

Subject card

Subject name and code	Marine Fishes - lecture, PG_00204921						
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	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	10.0	0.0	0.0	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	Getting to know and identifying representatives of the main groups of marine fish						
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		knows and understands advanced research methods used in taxonomic identification of marine fishes		[SW4] test/exam - oral or written		
	[OCEANMU2-W01] knows and understands in-depth specialized terminology used in oceanography and related sciences (in Polish and a selected foreign language)		knows and understands specialist terminology (in Polish and English) used in the taxonomy and biology of marine fishes		[SW4] test/exam - oral or written		

Subject contents	Description of systematic features of fishes: shape and coloration, elements of external structure and their arrangement, structure of the skeleton		
	Biometric and meristic features		
	Characteristics of marine and bi-environmental Agnatha and Gnathostomata		
	Characteristics of Holocephali		
	Characteristics of Elasmobranchii		
Characteristics of Actinopterygia			
Prerequisites and co-requisites	Basic knowledge of zoology		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	exam	51.0%	100.0%
Recommended reading	Basic literature	Brylińska M. Ryby słodkowodne Polski. Wydawnictwo Naukowe PWN Warszawa 2000	
		Gerstmeier R., Romig T. Przewodnik. Słodkowodne ryby Europy. Mulico Warszawa 2002	
		Bieniarz K., Epler P. Zoologia Tom V, Ryby. Leksykon popularnonaukowy. Wydawnictwo Albatros, Kraków 2004	
		Nelson J.S. Fishes of the World. 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	<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> <p>Gąsowska M., 1962. Kąglouste 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>
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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