

**Subject card**

<b>Subject name and code</b>	, PG_00121057						
<b>Field of study</b>	Oceanography						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>			2025/2026		
<b>Education level</b>	postgraduate studies	<b>Subject group</b>			Optional subject group		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	4	<b>ECTS credits</b>			1.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>					
<b>Conducting unit</b>							
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Anna Panasiuk				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	20.0	0.0	0.0	0.0	0.0	20
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	20		22.0		7.0	49
<b>Subject objectives</b>	The aim of the lecture is to familiarize students with modern algorithms used in Earth Sciences.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[OCEANMU2-W04] knows and understands the latest research trends in the field of oceanography as well as the possibilities of practical application of scientific achievements	Knows and understands in depth the latest research trends in the field of application of artificial intelligence and machine learning techniques in oceanography, as well as the possibilities of practical application of scientific achievements related to the development of modern algorithms	[SW4] test/exam - oral or written
	[OCEANMU2-K03] is ready to effectively organize his/her own work, is active and persistent and punctuality in completing tasks, is ready to carrying out evaluation of their own activities	Is ready to effectively organize his/her own work, is active and is distinguished by perseverance and punctuality in preparing for lectures, is self-critical and draws conclusions based on self-analysis.	[SK1] oral statement/conversation/discussion
	[OCEANMU2-U02] can use scientific terminology fluently and appropriately in presenting and discussing problems in the field of oceanography	Is able to fluently and appropriately use scientific terminology in presenting and discussing problems related to the application of machine learning techniques in oceanography.	[SU3] text preparation/written work [SU4] test/exam - oral or written
	[OCEANMU2-U07] is able to communicate using various communication channels and techniques with specialists and non-specialists in the field of oceanographic issues	Is able to communicate using various channels and techniques with specialists and non-specialists in the field of application of machine learning algorithms in oceanography.	[SU3] text preparation/written work
	[OCEANMU2-U12] can independently expand and update oceanographic knowledge when planning and developing a professional career, as well as motivates others to deepen their knowledge	Is able to independently expand and update knowledge concerning the application of computational methods to solve research problems in oceanography, planning and developing one's own professional career, and motivates others to deepen their acquired knowledge by sharing acquired information.	[SU4] test/exam - oral or written
	[OCEANMU2-W03] knows and understands research methods used in oceanography and related sciences	Knows and understands in-depth research methods using machine learning algorithms in oceanography and related sciences	[SW4] test/exam - oral or written [SW3] text preparation/written work
[OCEANMU2-U05] is able to use source information in Polish and a selected foreign language, including archival and electronic databases, in the field of oceanographic issues, performs critical analysis and synthesis of information	Is able to use source information, in Polish and English, including archival and electronic databases, in the scope of application of machine learning techniques in assessment, performs critical analysis and synthesis of information.	[SU3] text preparation/written work	
Subject contents	1. Introduction to the concept of data-based modeling. 2. Basic machine learning algorithms. 3. Case studies of data-based modeling (based on selected scientific articles from the field of Earth Sciences)		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	determining the grade based on partial grades received during the semester	51.0%	100.0%
Recommended reading	Basic literature	The lecture is based on the latest scientific publications. The list of literature is created immediately before the beginning of the block of classes and is made available to students.	
	Supplementary literature	The lecture is based on the latest scientific publications. The list of literature is created immediately before the beginning of the block of classes and is made available to students.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/example questions/tasks being completed			
Work placement	Not applicable		

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