University of Gdańsk

Subject card

Subject name and code	Scientific Project Laboratory - laboratory classes, PG_00201331						
Field of study	Aquaculture – Business And Technology						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
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	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		3.0		
Learning profile	practical		Assessment form		credit		
Conducting unit	Laboratory of Ecophysiology and Bioenergetics -> Department of Marine Ecology -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Monika Normant-Saremba				
	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		4.0		41.0	75
Subject objectives	Learning the rules for preparing applications for financing a research and development project related to the culture of plants and algae, invertebrates and fish, based on biological conditions, engineering, legal, socio-economic, environmental and marketing aspects.						

<table>
<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[AKWAL3_W04] has an advanced understanding of the principles of optimization of breeding methods for aquatic invertebrates, and has acquired theoretical and practical knowledge of the diagnostic methods used</td><td>Knows and understands the principles of optimizing methods in the aquaculture of plants, algae, invertebrates and fish.</td><td>[SW1] oral statement/ conversation/discussion
[SW2] presentation/project/paper/ report</td></tr>
<tr><td>[AKWAL3-W12] knows and understands the role of aquaculture in the modern economy and its impact on the natural environment</td><td>Knows and understands the role of aquaculture related to the production of various plants and algae, invertebrates and fish in the modern economy and its impact on the natural environment.</td><td>[SW1] oral statement/ conversation/discussion
[SW2] presentation/project/paper/ report</td></tr>
<tr><td>[AKWAL3-K05] student is ready to appreciate the practical application of acquired knowledge</td><td>Is ready to appreciate the practical application of acquired knowledge in the field of aquaculture of plants and algae, invertebrates and fish.</td><td>[SK1] oral statement/conversation/ discussion
[SK2] presentation/project/paper/ report</td></tr>
<tr><td>[AKWAL3-U04] can select and use available sources of information, and understand the literature on aquaculture in a broad sense</td><td>Is able to select and use available sources of information on the aquaculture of plants and algae, invertebrates and fish.</td><td>[SU1] oral statement/conversation/ discussion
[SU2] presentation/project/paper/ report</td></tr>
<tr><td>[AKWAL3-U08] can solve standard, atypical or complex problems on the basis of acquired knowledge and data sources</td><td>Based on his knowledge and data sources is able to solve problems tasks related to aquaculture of plants and algae, invertebrates and fish.</td><td>[SU1] oral statement/conversation/ discussion
[SU2] presentation/project/paper/ report</td></tr>
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<tr><td>Subject contents</td><td>Learning the principles of preparation and implementation of various types of projects related to aquaculture of selected species of plants and algae, invertebrates and fish, taking into account the substantive assumptions and goal, expected results, methods used, necessary materials and equipment, research schedule, project cost estimate, etc., prepared on the basis of biological conditions and engineering and legal aspects. Classes are carried out in two of the three proposed thematic blocks (plants and algae; invertebrates; fish), selected by students.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Knowledge of the biology, ecology and physiology of farmed organisms, as well as the legal basis and socio-economic aspects of aquaculture.</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Project/ presentation block 1</td><td>51.0%</td><td>50.0%</td></tr>
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<tr><td>Recommended reading</td><td>
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<tr><td>Basic literature</td><td>Publicly available and current subject literature on the methodology of conducting research and development projects, mass culture of plants and algae, invertebrates and fish, as well as legal, economic and environmental issues related to their breeding.</td></tr>
<tr><td>Supplementary literature</td><td>Publications from journals International Journal of Fisheries and Aquaculture, Aquaculture, Aquaculture Research, Aquaculture International, etc.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>Preparation of a project regarding for example: (1) micro- and macroalgae cultivation, (2) multitrophic aquaculture, (3) culture of crossbred salmonids with improved breeding characteristics, with particular emphasis on resistance to viral diseases, (4) testing the effect of a dietary supplement on selected growth indicators in invertebrate.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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