

Subject card

Subject name and code	Ecophysiology of marine plants - lecture, PG_00117867						
Field of study	Oceanography						
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 Optional subject group Subject group related to scientific research in the field of study		
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		3.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Department of Marine Ecosystems Functioning -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Filip Pniewski				
	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		10.0		50.0	90
Subject objectives	To learn and understand the basic physiological processes of marine algae (with an indication of the differences between them and cyanobacteria and higher plants) and the influence of environmental factors (such as light, temperature, salinity and nutrients) on their efficiency.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[OCEANMU2-W01] knows and understands in-depth specialized terminology used in oceanography and related sciences (in Polish and a selected foreign language)		Knows and understands to an in-depth degree the specialized terminology used in describing metabolic processes in marine algal ecophysiology.		[SW4] test/exam - oral or written		
Subject contents	1. Functional relationships between plants and the marine environment. 2. Mechanisms of plant response to environmental factors and their changes. 3. Photosynthesis, respiration, photorespiration, photoprotective processes (including the xanthophyll cycle), photoinhibition. 4. Primary production in the marine environment. 5. algal physiology vs. practical use of algal biomass in environmental protection.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	written exam		51.0%		100.0%		

Recommended reading	Basic literature	1. Renk Henryk - Fotosynteza w Fitoplanktonie Bałtyku, WSP, Słupsk, 1989 2. Renk Henryk Produkcja pierwotna południowego Bałtyku MIR, Studia i Materiały, Seria A, Numer 35, Gdynia 2000. 3. Salisbury Franck B., Ross Cleon - Fizjologia roślin, PWRiL, Warszawa, 1975 4. Schulze E-D. Caldwell M.M. (eds.) - Ecophysiology of Photosynthesis, Springer-Verlag, Berlin, 1994 5. Kirk J.T.O. - Light and photosynthesis in aquatic ecosystems, Cambridge Univ. Press, Cambridge, 1983, 1994 6. Dring - The biology of marine plants - Cambridge Univ. Press, Cambridge, 1992
	Supplementary literature	1. Renk Henryk - Fotosynteza w Fitoplanktonie Bałtyku, WSP, Słupsk, 1989 2. Renk Henryk Produkcja pierwotna południowego Bałtyku MIR, Studia i Materiały, Seria A, Numer 35, Gdynia 2000. 3. Salisbury Franck B., Ross Cleon - Fizjologia roślin, PWRiL, Warszawa, 1975 4. Schulze E-D. Caldwell M.M. (eds.) - Ecophysiology of Photosynthesis, Springer-Verlag, Berlin, 1994 5. Kirk J.T.O. - Light and photosynthesis in aquatic ecosystems, Cambridge Univ. Press, Cambridge, 1983, 1994 6. Dring - The biology of marine plants - Cambridge Univ. Press, Cambridge, 1992
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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