

**Subject card**

<b>Subject name and code</b>	Social and economic aspects of aquaculture - seminary, PG_00075881						
<b>Field of study</b>	Aquaculture – Business And Technology						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>			2025/2026		
<b>Education level</b>	undergraduate studies	<b>Subject group</b>					
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	3	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	practical	<b>Assessment form</b>					
<b>Conducting unit</b>	Pracownia Ekofizjologii i Bioenergetyki -> Katedra Ekologii Morza -> Faculty of Oceanography and Geography						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Joanna Hegele-Drywa				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Additional information:						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		15.0		15.0	60
<b>Subject objectives</b>	Learning and understanding the interaction between aquaculture and society, the economy, culture and the environment.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[AKWAL3-K06] is ready to think and act in an entrepreneurial manner in terms of actions taken, including social initiatives, cooperation for environmental sustainability and sustainable development	student is prepared to create and implement economic and social initiatives in the field of aquaculture resource management, based on ecological sustainability and sustainable development	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report
	[AKWAL3-U07] can come to the right conclusions on the basis of available data	student is able to make correct inferences on the basis of the available data	[SU2] presentation/project/paper/report [SU5] implementation of a problem task
	[AKWAL3-U09] can use specialist language in discussions with other aquaculture, legal or management experts	student is able to use specialised language in discussions with aquaculture, legal and management professionals	[SU1] oral statement/conversation/discussion
	[AKWAL3-U12] can interact and work in a group, and assume different roles	student can interact and work in a group, taking on different roles	[SU8] observation of student's independent or team work
	[AKWAL3_W01] knows and understands the relationship between the achievements in the selected fields of science and disciplines of natural sciences, and the possibility of their application in socio-economic life	student knows and understands the relationship between the achievements of natural sciences and the possibility of their use for economic activity while taking into account the social conditions for the realisation of such activity	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[AKWAL3-W12] knows and understands the role of aquaculture in the modern economy and its impact on the natural environment	student knows and understands the role of aquaculture in the modern economy and its impact on the natural environment	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report
[AKWAL3_W10] knows and understands the general principles of creation and development of forms of individual entrepreneurship, using knowledge from the fields of science and scientific disciplines, relevant to aquaculture	student knows and understands the general principles for the creation and development of forms of business activities using knowledge of the scientific fields and disciplines relevant to aquaculture	[SW2] presentation/project/paper/report [SW3] text preparation/written work	
Subject contents	<ol style="list-style-type: none"> <li>1. Socio-economics, socio-economic research and its relevance to the planning of new aquaculture investments.</li> <li>2. Socio-economic impact categories (natural capital, human capital, physical capital, social capital and financial capital) and methods used to gain information in each category.</li> <li>3. Socio-economic and environmental dimensions of shrimp aquaculture in different countries.</li> <li>4. Socio-economic and environmental dimensions of microalgal and seaweed aquaculture in different countries.</li> <li>5. Socio-economic and environmental dimensions of aquaponics in different countries.</li> <li>6. Estimating the socio-economic impact of aquaculture using multi-criteria analysis using the analytical hierarchy process.</li> </ol>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	projects or presentations	51.0%	80.0%
	activity during classes	51.0%	10.0%
	correct completion of the worksheets	51.0%	10.0%

Recommended reading	Basic literature	<p>Bhari B., Visvanathan C., 2018. Sustainable Aquaculture: Socio-Economic and Environmental Assessment. In: Hai F., Visvanathan C., Boopathy R. (eds) Sustainable Aquaculture. Applied Environmental Science and Engineering for a Sustainable Future. Springer, Cham</p> <p>Bunting S., 2013. Principles of Sustainable Aquaculture: Promotion Social, Economic and Environmental Resilience. Routledge</p> <p>Krause G., Buck B.H., Breckwoldt A., 2019. Socio-economic Aspects of Marine Bivalve Production. In: Smaal A., Ferreira J., Grant J., Petersen J., Strand Ø. (eds) Goods and Services of Marine Bivalves. Springer, Cham</p> <p>Krause G., Mikkelsen E., 2017. The Socio-economic Dimensions of Offshore Aquaculture in a Multi-use Setting. In: Buck B., Langan R. (eds) Aquaculture Perspective of Multi-Use Sites in the Open Ocean. Springer, Cham</p>
	Supplementary literature	<p>Andalecio M.N., 2010. Multi-criteria decision models for management of tropical coastal fisheries. A review. Agronomy for Sustainable Development, Springer Verlag/EDP Sciences/INRA, 2010, 30 (3), 10.1051/agro/2009051.hal-00886514</p> <p>Burbridge P., Hendrick V., Roth E., Rosenthal H., 2001. Social and economic policy issues relevant to marine aquaculture. J. Appl. Ichthyol. 17, 194-206.</p> <p>Neiland A.E., Shaw S.A., Bailly D., 1991. The social and economic impact of aquaculture: a European review. Aquaculture and Environment 16, 469-472.</p> <p>Nakyewa P., Akello F., Otim R., Ndhokero J., Mbilingi B., Akumu J., Ocaya W., MusambyaM., Lanta D., Wawa I., Adhiambo S.C., Okwara J., 2019. Socio-economic Aspects of Recirculating Aquaculture Systems (RAS) and Membrane Bioreactor (MBR) Technologies in the Lake Victoria Basin.</p>
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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