata Zdarta
agata.zdarta@put.poznan.pl

Lecturers

dr hab. inż. Wojciech Smulek
wojciech.smulek@put.poznan.pl

Prerequisites

The student should have basic knowledge of organic biology, chemistry and ecology. They can obtain information from the indicated sources, interpret them correctly and draw conclusions.

Course objective

To acquaint students with the broadly understood subject of biodiversity at the ecosystem level, with an emphasis on ecological and evolutionary processes and their interactions. Basic principles of behavioral ecology, population ecology and evolution related to biodiversity and nature conservation will be presented. The role of human and business in the environment will also be discussed.

Course-related learning outcomes

Knowledge:

1. Molecular mechanisms of evolution and basis of diversity of organisms - K_W07

Skills:

1. obtains information from literature, databases and other properly selected sources, also in English .
K_U01

Social competences:

1. lifelong learning and improving his/her competence - K_K01
2. thinking and acting in an entrepreneurial way - K_K07

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:

The lectures end with a final test including open and closed questions.

Programme content

The lectures in the subject in question will present various aspects related to biodiversity and sustaining biodiversity in the environment, taking into account such issues as ecosystems and taxonomy, endangered species, nature conservation and biodiversity.

Course topics

Lectures within the discussed subject will present various aspects related to biodiversity and the maintenance of biological diversity in the environment. Students will be acquainted with the basic concepts related to the evolution of species and ecosystems and their taxonomic division. Examples of various ecosystems will be presented - their structure, functions and types, as well as interactions and relationships between species will be discussed. Attention will be paid to the aspect of endangered species and tools for nature conservation and enhancement of biodiversity in the environment. Students will also be introduced to the role of the anthropogenic factor and business in the environment and the importance of biodiversity for people and the economy.

Teaching methods

Lecture with multimedia presentation, discussion with students

Bibliography

Basic

1. A. Mackenzie, A. S. Ball, S. R. Virdee "Ekologia" Wydawnictwo Naukowe PWN 2009
2. Z. Wnuk "Ekologia i ochrona środowiska: wybrane zagadnienia" Wydawnictwo Uniwersytetu Rzeszowskiego 2010
3. T. Żylicz "Ekonomia środowiska i zasobów naturalnych" Polskie Wydaw. Ekonomiczne 2004

Additional

1. A. Armstrong "Biodiversity" Nature, 2017, Vol. 546(7656), p.47.
2. E.O. Wilson "Biodiversity" National Academies Press 2000
3. P. L. Forey, C. J. Humphries, et al. "A Practical Course in Systematics" Clarendon Press, Oxford 1992.
4. B. G. Hall "Łatwe drzewa filogenetyczne" Wydawnictwo Uniwersytetu Warszawskiego 2008

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50