University of Gdańsk

Subject card

Subject name and code	Ecophysiology of Marine Plants - lecture, PG_00206177		
Field of study	Oceanography		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
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	35.0	75

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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