

**Subject card**

Subject name and code	, PG_00121051						
Field of study	Oceanography						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2025/2026		
Education level	postgraduate studies	Subject group			Optional subject group		
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			1.0		
Learning profile	academic	Assessment form					
Conducting unit	Faculty of Oceanography and Geography						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Mariusz Sapota					
	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	12.0		6.0	33	
Subject objectives	To familiarize students with the basic issues concerning the methods of using the diving technique for scientific research						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[OCEANMU2-W03] knows and understands research methods used in oceanography and related sciences	knows and understands to an in-depth degree complex research issues and the latest directions in underwater research in the field of oceanography			[SW4] test/exam - oral or written		
	[OCEANMU2-K05] is ready to follow the rules occupational health and safety, taking care of the entrusted person specialized and recognition equipment emergency situations and take appropriate action activities	is ready to comply with the principles of occupational health and safety, is aware of the risks and hazards resulting from working underwater with the use of specialized equipment			[SK4] test/exam - oral or written		
	[OCEANMU2-U03] can plan and carry out independently advanced research and measurements, both in field and laboratory, using appropriately selected measurement and analytical techniques in the field of oceanography, adequately to the studied specialty and research problem	is able to select basic measurement and analytical techniques used in underwater research of the marine environment, adequately to the scientific problem posed			[SU4] test/exam - oral or written		

Subject contents	<p>Underwater research techniques (free diving, unmanned vehicles, remotely operated unmanned vehicles, etc.)</p> <p>Methodology of underwater research using the free diving technique (research planning, equipment requirements and authorizations, safety rules)</p> <p>History of underwater research in the Baltic Sea</p> <p>The use of free diving techniques in marine environment research</p> <p>Organization of scientific diving in Europe</p> <p>Interpretation of geological separations, sedimentary structures of the seabed</p> <p>The use of free diving in archaeological research</p> <p>Presentation of underwater photos and videos documenting scientific underwater research</p>								
Prerequisites and co-requisites									
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="456 833 794 864">Subject passing criteria</th> <th data-bbox="801 833 1139 864">Passing threshold</th> <th data-bbox="1145 833 1473 864">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="456 869 794 898">final test</td> <td data-bbox="801 869 1139 898">51.0%</td> <td data-bbox="1145 869 1473 898">100.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	final test	51.0%	100.0%
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final test	51.0%	100.0%							
Recommended reading	Basic literature	<p>Beker L., Kaczyński R., 1985, Fotografia i fotogrametria podwodna. Wydawnictwo Naukowo-Techniczne.</p> <p>Macke J., Kuszewski K., Zieleniec G., 1989, Nurkowanie. Wydawnictwo Sport i turystyka Warszawa</p> <p>Olszański R., Skrzyński S., Klos R., 1997, Problemy medycyny i techniki nurkowej. Wydawnictwo Okrętownictwo i Żegluga Spółka z o.o</p> <p>Przylipiak M., Torbus J., 1981, Sprzęt i prace nurkowe poradnik. Wydawnictwo Ministerstwa Obrony Narodowej</p> <p>Cappo M., Brown I.W., 1996. Evaluation of sampling methods for reef fish populations for commercial and recreational inter-est. CRC Reef Research Centre. Technical report no. 6. Townsville CCRC Reef Research Centre 72pp.</p>							
	Supplementary literature	<p>Krzyżak J., 1998, Medycyna dla nurków. Fizjopatologia nurkowania. Wydawnictwo KOOPgraf S.C.</p>							
	eResources addresses	<p>Adresy na platformie eNauczanie:</p>							
Example issues/ example questions/ tasks being completed									
Work placement	Not applicable								

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