University of Gdańsk

Subject card

Subject name and code	Marine Meteorology - lecture, PG_00054225		
Field of study	Oceanography		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	postgraduate 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	1	Language of instruction	Polish
Semester of study	1	ECTS credits	1.0
Learning profile	academic	Assessment form	
Conducting unit	Faculty of Oceanography and Geography		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Janusz Filipiak	
	Teachers	dr Janusz Filipiak	

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	5.0	8.0	28

Subject objectives	To familiarize students with the physical processes and phenomena characteristic of the atmosphere over marine areas. To familiarize students with the aspects of ocean-atmosphere interactions relevant to marine processes and the basic methods and possibilities of using meteorological data in oceanography.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[OCEANMU2-U02] can use scientific terminology fluently and appropriately in presenting and discussing problems in the field of oceanography	Is able to use scientific terminology fluently and appropriately in presenting and discussing problems in the field of meteorology.	[SU4] test/exam - oral or written
[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 in-depth the specialist terminology used in atmospheric sciences; knows and understands in-depth the complex relationships between processes occurring in the sea and the atmosphere	[SW4] test/exam - oral or written
[OCEANMU2-W02] knows and understands complex processes and phenomena occurring in the marine environment, with particular emphasis on the coastal zone, as well as complex relationships between living and non-living elements of the aquatic environment	Knows and understands in-depth the specialist terminology used in atmospheric sciences; knows and understands in-depth the complex relationships between processes occurring in the sea and the atmosphere	[SW4] test/exam - oral or written
[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 basic and advanced techniques, research methods and computational tools used in contemporary atmospheric sciences, including the possibilities related to the use of numerical weather models	[SW4] test/exam - oral or written
[OCEANMU2-K04] is ready to critically evaluate his/her knowledge and received content in the field of natural sciences in in particular in the field of the studied specialty, a in problematic situations, supports oneself with knowledge experts	Is ready to critically evaluate the knowledge he/she has and the content he/she receives in the field of atmospheric sciences	[SK4] test/exam - oral or written

Subject contents

A.1 Introduction. Sea-atmosphere interaction. The boundary layer of the atmosphere.
A.2 Stability of the atmosphere over the ocean. Fog and stratus generated by dynamic processes.
A.3. Meteorology of the coastal zone. Specifics of ocean-atmosphere interactions in the coastal zone.
A.4. Meteorology and oceanography of ocean front zones. North Wall Effects (NWE).
A.5. Large-scale atmospheric circulation. Teleconnection patterns. Relationship of ocean circulation to atmospheric circulation.
A.6. Sea ice and its role in ocean-atmosphere interactions. Atmospheric processes over bodies of water covered by sea ice.
A.7. Basics of numerical weather prediction and use of atmospheric model results in oceanography.

Prerequisites and co-requisites

Knowledge of the basic physical processes and phenomena occurring in the Earth's atmosphere.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
obtaining a passing grade in the written exam	51.0%	100.0%

Recommended reading

Basic literature	Herman, A., 2006, Podstawy meteorologii. Skrypt do ćwiczeń z przedmiotu "Meteorologia morska", Wyd. UG.
Supplementary literature	Trzeciak, S., 2009, Meteorologia morska z oceanografią, PWN, 280 s. Moran, J.M., Morgan, M.D., Pauley, P.M., 1996, Meteorology: the atmosphere and the science of weather, Prentice Hall, 530s. Materiały edukacyjne MetEd (https://www.meted.ucar.edu/).
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.