University of Gdańsk

Subject card

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| Subject name and code | Social and Economic Aspects of Aquaculture - seminar, PG_00201320 | | |
| 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<br>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 | Laboratory of Ecophysiology and Bioenergetics -> Department of Marine Ecology -> Faculty of Oceanography and Geography -> Rector | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr Joanna Hegele-Drywa | |
| | 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

Additional information:

seminar, presentation, discussion

**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**

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_W01] has an advanced understanding of the links between achievements in selected fields of science and natural science disciplines, and their potential applications 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 and economic conditions for the realisation of such activity | [SW1] oral statement/ conversation/discussion<br>[SW2] presentation/project/paper/ report<br>[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 social and economic role of aquaculture in the modern economy and its impact on the natural environment | [SW1] oral statement/ conversation/discussion<br>[SW2] 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 based on data concerning the impact of aquaculture on society and the economy | [SU2] presentation/project/paper/ report<br>[SU5] implementation of a problem task |
| [AKWAL3-U12] can interact and work in a group, and assume different roles | student can interact and work in a group, performing various functions within the team, including managerial roles | [SU8] observation of student's independent or team work |

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| Subject contents | 1. Socio-economics, socio-economic research and its relevance to the planning of new aquaculture investments.<br><br>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.<br><br>3.Socio-economic and environmental dimensions of shrimp aquaculture in different countries.<br><br>4. Socio-economic and environmental dimensions of microalgal and seaweed aquaculture in different countries.<br><br>5. Socio-economic and environmental dimensions of aquaponics in different countries.<br><br>6. Estimating the socio-economic impact of aquaculture using multi-criteria analysis using the analytical hierarchy process. |
| Prerequisites and co-requisites | |

**Assessment methods and criteria**

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| correct completion of the worksheets | 51.0% | 10.0% |
| activity during clases | 51.0% | 10.0% |
| projects or presentations | 51.0% | 80.0% |

**Recommended reading**

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| Basic literature | 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<br>Bunting S., 2013. Principles of Sustainable Aquaculture: Promotion Social, Economic and Environmental Resilience. Routledge<br>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<br>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 |
| Supplementary literature | 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<br>Burbridge P., Hendrick V., Roth E., Rosenthal H., 2001. Social and economic policy issues relevant to marine aquaculture. J. Appl. Ichthyol. 17, 194-206.<br>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.<br>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. |
| eResources addresses | |

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| Example issues/ example questions/ tasks being completed | |
| Work placement | Not applicable |

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