Subject card

Subject name and code	Tropical ecology, PG_00117656		
Field of study	Biology		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2024/2025
Education level	postgraduate studies	Subject group	Optional subject group
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish Some classes may be held in English - e.g. a conversation with invited scientists
Semester of study	3	ECTS credits	1.0
Learning profile	academic	Assessment form	
Conducting unit	Katedra Taksonomii Roślin i Ochrony Przyrody -> Faculty of Biology -> Rektor		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Monika Lipińska	
	Teachers	dr Monika Lipińska prof. dr hab. Dariusz Szlachetko	

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

Additional information:

Lecture with multimedia presentationDiscussionProblem-based learning

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	0.0	10.0	25

Subject objectives

1. Getting to know the basic concepts of ecology and biogeography of tropical biomes.

2. Understanding the structure and functioning of the main tropical biomes.

3. Review of selected groups of animals and plants and their role in tropical ecosystems.

4. Understanding the impact of anthropogenic pressure and climate change on tropical ecosystems and the organisms inhabiting them.

5. Learning the methodology and specifics of conducting scientific research in tropical regions.

Learning outcomes

Course outcome	Subject outcome	Method of verification
BIOLMU2_W01	The student has an in-depth understanding of natural phenomena and processes at different levels of complexity occurring in tropical ecosystems	[SW4] test/exam - oral or written
[BIOLMU2_K05] use recognised sources of scientific and popular information in the field of biological sciences to improve their knowledge	The student uses recognized sources of scientific and popular science information in the field of biological sciences in order to deepen knowledge	[SK3] text preparation/written work
[BIOLMU2_U09] write research papers in the field of the studied biological speciality in Polish and short scientific communications in English based on own research	Students are able to write research papers in the field of the studied biological specialization in Polish and short scientific communications in English on the basis of their own research	[SU3] text preparation/written work
[BIOLMU2_K07] the systematic updating of biological knowledge and information on its practical applications	The student systematically updates biological knowledge and information about its practical applications	[SK1] oral statement/conversation/ discussion
[BIOLMU2_W02] the graduate applies the principle of a rigorous, empirically based interpretation of biological phenomena and processes in research work and practical activities	The student understands the principle of strict empirical data-based interpretation of biological phenomena and processes in research work and practical activities	[SW1] oral statement/ conversation/discussion
[BIOLMU2_U02] be fluent in the scientific literature of the biological speciality studied	The student is able to use the scientific literature of the studied biological specialty proficiently	[SU3] text preparation/written work
BIOLMU2_U07	The student is able to confront biological information from different sources critically and, on this basis, draw reasonable conclusions	[SU1] oral statement/conversation/ discussion [SU5] implementation of a problem task

Subject contents

Basic concepts of tropical ecology. Structure and functioning of major tropical biomes. Factors shaping biodiversity in the tropics. Biodiversity hotspots. The impact of anthropopressure and climate change on tropical ecosystems and the organisms inhabiting them. Methodology and specificity of conducting scientific research in tropical regions.

Prerequisites and co-requisites

Basic knowledge of ecology and biogeography. Knowledge of English enabling the use of the literature on the subject.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test (single choice questions)	51.0%	40.0%
Scientific essay	51.0%	40.0%
Active participation in the discussion	51.0%	20.0%

Recommended reading	Basic literature	Forsyth, A., & Miyata, K. (2011). Tropical Nature: Life and Death in the Rain Forests of Central and South America. Simon and Schuster. Gritzner, C. F. (2009). The Tropics. Infobase Publishing. Kricher, J. C. (1997). A neotropical companion: an introduction to the animals, plants, and ecosystems of the New World tropics. Princeton University Press. Kricher, J. C. (2011). Tropical ecology. Princeton University Press. The latest scientific articles on biodiversity in tropical regions, IUCN reports, e.g.: Lipińska M.M., Wibowo A.R.U., Margońska H.B. 2022. Notes on the genus *Nervilia* (Orchidaceae, Nervilieae) in Bali with new records. Acta Societatis Botanicorum Poloniae 91: art. no. 915. Lipińska M.M., Archila F.L., Haliński Ł.P., Łuszczek D., Szlachetko D.L., Kowalkowska A.K. 2022. Ornithophily in the subtribe Maxillariinae (Orchidaceae) proven - case study of *Ornithidium fulgens* in Guatemala. Scientific Reports 12(1): 5273. Margońska H.B, Champion J., Lipińska M.M. 2022. Preliminary checklist of Malaxidinae and Liparidinae representatives (Orchidaceae, Malaxideae) from Bali and Lombok islands (Indonesia) with new records. Diversity 14(5): art. no. 398 Kolanowska M., Kras M., Lipińska M., Mystkowska K., Szlachetko D. L., Naczk A. M. 2017. Global warming not so harmful for all plants - response of holomycotrophic orchid species for the future climate change. Scientific Reports Vol. 7, art. no. 12704.
	Supplementary literature	Hastenrath, S. (2012). Climate dynamics of the tropics (Vol. 8). Springer Science & Business Media.Rovero, F., & Ahumada, J. (2017). The Tropical Ecology, Assessment and Monitoring (TEAM) Network: An early warning system for tropical rain forests. Science of the Total Environment, 574, 914-923.Golley, F. B., & Medina, E. (Eds.). (2012). Tropical ecological systems: trends in terrestrial and aquatic research (Vol. 11). Springer Science & Business Media.Dominy, N. J., & Duncan, B. (2002). GPS and GIS methods in an African rain forest: applications to tropical ecology and conservation. Conservation Ecology, 5(2).Cole, N. A. (1984). Tropical ecology research. Nature, 309(5965), 204-204.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Essay topics may include, among others: the impact of logging and deforestation on the ecosystem of a selected country, analysis of the impact of global climate change on the flora and fauna of tropical countries, the latest trends in research in tropical regions or analysis of fake news present in the media.Discussions will include a critical analysis of data presented during lectures (e.g. recent articles).	
Work placement	Not applicable	

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