University of Gdańsk

Subject card

Subject name and code	Biodiversity/ Biological variety, PG_00103636		
Field of study	Environmental Protection		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	Master's studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	2.0
Learning profile	academic	Assessment form	exam
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Przemysław Baranow	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	15	2.0	33.0	50

Subject objectives

To learn the definition of biodiversity (at the intra-species, species and ecosystem level), methods of measuring species diversity, factors (anthropogenic and natural) affecting biodiversity, threats to biodiversity and ways to protect it. To learn about the diversity and variability of living organisms with particular emphasis on national flora and fauna species of economic, sanitary, bioindication, protected, extinct or endangered, and key species in the functioning of ecosystems (examples)

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OŚMU2_U01] On the basis of the acquired knowledge, proposes to solve environmental problems.	Student knows how to plan and carry out field surveys using appropriate methods used in the study of fauna and flora and interpret the results in terms of their conservation	[SU4] test/exam - oral or written
[OŚMU2_W06] Analyses the impact of human activities on biodiversity and environmental quality on a local, regional and global scale.	The student describes and analyzes the impact of human activities on the diversity of organisms at the local, regional and global scales	[SW4] test/exam - oral or written
[OŚMU2_W03] Characterises the effects of human interference in the natural environment and explains the mechanisms of reaction of living organisms to its pollution.	Student knows the effects of human interference with the natural environment (including those resulting from environmental pollution) and the resulting changes in flora and fauna	[SW4] test/exam - oral or written
[OŚMU2_W04] Chooses methods, techniques and research tools used in environmental protection.	By selecting appropriate methods, techniques and research tools, the student describes the diversity of the flora and fauna of Poland and the complex phenomena and processes occurring in nature	[SW4] test/exam - oral or written

Subject contents	Definition of biodiversity, levels at which it is considered, ways to determine the degree of biodiversity, factors affecting the degree of biodiversity (including anthropogenic), threats and ways to protect biodiversity. Review of selected groups of microorganisms, fungi, plants and animals occuring in Poland , including extinct, endangered, protected species, having bioindication significance or invasive. Methods for quantitative assessment of species diversity.	
Prerequisites and co-requisites	None	
Assessment methods and criteria	Subject passing criteria: Test exam Passing threshold: 51.0% Percentage of the final grade: 100.0%	
Recommended reading	Basic literature	Maćkowiak M., Michalak A. (red.) 2008. Biologia: jedność i różnorodność. Warszawa. (wybrane rozdz.) Pławilszczikow N. 1972. Klucz do oznaczania owadów. PWRiL, Warszawa. Rutkowski L. 2008. Klucz do oznaczania roślin naczyniowych Polski Niżowej. Wyd. Nauk. PWN, Warszawa. Rybak J. I. 2001. Przewodnik do rozpoznawania niektórych bezkręgowych zwierząt słodkowodnych, PWN, Warszawa. Szafer W., Kulczyński S., Pawłowski B. 1988. Rośliny polskie. PWN, Warszawa. Szweykowska A., Szweykowski J. 2009. Botanika. Tom 1 i 2. PWN, Warszawa. (wybrane rozdz.) A.2. studiowana samodzielnie przez studenta:. Andrzejewski R., Weigle A. 2003. Różnorodność biologiczna Polski. Narodowa Fundacja Ochrony Środowiska., Warszawa. Bogdanowicz W., Chudzicka E., Pilipiuk I., Skibińska E. [red.] 2004, 2007, 2008, 2014. Fauna Polski charakterystyka i wykaz gatunków. T I-IV Muzeum i Instytut Zoologii PAN, Warszawa. Głowaciński Z. 2001 [red.] Polska czerwona księga zwierząt. Kręgowce. PWRiL, Warszawa Głowaciński Z., Nowacki J. [red.] 2005. Polska czerwona księga zwierząt. Bezkręgowce. Instytut Ochrony Przyrody PAN, Kraków i Akademia Rolnicza im. A. Cieszkowskiego, Poznań. Müller E., Loeffler W. 1987. Zarys Mykologii. PWRiL, Warszawa. Rothmaler W., Jäger E., Werner K. 2007. Exkursionsflora von Deutschland. Gefässpflanzen: Atlasband. Spektrum Akademischer Verlag, München. Szafer W., Zarzycki K. (red.) 1977. Szata roślinna Polski. T. 1-2. PWN, Warszawa. Szweykowska A., Szweykowski J. 2016. Botanika. Tom 1 i 2. PWN, Warszawa.
	Supplementary literature	Garbarczyk H. (red.) 1983. Świat zwierząt. PWRiL, Warszawa. Weiner J. 2020. Życie i ewolucja biosfery. PWN. Wilson E. O. 1999. Różnorodność życia. PIW, Warszawa. Wszałek-Rożek K., Lazarus M., Afranowicz-Cieślak R., Gołębiewska J., Kuczyńska A., Jarosińska M., Eichmann A., Markowski R. 2018. Endangered flora of Gdańsk Pomerania - its distinctiveness and diversity. Biodiversity: Research and Conservation, vol. 50, p. 53-60.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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