

Subject card

Subject name and code	The basics of organic chemistry for oceanographers - lecture, PG_00159311						
Field of study	Oceanography						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		1.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Laboratory of Toxic Substances Transformation -> Department of Chemical Oceanography and Marine Geology -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Marta Staniszevska				
	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		2.0		10.0	27
Subject objectives	To familiarize the student with basic knowledge in the field of organic chemistry.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	OCEANL3-W01		knows and understands specialized terminology related to organic chemistry		[SW4] test/exam - oral or written		
	OCEANL3-U01		is able to use current terminology in the field of organic chemistry		[SU4] test/exam - oral or written		
Subject contents	A.1 Structure of the carbon atom, hybridization of the carbon atom, chemical bonds in organic compounds, intermolecular interactions in organic compounds.A.2 Classification of organic compounds. Structure, nomenclature, properties, origin, homologous series, isomerism of basic groups of organic compounds: carbon and hydrogen compounds: hydrocarbons; hydrocarbon derivatives: compounds containing oxygen, halogen, others: compounds containing nitrogen, multifunctional compounds. Concepts: saturated/unsaturated, acyclic/cyclic, non-aromatic/aromatic compounds.A.3 The importance of selected compounds and/or organic groups for the environment, including: hydrocarbons (benzene and its derivatives, crude oil, polycyclic aromatic compounds), volatile organohalogen compounds (trihalomethanes, freons, halons), organometallic compounds.A.4 Cycle of selected organic compounds in the marine environment (atmosphere, water, sediment, organisms). Environmental factors influencing the distribution of selected organic compounds in the sea.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	written test		51.0%		100.0%		

Recommended reading	Basic literature	1. Morrison T.R., Boyd N.R., Organic Chemistry, PWN Warsaw 1994.2. Mastalerz P., Textbook of organic chemistry, Wydawnictwo Chemiczne, Wrocław 1996.3. Kupryszewski G., Introduction to organic chemistry, PWN, 1979, Warsaw
	Supplementary literature	-
	eResources addresses	
Example issues/ example questions/ tasks being completed	Ile wiązań może maksymalnie utworzyć atom węgla ? Wskaż wiązania kowalencyjne, kowalencyjne-spolaryzowane, jonowe w związkach organicznych. Dlaczego alkohole ulegają asocjacji ? Co to są węglowodory pirogenne, a co to petrogenne? Podaj źródła ropy naftowej w morzu. Co to są klatraty metanu. Zdefiniuj węglowodory nasycone, nienasycone, cykliczne, acykliczne, aromatyczne. Jak budowa związku, obecność grup funkcyjnych wpływają na właściwości głównych grup związków organicznych. Jak zmieniają się właściwości alkoholi w zależności od długości łańcucha. Wyjaśnij pojęcie hydrofobowy i hydrofilowy - podaj przykłady związków. Zdefiniuj pojęcie polimer i tworzywo sztuczne. Zagrożenie dla środowiska morskiego odpadami z tworzyw sztucznych.	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.