University of Gdańsk

Subject card

Subject name and code	Basic Biochemistry and Genetics of Cultured Organisms - laboratory classes, PG_00201310		
Field of study	Aquaculture – Business And Technology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Subject group related to practical vocational preparation
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	practical	Assessment form	credit
Conducting unit	Department of Marine Ecosystems Functioning -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Katarzyna Smolarz, prof. UG	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	30.0	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

C1. Analysis of the biochemical composition of aquacultured organisms.

C2. Cytogenetic techniques used in breeding invertebrates, identification of abnormalities in reproductive cell division.

C3. The use of molecular markers in breeding (estimation of genetic variability in breeding material, creation of criteria for the selection of reproductive material, selection supported by molecular markers).

Learning outcomes

Course outcome	Subject outcome	Method of verification
[AKWAL3_W03] has an advanced understanding of the conceptual categories and terminology related to the biological basis of aquatic organisms breeding, as well as concepts directly relevant to the practical applications of this knowledge	the student knows and understands the conceptual categories and terminology regarding the biological basis of breeding aquatic organisms in the field of biochemistry and genetics, as well as concepts directly related to the practical applications of this knowledge (program content: C1-C3)	[SW4] test/exam - oral or written [SW3] text preparation/written work
[AKWAL3-K03] is ready to follow the ethical principles in biological research and adhere to the principles of intellectual honesty	the student is ready to comply with the principles of ethics in biological research and the principles of intellectual honesty (program content: C1-C3).	[SK1] oral statement/conversation/ discussion
[AKWAL3-U07] can come to the right conclusions on the basis of available data	the student is able to make correct conclusions based on available biochemical and genetic data regarding breeding activities (program content: C1-C3).	[SU4] test/exam - oral or written

Subject contents

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Prerequisites and co-requisites

Systematics and basics of biology of breeding organisms (Invertebrates).

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
knowledge of the material covered in classes	51.0%	80.0%
report	51.0%	20.0%

Recommended reading

Basic literature	A. Literatura wymagana do ostatecznego zaliczenia zajęć: Brown T., 2001, Genomy. Wydawnictwo Naukowe PWN, Warszawa. Charon K., Świtoński H., 2006, Genetyka zwierząt. Wydawnictwo Naukowe PWN, Warszawa. Gajewski W., 1987, Genetyka ogólna i molekularna. Wydawnictwo Naukowe PWN, Warszawa. Kłyszejko-Stefanowicz Leokadja, Ćwiczenia z biochemii, 2013, Wydawnictwo Naukowe PWN Węgleński Piotr, Genetyka molekularna, 2012, Wydawnictwo Naukowe PWN
Supplementary literature	none
eResources addresses	

Example issues/ example questions/ tasks being completed

none

Work placement

Not applicable