

**Subject card**

<b>Subject name and code</b>	Marine mammals - biology and management - laboratory exercises, PG_00117729						
<b>Field of study</b>	Oceanography						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>			2024/2025		
<b>Education level</b>	Master's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group Specialty subject group Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	1	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	2	<b>ECTS credits</b>			1.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>					
<b>Conducting unit</b>	Prof. Krzysztof Skóra Hel Marine Station -> Faculty of Oceanography and Geography -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Iwona Pawliczka Vel Pawlik				
	<b>Teachers</b>		dr Iwona Pawliczka Vel Pawlik				
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	10.0	0.0	0.0	10
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	10		6.0		10.0	26
<b>Subject objectives</b>	<p>Introducing the selected research methods to study biology and ecology of marine mammals and practicing them.</p> <p>Introducing possible conflicts between human activity and marine mammal populations and implementing the effective methods to resolve them.</p>						

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 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] knows and understands research methods used in oceanography and related sciences	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	<p>1. Presentation and application of the technique of age determination of marine mammals based on tooth structure, using porpoises and seals as examples.</p> <p>2. Presentation of the method of passive acoustic monitoring of the occurrence of harbour porpoises using porpoise recorders (PODs) and preliminary data analysis.</p> <p>3. Conducting a conflict resolution process with stakeholders in marine wildlife conservation.</p>		
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	<p>Perrin, W.E., Myrick, A.C. (Eds). 1980. Age Determination of Toothed Whales and Sireniens. Rep.Int.Whal.Comm (Special Issue 3), Cambridge.</p> <p>Au, Whitlow W.L., 1993. The Sonar of Dolphins. Springer.</p> <p>Norse, E., Crowder, L.B. 2005. Marine Conservation Biology: the science of maintaining the sea's biodiversity. Marine Conservation Biology Institute.</p>	
	Supplementary literature	<p>Lockyer, C. 2003. Harbour porpoise (<i>Phocoena phocoena</i>) in the North Atlantic: Biological parameters. <i>NAMMCO Sci.Publ.</i> 5:71-90.</p> <p>Evans, P. Raga, T. (ed). Marine Mammals: Biology and Conservation. Kluwer Academic/Plenum Publishers. 2001.</p>	
	eResources addresses	Adresy na platformie eNauczanie:	
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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