University of Gdańsk

Subject card

Subject name and code	Biology of Fishes - lecture, PG_00205294		
Field of study	Oceanography		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2029/2030
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, prof. UG	
	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	2.0	18.0	50

Subject objectives

Familiarization with the basic issues in the field of general ichthyology

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANL3-W01] has an advanced knowledge and understanding of the terminology used in oceanography and related exact and natural sciences (in Polish and a selected foreign language)	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. Krągłouste 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 Willey & Sons. New York, Chichester, Brisbane, Toronto
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.