University of Gdańsk

Subject card

Subject name and code	Inventory of nature, PG_00154495		
Field of study	Natural Resources Conservation		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional subject group 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	3	Language of instruction	Polish
Semester of study	5	ECTS credits	4.0
Learning profile	academic	Assessment form	credit
Conducting unit	Faculty of Biology -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Renata Afranowicz-Cieślak	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	45.0	0.0	0.0	0.0	45

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	45	8.0	47.0	100

Subject objectives

1. Learning the basic methods of faunistic and floristic research appropriate for groups of organisms enabling the valorization of various types of ecosystems and the limitations in their application.

2. Developing knowledge and skills regarding the appropriate selection of the scope of nature inventories for the preparation of various planning documents and expert opinions in the field of nature protection.

3. Preparation to independently prepare documents regarding the inventory and valorization of nature.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OZPL3_W07] The graduate has an advanced understanding of the methods and means of nature and environmental protection, including nature monitoring	- knows the basics of nature valorization and the methodology used when preparing inventories, expert opinions and nature monitoring - knows the types of planning documents and expert opinions requiring a natural inventory	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work
[OZPL3_K08] The graduate is ready to systematically update his/ her natural knowledge and to apply it in practice	- is aware of continuing education with changing guidelines, improving knowledge and skills in carrying out proper inventory work and preparing documents in the field of environmental valorization	[SK1] oral statement/conversation/ discussion
[OZPL3_U04] The graduate is able to plan and carry out simple research tasks in the biological sciences under the guidance of a supervisor	- plans and performs research tasks or expert opinions in the field of natural inventories under the supervision of a supervisor - has the ability to interpret collected data and draw conclusions for the needs of nature expertise	[SU2] presentation/project/paper/ report [SU3] text preparation/written work [SU6] demonstration of practical skills
[OZPL3_U01] The graduate is able to use basic apparatus and research tools and maintains the correct sequence of operations in laboratory and field work	- plans the scope of work and applies appropriate methodology and research tools used during inventories or nature expertise	[SU2] presentation/project/paper/ report [SU3] text preparation/written work [SU6] demonstration of practical skills
[OZPL3_W06] The graduate has an advanced understanding of the names and types of natural environments, including their structural and functional characteristics	- has knowledge about various groups of organisms and understands the interactions between organisms and the inanimate environment, which translates into the correct preparation of natural inventories	[SW2] presentation/project/paper/ report [SW3] text preparation/written work

Subject contents

Types of planning documents and expert opinions requiring a natural inventory - protection plan/plan of protective tasks for a nature reserve, national park, landscape park, Natura 2000 area; design documentation of the protected area; assessment of the investment's impact on the environment. Natural resources and groups of organisms requiring inventory for particular types of documents and expert opinions. Basics of nature valorization based on various indicators. Selection of groups of organisms enabling the valorization of various types of ecosystems (forests, peat bogs, meadows, xerothermic grasslands, water reservoirs) and the assessment of threats related to various types of human activities (energy, construction, forest and agricultural management, linear infrastructure - roads). Methods of inventorying plant cover (floral inventories, geobotanical mapping), fungi, lichens, various groups of animals, selected groups of invertebrate animals, fish, amphibians, reptiles, birds, mammals); determining animal migration routes and the possibilities of their application in practice. Materials and equipment necessary to perform an inventory, principles of field work, ethical issues. Preparation of a project of a natural inventory of a selected group of organisms in a given area, under the supervision of supervisors.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
written study - report	51.0%	50.0%
inventory project	51.0%	50.0%

Recommended reading	Basic literature	Bloch-Orłowska J., Afranowicz-Cieślak R., Żółkoś K., Kukwa M., Kaczorowska E., Gerstmann E., Ściborski M., Meissner W., Pleskot I., Mikoś J., 2015. Nature of the "Helskie" reserve "Dunes" (northern Poland). Acta Botanica Cassubica, Monographiae, 5, pp. 135. Bystrek J. 1997. Basics of lichenology. Publisher Maria Curie-Skłodowska University. Guides for the protection of Natura 2000 habitats and species - methodological manuals, vol. 1-8. Ministry of the Environment, Warsaw. Makomaska-Juchiewicz M. (ed.) 2010. Monitoring of animal species. Methodological guide, part 1. Environmental Monitoring Library, Warsaw. Makomaska-Juchiewicz M., Baran P. (ed.) 2012. Monitoring of animal species. Methodological guide, part 2, 3. Environmental Monitoring Library, Warsaw. Obidziński A., Żelazo J. (ed.). 2011. Inventory and valorization of nature. Field exercise guide. Ed. SGGW. Warsaw. Perzanowska J. (ed.) 2010. Monitoring of plant species. Methodological guide, part 1-3. Chief Inspectorate of Environmental Protection, Warsaw. Szweykowska A., Szweykowski J. 2009. Botanika. Volumes 1 and 2. PWN, Warsaw.
	Supplementary literature	Chylarecki P., Sikora A., Cenian Z. (ed.). 2009. Monitoring of breeding birds. Methodological guide for species protected by the Birds Directive. CIEP, Warsaw. Guzow-Krzemińska B., Kukwa M. 2013. Research methods in contemporary taxonomy of lichens. Kosmos 62(1): 95-103. Kozina P. 2015. New locality of Mantis religiosa (L.) (Mantodea: Mantidae) in the Wzgórza Sobkowskie reserve (Lesser Poland Upland, Szydłowski Foothills). Entomological News 34: 67. Kubiak D., Kukwa M. 2011. Thin layer chromatography (TLC) in lichenology. In: Dynowska M., Ejdys E. (ed.). Laboratory mycology. Preparation of research material and diagnostics. Publishing House of the University of Warmia and Mazury in Olsztyn, pp. 176190. Ossowska E. 2021. Genus Parmelia in Poland. Taxonomic study. University of Gdańsk Publishing House, Gdańsk. Southwood T. R. E., Henderson P. A. 2000. Ecological methods. Blackwell Science, Oxford. Sutherland, W. J. (ed.). 2006. Ecological census techniques: a handbook. Cambridge University Press. Wysocki Cz., Sikorski P. 2009. Phytosociology used in landscape protection and shaping. Ed. SGGW, Warsaw.
	eResources addresses	
Example issues/ example questions/ tasks being completed		

Work placement	Not applicable

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