

Subject card

Subject name and code	Traditional Maritime Sectors, PG_00171503						
Field of study	Economics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Specialty subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Ernest Czernański				
	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		10.0		25.0	50
Subject objectives	The purpose of the course is to present students with the economic aspects of the development of forward-looking industriesmaritime economy such as biotechnology or aquaculture. Students will gain knowledge regarding the economic, legal, social and ecological conditions of their development. They will also be presented with economic instruments and programs of their support in Poland and the Baltic Region						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[EKONMU2_W01] has an in-depth knowledge of the nature of social sciences and their place in the system of sciences; understands the differences between contemporary trends in economic thought; knows the claims of contemporary economic theories	The student has in-depth knowledge of the different types of existing entities and organizations economic entities and organizations in the sector of renewable energy sources, as well as expanded knowledge of offshore wind farms	[SW4] test/exam - oral or written
	[EKONMU2_W02] has an in-depth knowledge of various types of existing economic entities and organisations as well as an extended knowledge of public institutions	The student has an in-depth knowledge of the nature of marine science, its place in the system of sciences, understands the differences between contemporary currents of economic thought, knows the principles of function of offshore maritime sectors	[SW4] test/exam - oral or written
	[EKONMU2_K03] inspires and organises preparation of economic and social projects, following the idea of sustainable development, reconciling legal, economic, ecological, political and social requirements	The student inspires and organizes the preparation of economic and social projects related to maritime sectors, in accordance with the idea of sustainable development, being able to reconcile legal, economic, ecological, political and social requirements	[SK4] test/exam - oral or written
	[EKONMU2_U02] can use acquired knowledge to describe and analyse the causes and course of economic and social processes and phenomena, and can formulate his/her own opinions and critically select data and analysis methods based on the achievements of economic and social sciences	Students are able to use their knowledge to describe and analyze the causes and course of economic and social processes and phenomena, and is able to formulate own opinions and critically select data and methods of analysis on the basis of the achievements of the sector maritime and offshore industry	[SU4] test/exam - oral or written
	[EKONMU2_K02] is aware of the level of his/her knowledge in the field of economics; understands the need to extend and update this knowledge throughout his/her life	Student inspirowuje i organizuje przygotowanie projektów gospodarczych i społecznych związanych z sektorami morskimi, zgodnie z ideą zrównoważonego rozwoju, będąc w stanie pogodzić wymagania prawne, ekonomiczne, ekologiczne, polityczne i społeczne	[SK4] test/exam - oral or written
	[EKONMU2_U01] can creatively interpret and explain economic and social phenomena and relations between them, using acquired knowledge of economics, finance and management sciences	Students can creatively interpret and explain economic and social phenomena and the relations between these phenomena, using his/her knowledge of the concept of sustainable development	[SU4] test/exam - oral or written
	[EKONMU2_K01] recognises the importance of knowledge in the field of economics in the process of identifying and solving economic problems and of consulting experts when having difficulties in solving them independently	The student recognizes the importance of knowledge of offshore marine industries in the process of identifying and solving economic problems and consulting experts in case of difficulties in solving them independently	[SK4] test/exam - oral or written

Subject contents	1. Analysis of the legal status and organizational and economic conditions. 2. Development trends, innovations and sources of funding for the development of aquaculture and biotechnology in Poland. 3. Algae - introduction including definition, types. Algae - market. Algae - properties, application, potential: food industry, Cosmetic industry, Medical products, Agriculture, Alternative energy sources. Industrial products, Other. Algae production systems/technologies. Regulations 4. economic models for aquaculture and biotechnology development. 5. case studies from EU countries, biotechnology and mariculture development. 6. support from public funds for mariculture and biotechnology development 7. mariculture and biotechnology market in Poland 8. analysis of the current state of aquaculture (strengths, weaknesses, opportunities, identification of needs) 9. monitoring and reporting system of the AQ 2027 Strategy Any doubts regarding the issues discussed during classes can be discussed during consultations.		
Prerequisites and co-requisites	Ability to make inferences and think logically.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	100.0%
Recommended reading	Basic literature	Zimna J., Przedrzymirska J., Matczak M., Zaucha J. (2013). Mapa Drogowa rozwoju polskich obszarów nadmorskich opartego na czerpaniu pożytków z innowacyjnych form wykorzystania zasobów Bałtyku. Gdańsk: Instytut Morski w Gdańsku, s. 62 Schultz-Zehden A., Matczak M. (2012). Compendium. Gdańsk: Maritime Institute in Gdańsk, 260s. SUBMARINER Network Mussels Working Group, (2019). Mussel farming in the Baltic Sea as an environmental measure. Berlin, Germany. Schultz-Zehden A., Steele A., Weig B. (2019) How to turn EcoSystem Payments to Baltic Mussel Farms into reality? SUBMARINER Network https://www.submariner-network.eu/images/BBG_GoA53_Ecosystem_services_20190418.pdf Schultz-Zehden A. et al (2021) SUBMARINER ROADMAP BEYOND 2021. SUBMARINER Network https://submariner-network.eu/images/sub-roadmap_2021-initial_layout-211123.pdf Johnson K., Dalton G. and Masters (Editors) I. (2018) Building Industries at Sea: Blue Growth and the New Maritime Economy, River Publishers Series in Renewable Energy https://www.riverpublishers.com/pdf/ebook/RP9788793609259.pdf Instytut Rybactwa Śródlądowego im. S. Sakowicza w Olsztynie, Akwakultura 2027 Plan strategiczny rozwoju chowu i hodowli ryb w Polsce w latach 2021-2027 Kulikowski T., Jakubowska M., Krupska J., Psuty I., Szulecka O., Guide to macroalgae cultivation and use in the Baltic Sea Region, National Marine Fisheries Research Institute, Gdynia 2021 Bielenia M.: The role of recyclates in the polyurethane industry: environmental and economic aspects, Zeszyty Naukowe / Akademia Morska w Szczecinie, Wydawnictwo Naukowe Akademii Morskiej w Szczecinie, nr 67 (139), 2021, Czernański E., Bielenia M., Bochynek C., Borodo A., Cailliaux Ad, Cirella G., Feyen E., Jankiewicz J., Normio L., Oniszczyk-Jastrząbek A.: E-book on combined transport in the Baltic Sea Region, 2021, Wydawnictwo Uniwersytetu Gdańskiego, ISBN 978-83-7939-023-6, 168	
	Supplementary literature	Źródła internetowe: https://maritime-spatial-planning.ec.europa.eu/sectors https://www.submariner-network.eu/what-we-do/23-roadmap/topics/967-blue-biotechnology-topic https://www.submariner-network.eu/ https://www.submariner-network.eu/what-we-do/deliverables Questionnaire_EUAquacultureGuidelines2020_04_03_2021_EN_draft	

	eResources addresses	
Example issues/ example questions/ tasks being completed	Development of innovation and sources of financing for the development of aquaculture and biotechnology in Poland Algae Economic models of aquaculture and biotechnology development Public support for the development of mariculture and biotechnology Mariculture and biotechnology market Analysis of the current state of aquaculture Monitoring and reporting system of the AQ Strategy 2027	
Work placement	Not applicable	

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