University of Gdańsk

Subject card

Subject name and code	Introduction to Environmental Photochemistry - lecture, PG_00205357		
Field of study	Oceanography		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor'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	3	Language of instruction	Polish
Semester of study	6	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Marine Environmental Protection -> Department of Chemical Oceanography and Marine Geology -> Faculty of Oceanography and Geography -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Waldemar Grzybowski	
	Teachers		

Lesson types

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

Familiarization with the basics of the impact of solar radiation on inanimate components of the environment and with the basic methods of observing these impacts

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANL3-W02] has a broad knowledge and understanding of physical, biological, chemical, and geological processes and phenomena occurring in aquatic environments, with particular emphasis on the marine environment	has knowledge about solar radiation (quantitative and qualitative) and factors determining its variability, knows the basic ones mechanisms of the impact of solar energy on environmental elements (content program: A.1-4)	[SW4] test/exam - oral or written

Subject contents

A. Topics of the lecture A.1 interaction of electromagnetic radiation with matter; chemical properties of electronically excited substances A.2 basic laws and concepts used in photochemistry A.3 characteristics of solar radiation (spatial and temporal diversity); A.4 specificity of photochemical processes in the environment, absorption of solar radiation in natural waters

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
exam	51.0%	100.0%

Recommended reading

Basic literature	Waldemar Grzybowski - Transformation of dissolved organic matter under the influence of solar radiation, 2006, UG Publishing House, Gdańsk
Supplementary literature	Blough, N.V., del Vecchio, R., 2002. Chromophoric DOM in the coastal environment. In: Hansell, D.A., Carlson, C.A. (Eds.), Biogeochemistry of Marine Dissolved Organic Matter. Academic Press. https://doi.org/10.1016/B978-012323841-2/50012-9

	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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