


KAPITAŁ LUDZKI
 NARODOWA STRATEGIA SPÓJNOŚCI

 Projekt współfinansowany przez
 Unię Europejską w ramach
 Europejskiego Funduszu
 Społecznego

UNIA EUROPEJSKA
 EUROPEJSKI
 FUNDUSZ SPOŁECZNY


Course title		ECTS code	
Animal movement		13.1.1459	
Name of unit administrating study			
null			
Studies			
faculty	field of study	type	all
Faculty of Biology	Natural Resources Conservation, Genetics and Experimental Biology, Medical Biology, Biology	form	all
		specialty	all
		specialization	all
Teaching staff			
dr hab. Magdalena Remisiewicz; dr hab. Wojciech Pokora, profesor uczelni			
Forms of classes, the realization and number of hours		ECTS credits	
Forms of classes		2	
Lecture		Work in contact with the lecturer:	
The realization of activities		Participatiion in lectures - 15 hours	
classroom instruction, online classes		Writing the exam – 2 hours	
Number of hours		Individual work by the student:	
Lecture: 15 hours		Preparation for the exam - 8 hours	
The academic cycle			
2022/2023 summer semester			
Type of course		Language of instruction	
an elective course		english	
Teaching methods		Form and method of assessment and basic criteria for eveluation or examination requirements	
Lecture with multimedia presentation and discussion		Final evaluation	
		Examination	
		Assessment methods	
		<ul style="list-style-type: none"> - written exam with open questions - Written assignment with test and open questions 	
		The basic criteria for evaluation	
		<p>The condition of a student being allowed to take exam is participation in all lectures. Allowed absence is 5 hours of lecture (225 min) in case of justified emergencies, e.g. sickness, hospitalisation, family problems, justified by relevant documents presented to the lecturer. The student can compensate for the absence by reading materials indicated by the lecturer or watching a recording from a lecture, if available.</p> <p>Completing the course is based on written assignment during the last lecture, marked according to the percent scale (according to „Rules of studying at UG”) with test questions, open questions and sketches to label. The assignment covers the material from lectures. In case of not passing the assignment at the first date, the student can write the assignment of the same kind as the first one more time at the date agreed with the lecturer.</p>	
Method of verifying required learning outcomes			

zakładany efekt kształcenia	Lecture with multimedia presentation and discussion
	Knowledge
B_W01	Contribution to discussion.
B_W04	Writing exam (assignment with test and open questions).
	Skills
B_U06	Writing exam (assignment with test and open questions).
	Social competences
O_K05	Writing exam (assignment with test and open questions). Contribution to discussion

Required courses and introductory requirements

A. Formal requirements

None

B. Prerequisites

English at level B2

Aims of education

Understanding reasons, mechanisms and adaptations of animals to migrations, as an important element of animal's life cycle in seasonal climates.

Course contents

1. Animal movements – reasons and types.
2. General patterns and rules in animal movements.
3. Altitudinal migrations in water and in mountains.
4. Breeding migrations in different groups of animals.
5. Seasonal migrations vs irruptive and irregular movements.
6. Mechanisms of animal navigation and orientation during migration.
7. Regular patterns and outstanding achievements of migratory animals.
8. Novel techniques in studies of animal movements.

Bibliography of literature

A. Compulsory:

Dingle H. 1996. Migration: The Biology of Life on the Move. Oxford University Press.

Hansson L.-A., Åkesson S., (eds). Animal Movement Across Scales. Oxford: Oxford University Press, 2014. Oxford Scholarship Online, 2014. doi: 10.1093/acprof:oso/9780199677184.001.0001.

B. Facultative:

Jetz W, Tertitski G, Kays R, Mueller U, Wikelski M. and Supporting authors. 2022. Biological Earth observation with animal sensors. Trends in Ecology & Evolution 37 (4): 293–298.

Remisiewicz M, Underhill LG. 2022. Climate in Africa sequentially shapes spring passage of Willow Warbler *Phylloscopus trochilus* across the Baltic coast. PeerJ 10:e12964 DOI 10.7717/peerj.12964

Milner-Gulland, E.J., J.M. Fryxell, Sinclair A.R.E. 2011. Animal Migration: A Synthesis. Oxford University Press.

Newton I. 2010. Bird Migration. Harper Collins.

Elphick, J. 1995. The atlas of bird migration: tracing the great journeys of the world's birds. Random House.

Berthold, P. 2003. Avian migration. Springer.

Lucas, M.C. and Baras, E. 2001. Migration of freshwater fishes. Blackwell Science.

Drake, V.A. and Gatehouse, A. G. 1995. Insect migration: tracking resources through space and time. Cambridge University Press.

The learning outcomes (for the field of study and specialization)

Knowledge

A student consistently applies and disseminates the principle of a strict, based on empirical data, interpretation of biological phenomena and processes in research and practical activities

A student has in-depth knowledge of the animal movements.

Skills

A student selects and applies knowledge on animal movements to interpret and conclude on empirical data related to animal movements.

Social competence

A student understands the need to use recognized sources of scientific and popular science information on animal behaviour in order to deepen knowledge.

Contact

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