

Subject card

Subject name and code	Marine fishes - laboratory exercises, PG_00117875						
Field of study	Oceanography						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	postgraduate studies	Subject group			Obligatory subject group in the field of study Optional subject group		
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					
Conducting unit	Pracownia Ichtiologii -> Katedra Ekologii Morza -> Faculty of Oceanography and Geography						
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 <ul style="list-style-type: none"> • 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%
Recommended reading	Basic literature	<p>Gąsowska M., 1962. Kragłouste i ryby. Państwowe Wydawnictwo Naukowe. Warszawa</p> <p>Grodziński Z., 1981. Anatomia i embriologia ryb. Państwowe Wydawnictwo Rolnicze i Leśne. Warszawa</p> <p>Opuszyński K., 1979. Podstawy biologii ryb. Państwowe Wydawnictwa Rolnicze i Leśne. Warszawa</p> <p>Pliszka F., 1964. Biologia ryb. Państwowe Wydawnictwa Rolnicze i Leśne. Warszawa</p> <p>Suworow E., 1954. Podstawy ichtiologii. Państwowe Wydawnictwo Naukowe. Warszawa</p> <p>Bieniarz K., Epler P. Zoologia Tom V, Ryby. Leksykon popularnonaukowy. Wydawnictwo Albatros, Kraków 2004</p> <p>Nelson J.S. Fishes of the World. Wiley 2006</p> <p>Kottelat M., Freyhof J. Handbook of European Freshwater Fishes. 2007</p> <p>Jasiński A., 1973. Zootomia kręgowców. Państwowe Wydawnictwo Naukowe</p> <p>Klimaj A., Rutkowicz S., 1970. Atlas ryb Północnego Atlantyku. Wydawnictwo Morskie. Gdańsk</p> <p>Rutkowicz S., 1982. Encyklopedia ryb morskich. Wydawnictwo Morskie. Gdańsk</p>	
	Supplementary literature	<p>Bone Q.M.A., Marshall N.B., 1982. Biology of fishes. Blackie. Glasgow and London</p> <p>Cailliet G.M., Love M.S., Ebeling A.W., 1986. Fishes. Wadsworth Publishing Company, Belmont, California</p> <p>Lagler K.F., Bardach J.E., Miller R.R., May Passino D.R., 1977. Ichthyology. John Willey & Sons. New York, Chichester, Brisbane, Toronto</p>	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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