University of Gdańsk

Subject card

| | | | |
|---|---|---|---|
| Subject name and code | Aquaculture Microbiology - lecture, PG_00201307 | | |
| 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 | exam |
| Conducting unit | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr Anna Toruńska-Sitarz | |
| | 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**

To learn about the various groups of aquatic microorganisms and the nature of their interactions with other organisms. To learn about the role of microorganisms occurring in aquaculture systems of higher organisms and the ways they can be used to improve aquaculture practices.

**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 | W_1 [K_W03] The student knows and understands the diversity of aquatic microorganisms, as well as the conceptual categories and terminology related to the biological foundations of their cultivation, along with the concepts directly applicable to the practical use of this knowledge. | [SW4] test/exam - oral or written |

<table>
<tr><td>Subject contents</td><td>1. Structure, diversity and ecological functions of aquatic microorganisms.<br><br>2. Mechanisms regulating the abundance, biomass and diversity of microorganisms.<br><br>3. Methods used in microbiological studies.<br><br>4. Microbiological processes and water quality in aquaculture.<br><br>5. Use of "beneficial microorganisms" in aquaculture (probiotics, feed, sensors etc.)<br><br>6. Pathogenic microorganisms in aquaculture.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>none</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>Exam</td><td>51.0%</td><td>80.0%</td></tr>
<tr><td>Group work (active learning)</td><td>51.0%</td><td>20.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>Mikrobiologia ogólna H.G. Schlegel; Mikrobiologia środowisk M.K. Błaszczyk; Aquaculture Microbiology and Biotechnology D. Montet, R.C. Ray; Scientific papers</td></tr>
<tr><td>Supplementary literature</td><td>Mikrobiologia wód G. Rheinheimer; Łowcy mikrobów P. de Kruif; Beneficial Microorganisms in Agriculture, Aquaculture and Other Areas M.T.Liong</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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