

Subject card

Subject name and code	Meteorology laboratory excercise, PG_00131421						
Field of study	Marine Hydrography						
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 Subject group related to practical vocational preparation		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		2.0		
Learning profile	practical		Assessment form				
Conducting unit	Climate Research Laboratory -> Department of Physical Oceanography and Climate Research -> Faculty of Oceanography and Geography -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Mirosława Malinowska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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		5.0		25.0	60
Subject objectives	Getting acquainted with the basic processes in the ocean-atmosphere system for analyzing the weather situation						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[HML3-W02] selected phenomena and processes occurring in the hydrosphere, atmosphere, lithosphere and biosphere, their interconnections and relations, as well as practical applications of this knowledge in professional activities related to the field of study	Practical applications of this knowledge of atmospheric phenomena and processes and their interrelationships.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[HML3-W04] the issue of measurements related to the exploration of sea basins and inland waters and tools allowing to describe, interpret and present the results of measurements	Methods, techniques and research tools used in physical studies of the atmosphere.	[SW2] presentation/project/paper/report
	[HML3-U08] independently use the professional literature available in traditional and electronic form, make an assessment, critical analysis and synthesis as well as the correct interpretation of the information obtained	Independently use the professional literature in the field of meteorology, available in traditional and electronic form, databases and the Internet; is able to integrate, evaluate and correctly interpret the acquired information, and on the basis of this information derive conclusions.	[SU2] presentation/project/paper/report
	[HML3-K01] correctly identify and resolve professional dilemmas, especially in the aspects of security and entrusted property	Complete tasks in a timely manner during individual and team work.	[SK8] observation of student's independent or team work
	[HML3-U14] use the applicable terminology in presenting and discussing problems related to the field of study	Use current scientific terminology in presenting and discussing problems in meteorology.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
Subject contents	Stratification curve. Thermodynamic diagram. Distribution of atmospheric pressure on the globe. General circulation of the atmosphere, geostrophy condition, local winds. Determination of advective wind parameters by the method of geostrophy, geostrophic ruler, reduction factors on weather maps. Process of cyclogenesis and frontogenesis, basics of synoptic analysis, isobaric and isalobaric analysis. Intertropical convergence zone, weather conditions, monsoons, stripes. Tropical cyclones, classification, stages of development, storming methodology in CT. Tropical cyclone evasion maneuver.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written assessment	51.0%	50.0%
	staged work	51.0%	50.0%
Recommended reading	Basic literature	HERMAN A.: Fundamentals of meteorology. Script for exercises in the course "Marine Meteorology". University of Gdansk Publishing House, 2006.HOLEC M., TYMANSKI P.: Fundamentals of meteorology and meteorological navigation. 1973.KOŻUCHOWSKI K. (ed.): Meteorology and climatology. Wydawnictwo Naukowe PWN, 2007.WISNIEWSKI B.: Problems of selection of the sea route. 1992.	
	Supplementary literature	HÄKEL H.: Weather and climate. Multico, 2009.REYNOLDS R.: A guide to weather. 2004.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Recognize the baric systems, shown on the mapDetermine the direction and speed of geostrophic winds for a specific pointRecognize the types of clouds, shown in the photos		
Work placement	Not applicable		

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