

Subject card

Subject name and code	Marine fishes - laboratory exercises, PG_00117875						
Field of study	Oceanography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
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	Laboratory of Ichthyology -> Department of Marine Ecology -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Mariusz Sapota				
	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		20.0	32
Subject objectives	Getting to know and identifying representatives of the main groups of marine fishes						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[OCEANMU2-U03] can plan and carry out independently advanced research and measurements, both in field and laboratory, using appropriately selected measurement and analytical techniques in the field of oceanography, adequately to the studied specialty and research problem		can plan and carry out measurements and observations allowing for taxonomic identification of marine fishes		[SU3] text preparation/written work [SU6] demonstration of practical skills		
Subject contents	Morphological systematic features of the Holocephala and the Elasmobranchii						
	Systematic division and overview of shark orders						
	Practical familiarization with selected fish species						
	• Petromyzontiformes • Acipenseriformes • Anguilliformes • Clupeiformes • Perciformes						

Prerequisites and co-requisites	Basic knowledge of zoology		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written elaboration of the results of the observations carried out	51.0%	100.0%
Recommended reading	Basic literature	Gąsowska M., 1962. Kąglouste i ryby. Państwowe Wydawnictwo Naukowe. Warszawa Grodziński Z., 1981. Anatomia i embriologia ryb. Państwowe Wydawnictwo Rolnicze i Leśne. Warszawa Opuszyński K., 1979. Podstawy biologii ryb. Państwowe Wydawnictwa Rolnicze i Leśne. Warszawa Pliszka F., 1964. Biologia ryb. Państwowe Wydawnictwa Rolnicze i Leśne. Warszawa Suworow E., 1954. Podstawy ichtiologii. Państwowe Wydawnictwo Naukowe. Warszawa Bieniarz K., Epler P. Zoologia Tom V, Ryby. Leksykon popularnonaukowy. Wydawnictwo Albatros, Kraków 2004 Nelson J.S. Fishes of the Word. Wiley 2006 Kottelat M., Freyhof J. Handbook of European Freshwater Fishes. 2007 Jasiński A., 1973. Zootomia kręgowców. Państwowe Wydawnictwo Naukowe Klimaj A., Rutkowicz S., 1970. Atlas ryb Północnego Atlantyku. Wydawnictwo Morskie. Gdańsk Rutkowicz S., 1982. Encyklopedia ryb morskich. Wydawnictwo Morskie. Gdańsk	
	Supplementary literature	Bone Q.M.A., Marshall N.B., 1982. Biology of fishes. Blackie. Glasgow and London Cailliet G.M., Love M.S., Ebeling A.W., 1986. Fishes. Wadsworth Publishing Company, Belmont, California Lagler K.F., Bardach J.E., Miller R.R., May Passino D.R., 1977. Ichthyology. John Willey & Sons. New York, Chichester, Brisbane, Toronto	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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