GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Ecological basis of environmental protection, PG_00057722		
Field of study	Green Technologies		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	Optional subject group
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Laboratory of Bacterial Genetics -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Gracjana Klein-Raina	
	Teachers	dr hab. Gracjana Klein-Raina	

Lesson types and methods of instruction							
	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	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	30	1.0	19.0	50

Subject objectives	
	Presentation of the relationship between organisms, organisms and the environment, discussion about the main problems of environmental protection and species on a global and local scale in relation to ecological issues, biodiversity in ecosystems, familiarization with the main protected species, characteristics of selected National Parks and Reserves in Poland - protected species occurring there, their ecological relationships. The aim of the course will be not only to provide concise and clear information, but also to show how fascinating is ecology and environmental protection.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W05] has an elementary knowledge of the fundamental concepts and problems of quality management, the general principles of creation and development of forms of individual entrepreneurship, application of the principles of work organization and integrated management, basic principles of quality control and analysis results; knowledge of basic legal aspects relating to the management of chemicals with particular emphasis on compounds polluting the environment and business, knows and understands the basic concepts and principles of the protection of industrial property and copyright and the need for management of intellectual property.	Students know the basic principles of environmental protection in connection with ecology and are able to manage and organize work aimed at environmental protection in accordance with applicable laws and regulations.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation
[K6_K06] has awareness of the importance of non-technical aspects and effects of engineering activities, including its impact on the environment and the associated responsibility for decisions.	Students are able to evaluate and discuss priorities in the protection of species and ecosystems. Students have a new approach to environmental protection in the 21st century.	[SK3] Assessment of ability to organize work [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice [SK1] Assessment of group work skills
[K6_W04] is aware of the importance of environmental protection and has a basic knowledge of chemical and biological threats to the environment, with particular emphasis on anthropogenic factors, has a basic knowledge of knowledge of the principles of sustainable development as well as national and European environmental management conditions.	Students are able to evaluate and discuss key ecology and environmental issues.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation

Subject contents

The concept of the species; mechanisms of the protection of new species; examples and protection of endangered species; competition between species and within species; predators and herbivores, parasitism; mutualism and commensalism; the basis of genetic diversity and its importance in environmental protection; the use of molecular techniques in ecology; biodiversity the role and its protection; new technologies in environmental protection; national parks and reserves.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
passing the lectures	60.0%	100.0%

Recommended reading

Basic literature	**Elements of Ecology** Thomas M. Smith and Robert Leo Smith (2012) 8 th Edition **Ecology** Michael L. Cain, Wiliam D. Bowman and Sally D. Hacker (2014) Third Edition **Environmental Biology** Mike Claver, Alan Lymbery, Jennifer McComb and Mike Bamford (2009)
Supplementary literature	**Essentials of Conservation Biology** Richard B. Primack (2006) Fourth Edition
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	**1.** How are species arise? **2.** Modern methods of protecting endangered species. **3.** The role of biodiversity.
Work placement	Not applicable

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