University of Gdańsk

Subject card

Subject name and code	Marine Mammals - Biology and Management - laboratory , PG_00204923		
Field of study	Oceanography		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2027/2028
Education level	Master'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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Prof. Krzysztof Skóra Hel Marine Station -> Faculty of Oceanography and Geography -> Rector		
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	10.0	0.0	0.0	10

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	10	2.0	13.0	25

Subject objectives

Introducing the selected research methods to study biology and ecology of marine mammals and practicing them.

Introducing possible conflicts between human activity and marine mammal populations and implementing the effective methods to resolve them.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANMU2-K04] is ready to critically evaluate his/her knowledge and received content in the field of natural sciences in in particular in the field of the studied specialty, a in problematic situations, supports oneself with knowledge experts	Student is able to critically analyze his/her own knowledge and external content regarding biology and conservation of marine mammals	[SK1] oral statement/conversation/ discussion [SK5] implementation of a problem task [SK8] observation of student's independent or team work
[OCEANMU2-W01] knows and understands in-depth specialized terminology used in oceanography and related sciences (in Polish and a selected foreign language)	Student knows and understands in depth the specialist terminology specific to marine mammal research	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
[OCEANMU2-W03] has an in-depth understanding of research methods used in oceanography and related sciences, and interprets their mechanisms and interrelationships across different spatial and temporal scales	Student knows and understands the principles of using selected methods of population studies of marine mammals	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task

Subject contents

1. Presentation and application of the technique of age determination of marine mammals based on tooth structure, using porpoises and seals as examples.

2. Presentation of the method of passive acoustic monitoring of the occurrence of harbour porpoises using porpoise recorders (PODs) and preliminary data analysis.

3. Conducting a conflict resolution process with stakeholders in marine wildlife conservation.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
attendance and own work of student	80.0%	100.0%

Recommended reading

Basic literature	Perrin, W.E., Myrick, A.C. (Eds). 1980. Age Determination of Toothed Whales and Sirenians. Rep.Int.Whal.Commn (Special Issue 3), Cambridge. Au, Whitlow W.L., 1993. The Sonar of Dolphins. Springer. Norse, E., Crowder, L.B. 2005. Marine Conservation Biology: the science of maintaining the sea`s biodiversity. Marine Conservation Biology Institute.
Supplementary literature	Lockyer, C. 2003. Harbour porpoise *(Phocoena phocoena*) in the North Atlantic: Biological parameters. *NAMMCO Sci.Publ.* 5:71-90. Evans, P. Raga, T. (ed). Marine Mammals: Biology and Conservation. Kluwer Academic/Plenum Publishers. 2001.
eResources addresses	

Example issues/ example questions/ tasks being completed	Age estimation of harbour porpoises and seals from tooth preparations.Preparation of seal teeth for age estimation. Participation as stakeholders in the process of developing a marine mammal species conservation plan.
Work placement	Not applicable

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