University of Gdańsk

Subject card

Subject name and code	Introduction to Marine Mammals Biology and Protection - laboratory, PG_00206176		
Field of study	Oceanography		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2029/2030
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	6	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr Iwona Pawliczka Vel Pawlik	
	Teachers		

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	0.0	0.0	15
	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	15	1.0	9.0	25

Subject objectives	Understanding the systematic diversity, phylogeny, biology and adaptation to life in the marine environment of mammals. Familiarization with conservation conflicts in population management, the importance of knowledge about species and the implementation of modern research methods for the effective management of human activities. Post mortem analysis as a comprehensive method of getting the knowledge of population parameters.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANL3-K01] is willing to plan and implement, individually or as a team, the subsequent stages of the entrusted task, is willing to take responsibility for the results of these works, effectively cooperates in the team and performs various roles in it	the student is ready to be responsible for his own work and to be subordinated adheres to the principles of teamwork, feels responsible for the joint implementation tasks	[SK6] demonstration of practical skills [SK8] observation of student's independent or team work
[OCEANL3-K03] is ready to exercise caution and criticism in accepting information from scientific literature, the Internet and other media relating to natural sciences	the student is ready to be careful when accepting information and opinions, from various sources relating to the biology and conservation of marine mammals	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[OCEANL3-W06] has an advanced understanding of the principles of managing the marine environment and its resources, as well as the consequences of disrupting the balance of marine ecosystems	the student knows and understands potential threats to marine mammals and how to mitigate them, knows and understands the basic legal regulations and principles regarding protection marine mammals	[SW2] presentation/project/paper/ report [SW3] text preparation/written work
[OCEANL3-U09] is able to present and evaluate various specialized opinions and positions on oceanographic issues, and to participate in discussions or debates	the student is able to take part in a discussion about marine mammals and their protection	[SU1] oral statement/conversation/ discussion [SU5] implementation of a problem task
[OCEANL3-U06] is able to formulate and solve advanced problems related to the functioning of individual components of the marine environment, using knowledge from various fields and scientific disciplines	the student is able to formulate and solve advanced problems related to functioning of mammals in the marine environment, with support of knowledge in other scientific fields and disciplines	[SU1] oral statement/conversation/ discussion [SU5] implementation of a problem task
[OCEANL3-U01] is able to use the current scientific terminology in the field of oceanography in various forms of expression	the student is able to formulate and solve complex and unusual problems concerning the functioning of marine mammals by integrating knowledge from various fields and scientific disciplines	[SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work

Subject contents

Identification of differences in the body structure of marine mammals and characterization of species..Analysis of the anatomy, behavior and physiological functions of the marine mammals based on post-mortem examinations of grey seals.Objectives and procedures in marine mammal research.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Implementation of a problem task	51.0%	30.0%
Observation of student's independent or team work	51.0%	35.0%
Presentation	51.0%	35.0%

Recommended reading	Basic literature	Głowaciński (red) 2001. Polish Red Book of Animals. PWRiL, Warszawa IUCN Red List of Threatened Species. Jefferson, T.A., Webber, M.A., Pitman, R. 2015. Marine mammals of the World: A comprehensive Guide to their identification. Academic Press. Marine Mammal Necropsy: An introductory guide for stranding responders and field biologists. Woods Hole Oceanographic Institution. 2007 Society for Marine Mammals, Committee of Taxonomy. Marine Mammals Species List: https://www.marinemammalscience.org/speciesinformation/list-marine-mammal-species-subspecies/ State of the Baltic Sea - Second HELCOM Holistic Assessment 2011-2016 Varjopuro R (2011) Co-existence of seals and fisheries? Adaptation of a coastal fishery for recovery of the Baltic grey seal. Marine Policy 35:450456
	Supplementary literature	Liebschner A., Seibel H., Teilmann J., Wittekind D., Parmentier E., Dähne M., Dietz R., Driver J., van Elk C., Everaarts E., Findeisen H., Kristensen J., Lehnert K., Lucke K., Merck T., Müller S., Pawliczka I., Ronnenberg K., Rosenberger T., Ruser A., Tougaard J., Schuster M., Sundermeyer J., Sveegaard S., Siebert U., 2016, Impacts of underwater noise on marine vertebrates : project introduction and first results [W:] The effects of noise on aquatic life II / eds. Arthur N. Popper, Anthony Hawkins. Advances in Experimental Medicine and Biology, 2016, vol. 875: 631-636. Carlén I., Thomas L., Carlström J., Amundin M., Teilmann J., Tregenza N., Tougaard J., Koblitz J.C., Sveegaard S., Wennerberg D., Loisa O., Dähne M., Brundiers K., Kosecka M., Kyhn L.A.,Ljungqvist C.T., Pawliczka I., Koza R., Arciszewski B, Galatiuse A., Jabbusch M., Laaksonlaita J., Niemi J., Lyytinen S., Gallus A., Benke H., Blankett P., Skóra K.E., Acevedo-Gutiérrez A., 2018, Basin-scale distribution of harbour porpoises in the Baltic Sea provides basis for effective conservation actions, Biological Conservation, Volume 226: 42-53.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Taxonomic identification of marine mammals.Marine mammals stranding response and procedures.Methods of sampling and post-mortem examination of marine mammals.	
Work placement	Not applicable	

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