University of Gdańsk

Subject card

Subject name and code	Marine and Inland Fisheries - laboratory classes, PG_00201227		
Field of study	Aquaculture – Business And Technology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
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	1	Language of instruction	Polish
Semester of study	1	ECTS credits	1.0
Learning profile	practical	Assessment form	credit
Conducting unit	Laboratory of Aquaculture -> Department of Marine Biology and Biotechnology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Ligia Panasiak	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	15.0	0.0	0.0	0.0	15

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	15	1.0	9.0	25

Subject objectives

Introducing students to the environmental conditions of seas and estuaries (including basic ecology principles), fishing methods in marine and estuarine waters, marine fish production, inland fisheries, including fishing gear used in inland waters. Presenting to students the characteristics of fish production in inland and marine waters, conducting hydrological research of waters, and their potential use in fish production.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[AKWAL3-U12] can interact and work in a group, and assume different roles	Students can collaborate and work in a group, preparing presentations on selected topics related to marine and inland fisheries, assuming different roles within the team.	[SU8] observation of student's independent or team work
[AKWAL3-U04] can select and use available sources of information, and understand the literature on aquaculture in a broad sense	Students can select and utilize available sources of information describing topics related to marine and inland fisheries.	[SU8] observation of student's independent or team work
[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	Students are familiar with and understand the connections between the accomplishments of selected natural science disciplines and their potential applications in analyzing and managing marine and inland fisheries.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[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	Students are familiar with and understand the conceptual categories and terminology of marine and inland fisheries.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[AKWAL3_W06] has an advanced understanding of techniques, research methods and tools used in aquaculture	Students are familiar with and discuss the techniques, research methods, and tools used in marine and inland fisheries.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report

Subject contents

1. Fishery production in inland and marine waters.

2. Hydrological studies of waters and the possibility of their use in fisheries production.

3. Ecological characteristics of fish populations. Fishing mortality.

4. Review of fishery tools and equipment.

Prerequisites and co-requisites

Basic knowledge of fish biology and ecology

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test	51.0%	50.0%
Presentation with accompanying written material	51.0%	50.0%

Recommended reading	Basic literature	1. FAO. 2022. The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome, FAO. https://doi.org/10.4060/cc0461en 2. Gulland J. A., The Fish Resources of the Ocean, FAO, 1971, 3. Rybactwo śródlądowe - praca zbiorowa pod red. J.A. Szczerbowskiego, 2008, Wyd. IRS, 4. Cetinić Perica; Świniarski Józef, Technologia połowu organizmów morskich, Gdansk, 1993 https://smp.am.szczecin.pl/dlibra/publication/1037/edition/667/content, 5. Filipiak J., Sadowski J., Trzebiatowski R., Gospodarka rybacka na wodach otwartych, AR, Szczecin, 1999, 6. Aktualne problemy rybactwa. Red. A. Wołos - Wyd. IRS, 1994.

	Supplementary literature	1. Rudnicki A, Poradnik rybaka jeziorowego, PWRiL, Warszawa, 1957, 2. Caddy J.F., Griffiths R.C., Living marine resources and their sustainable development: some environmental and institutional perspectives, FAO, Rome, 1995, 3. Leszek Myszkowski. Obraz polskiej akwakultury w 2021 roku na podstawie badań statystycznych przy zastosowaniu kwestionariusza RRW-22. XLVII Szkolenie - Konferencja Hodowców Ryb Łososiowatych 13-14 października 2022, Gdynia, 4. Niezależne sprawozdanie z obrotu ryb i skorupiaków krajowej akwakultury - ocena dobrych, zrównoważonych perspektyw rynkowych Opracowanie wykonane w ramach Umowy nr BBF.IV.320.V. 10.2018/2018/790 zawartej w dniu 29.05.2018 r. w Warszawie pomiędzy Ministerstwem Gospodarki Morskiej i Żeglugi Śródlądowej a Instytutem Rybactwa Śródlądowego im. Stanisława Sakowicza w Olsztynie Olsztyn, czerwiec 2018 r. https://www.arimr.gov.pl/fileadmin/pliki/PO-ryby/PO_RYBY_2014-2020/Pliki_do_pobrania/Niezalezne_sprawozdanie_z_obrotu/Opracowanie-RybyMGM-2018.pdf, 5. Mirosław Kuklik - Narzędzia i metody połowów w rybołówstwie przybrzeżnym http://plgr.pl/UserFiles/rybak_271-312.pdf. 6. Czarkowski, T. K., Kucharczyk, D., Kupren, K., Żarski, D., Król, R., Targońska, K., & Aszyk, P. (2010). Podstawy akwakultury-poradnik dla rolników praz innych mieszkańców obszarów wiejskich. *W-MODR w Olsztynie*. 7. Arlinghaus, R., Johnson, B. M., & Wolter, C. (2008). The past, present and future role of limnology in freshwater fisheries science. *International Review of Hydrobiology*, *93*(45), 541-549. 8. Antychowicz, J., & Mazur, W. (2010). Podstawy hodowli ryb łososiowatych. *Życie Weterynaryjne*, *85*(10). 9. Kapetsky, J. M. (2000). Present applications and future needs of meteorological and climatological data in inland fisheries and aquaculture. *Agricultural and Forest meteorology*, *103*(1-2), 109-117, 10. Ryszard Wojda, 2015 - Chów i hodowla karpia. Wyd. IRS, s. 457, 11. K. Goryczko, J. Grudniewska 2015 Chów i hodowla pstrąga tęczowego Wyd. IRS, 2015, s. 173; 12. Ryszard Kolman, 2010 - JESIOTRY. Chów i hodowla. Poradnik hodowcy. II wydanie, Rozszerzone i poprawione, Wyd. IRS, s. 134.
	eResources addresses	

Example issues/ example questions/ tasks being completed	1. Fish production conditions in inland waters and population density, 2. Reproduction, mortality, age structure, population development of fish, lifespan, and growth rate, 3. Population movement, production, species interactions, fish feeding habits, impact of fishing on fish populations, 4. Overview of aquatic organisms produced in aquaculture, 5. Inland water fisheries (basic principles and elements of management, lake, river, and reservoir fisheries, pond culture, major species caught in Poland, concept of sustainable fisheries), 6. Basics of salmonid aquaculture (history, production technology, characteristics of trout farming facilities, major salmonid species produced alongside rainbow trout), 7. Basics of carp farming (Cyprinus carpio) (history, technology, characteristics of carp farming facilities, other species produced in polyculture with carp), 8. Fish and invertebrate mariculture (history, major species produced, production methods, and scale), 9. Importance of limnology and hydrometeorology in fisheries, 10. Importance of potamology and krenology in fisheries, 11. Stocking and fish conservation, 12. Biomanipulation as a fishery tool for lake restoration, 13. List and briefly describe tools used in marine and inland fisheries for catching aquatic organisms.
Work placement	Not applicable

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