University of Gdańsk

Subject card

Subject name and code	Identification of chordates - laboratory exercises, PG_00118043		
Field of study	Natural Resources Conservation		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	undergraduate studies	Subject group	Obligatory subject group 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	4.0
Learning profile	academic	Assessment form	
Conducting unit	Pracownia Ornitologii -> Katedra Ekologii i Zoologii Kręgowców -> Faculty of Biology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Agnieszka Ożarowska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	60.0	0.0	0.0	60

E-learning hours included: 0.0

Additional information:

Classes in the UG campus:

- Solving tasks
- Discussion
- Group work
- Observation of specimens, photographs, identification of chordate species with the use of keys and guides, work in groups/teams

Classes outside the UG campus:

- Discussion
- Group work
- Observations, talks, identification of vertebrate species in the field using keys and guides, identification of vertebrate species in the field using equipment such as binoculars, telescope, ultrasound detectors

Classes outside the UG campus are carried out in the Tri-City, Rumia, Reda, Wejherowo, Puck, Hel, Władysławowo and in the vicinity of these towns, including the Trójmiejski Landscape Park and the Nadmorski Landscape Park.

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	60	5.0	35.0	100

Subject objectives

Getting knowledge of Polish species of chordates. Knowledge of diagnostic features of chordates enabling the identification of taxa, knowledge of Polish and Latin names of selected species of fauna. Ability to recognize the basic species of animals learned. Ability to work with a key and guide for identification of Polish vertebrates and with binoculars, scope, detectors and other devices used for observation and detection of vertebrates. Ability to select and apply appropriate methods of assessing the number of selected vertebrate species in the field and to process the collected material.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OZPL3_U04] The graduate is able to plan and carry out simple research tasks in the biological sciences under the guidance of a supervisor	The student, under the supervision of a teacher, plans and performs simple research tasks (population monitoring) in the topic of zoology and ecology of vertebrates	[SU5] implementation of a problem task
[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	The student uses the basic equipment and appropriate research tools used in the identification of chordates and maintains the correct sequence of activities in laboratory and field work (can conduct observation, note diagnostic features and identify Polish vertebrate species)	[SU6] demonstration of practical skills [SU8] observation of student's independent or team work
[OZPL3_K06] The graduate is prepared to demonstrate responsibility for their own and others' safe working conditions in the laboratory and in the field, and is able to recognise hazardous situations and take appropriate action	The student is responsible for the entrusted equipment/materials and her/his own work and respects the work of others	[SK8] observation of student's independent or team work
[OZPL3_K04] The graduate is ready to understand the need for honesty and integrity in scientific and professional work, and consciously applies the principles of bioethics	The student applies the principles of bioethics, respecting the regulations on the protection of wild vertebrates	[SK8] observation of student's independent or team work
[OZPL3_W04] The graduate possesses advanced knowledge and understanding of the characteristics, systematics, and evolution of selected groups of organisms, as well as the basic concepts and mechanisms of evolution	The student presents the characteristics, evolution and identifies Polish chordates	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[OZPL3_W01] The graduate possesses advanced knowledge and understanding of the structural and functional relationships at the cellular, tissue, organ, and body levels.	The student presents the structure of chordates taking into account functional relationships at the tissue, organ and organism levels	[SW4] test/exam - oral or written

Subject contents

Systematic position, characteristics and identification of selected systematic groups of chordates, particularly Polish species. Identification of fish, amphibians, reptiles, mammals and birds based on museum specimens. Identification of mammals based on dissected skulls. Identification of amphibians and birds based on their voices.Biometric methods in the identification of vertebrate species. Practical identification of Polish vertebrate species in the field based on their diagnostic characteristics, both visual and acoustic (voice recognition). Construction and use of a key and guide for identifying vertebrates. Observations of vertebrates in the field, techniques of collecting and documenting the material. Getting the knowledge of selected elements of the biology of the observed species.Methods for the assessment of the abundance of selected vertebrate species in the field. Diversity of animals in selected ecosystems of the Pomeranian region (forest, meadow, river, lake, dune, beach).

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
written test	51.0%	20.0%
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written test - species identification	51.0%	20.0%
practical test	51.0%	20.0%
attendance at classes	85.0%	20.0%

Recommended reading	Basic literature	Berger L. 2000. Płazy i gady Polski. Klucz do oznaczania. PWN, Warszawa-Poznań. Błaszak C. [red.] 2015. Zoologia, t. 3, cz. 1. Szkarłupnie płazy. PWN, Warszawa. Brown R., Fergusson J., Lawrence M., Lees D. 2006. Tropy i ślady ptaków. Muza SA, Warszawa. Bezzel E. 2010. Jakie to pióro? Multico, Warszawa. Błaszak C. [red.] 2015. Zoologia, t. 3, cz. 1. Szkarłupnie płazy. PWN, Warszawa. Brylińska M. (red.), 2000. Ryby słodkowodne Polski. PWN, Warszawa. Cieślak M., Dul B. 2009. Pióra. Identyfikacja gatunków rzadkich. Natura Publishing House, Warszawa. Dziurdzik, B. 1973: Klucz do oznaczania włosów ssaków Polski. (In Polish with an English summary: Key to the indentification of hairs of Mammals from Poland.). Acta Zoologica Cracoviensa 13:73-91. Jabłoński B., Gotzman J. 1972. Gniazda naszych ptaków. PZWS, Warszawa. Jasiński A. 1973. Zootomia kręgowców. PWN, Warszawa. Jonsson L. 1998. Ptaki Europy i obszaru śródziemnomorskiego. Muza SA, Warszawa. Kardong K.V. 1998. Vertebrates. Comparative Anatomy, Function, Evolution. WCB McGaw-Hill Comp. Inc., New York. Pucek Z. (red.) 1984. Klucz do oznaczania ssaków Polski. PWN Warszawa. Romanowski J. 1990. Śladami zwierząt. Krajowa Agencja Wydawnicza, Warszawa. Sachanowicz K., Ciechanowski M. 2005. Nietoperze Polski. Multico, Warszawa. Svensson L., Mullarney K., Zetterstrom D., Grant P. J. 2009. Przewodnik Collinsa Ptaki. Multico, Warszawa. Szarski H. (red). 1976. Anatomia porównawcza kręgowców. PWN, Warszawa.
	Supplementary literature	Jasiński A. 1973. Zootomia kręgowców. PWN, Warszawa. Szarski H. 1982. Historia Zwierząt Kręgowych. PWN. Warszawa.
	eResources addresses	Podstawowe http://www.xeno-canto.org - Xeno-canto is a website dedicated to sharing wildlife sounds from all over the world. Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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