

Subject card

Subject name and code	Biology of Fishes - lecture, PG_00118085						
Field of study	Oceanography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2027/2028		
Education level	Bachelor'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	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		2.0		
Learning profile	academic		Assessment form		exam		
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	30.0	0.0	0.0	0.0	0.0	30
	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	30		7.0		10.0	47
Subject objectives	Familiarization with the basic issues in the field of general ichthyology						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	OCEANL3-W01		knows and understands the terminology appropriate for ichthyology (in Polish, English and Latin) at an advanced level		[SW4] test/exam - oral or written		

Subject contents	Subject of interest in ichthyology. Occurrence and diversity of fish. The most important groups of modern fish, their origin and development. Fish taxonomy and systematic nomenclature. Fish swimming mechanism. Skeleton and muscles. Buoyancy (floating) of fish. Gas exchange and circulatory system. Blood. Respiration. Osmoregulation and ion exchange. Excretion. Food and nutrition. Digestive. Reproduction. Development and growth. Senses and communication. Endocrine organs. Hormonal regulation. Central nervous system. Genetics and evolution. Ecology and zoogeography. The role of fish in the Baltic Sea ecosystem.		
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., 2000. Ryby słodkowodne Polski. Państwowe Wydawnictwo Naukowe. Warszawa 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 Gąsowska M., 1962. Kręglouste 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
	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 Wiley & Sons. New York, Chichester, Brisbane, Toronto
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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