

**Subject card**

<b>Subject name and code</b>	Petrography of Quaternary Sediments - laboratory , PG_00205021						
<b>Field of study</b>	Oceanography						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>				2027/2028	
<b>Education level</b>	Master's studies	<b>Subject group</b>				Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study	
<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>	3	<b>ECTS credits</b>				1.0	
<b>Learning profile</b>	academic	<b>Assessment form</b>				credit	
<b>Conducting unit</b>	Department of Geomorphology and Quaternary Geology -> Faculty of Oceanography and Geography -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Piotr Woźniak				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	15.0	0.0	0.0	15
	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>	15		1.0		9.0	25
<b>Subject objectives</b>	Familiarization with the methodology and methods of petrographic research of Quaternary sediments. Presentation of the basic characteristics of indicator rocks allowing for their identification. Familiarization with the possibilities of using petrographic studies in comprehensive studies of Quaternary sediments.						
<b>Learning outcomes</b>	<b>Course outcome</b>		<b>Subject outcome</b>		<b>Method of verification</b>		
	[OCEANMU2-W05] knows and understands the principles of planning and conducting field and laboratory research as well as advanced methods and tools of scientific research, especially in the field of the studied specialty		Knows and understands basic and advanced methods of petrographic research used in comprehensive studies of Quaternary sediments.		[SW2] presentation/project/paper/report		
	[OCEANMU2-U04] is ready to develop in an analytical and synthetic way research and analysis results and based on them creating conclusions		Is able to analytically and synthetically develop the results of research and analysis of Quaternary sediments and on their basis make correct conclusions.		[SU2] presentation/project/paper/report		
	[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		Can independently plan and carry out research, both in the field and in the laboratory, using appropriately selected measurement and analytical techniques in the field of petrographic research methods of Quaternary sediments.		[SU5] implementation of a problem task		

Subject contents	<ol style="list-style-type: none"> <li>1. Principles of sampling and initial preparation of gravel samples for petrographic analyses and supplementary analyses in the field.</li> <li>2. Macroscopic features of indicator erratic rocks.</li> <li>3. Recognition of selected indicator erratic rocks.</li> <li>4. Analysis of the relationship between macroscopic features of clasts and petrographic type.</li> </ol>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Implementation of the problem task	51.0%	35.0%
	Presentation/project/oral speech/report	51.0%	65.0%
Recommended reading	Basic literature	<p>Czubla P., 2001, Eratyki fennoskandzkie w utworach czwartorzędowych Polski Środkowej i ich znaczenie stratygraficzne, Acta Geographica Lodziensia, 80: 1-174.</p> <p>Harasimiuk M., Terpiłowski S. red., 2003, Analizy sedymentologiczne osadów glacialigenicznych, Wyd. UMCS, Lublin.</p> <p>Mycielska-Dowgiało E. i Rutkowski J. red., 2007, Badania cech teksturalnych osadów czwartorzędowych..., Wyd SWPR, W-wa.</p> <p>Smed P., 1994, Steine aus dem Norden, Gebrüder Borntraeger, Berlin Stuttgart. Schulz W., 2003, Geologischer Führer für den norddeutschen Geschiebesammler, cw Verlagsgruppe, Schwerin.</p> <p>Zandstra J. G., 1999, Platenatlas van noordelijke kristallijne gidsgesteenten, Backhuys, Leiden.</p>	
	Supplementary literature	<p>Benn D.I., Ballantyne C.K., 1993, The description and representation of particle shape. Earth Surf. Proc. Landf., 18: 665-672.</p> <p>Czubla P., Gałazka D., Górska M., 2006, Eratyki przewodnie w glinach morenowych Polski, Prz. Geol., 54, 4: 352-362.</p> <p>Górska M., 2000, Advantages and disadvantages of petrographical analyses of glacial sediments, Geol. Quart., 43 (2): 241-250.</p> <p>Ogren D.E., Waag C.J., 1986, Orientation of cobble and boulder beach clasts. Sedimentary Geology, 47: 69-76.</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<p>Prepare a set of indicator erratic rocks based on the specimens collected on the beach.</p> <p>Analyze the relationships between clast morphology and its petrographic type.</p>		
Work placement	Not applicable		

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