

Subject card

Subject name and code	Marine Mammals - Biology and Management - laboratory , PG_00204923						
Field of study	Oceanography						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
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	<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-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
	[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-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
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.Commn (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		

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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