

**Subject card**

<b>Subject name and code</b>	Cosmogenic nuclides in geology - discussion classes, PG_00192990						
<b>Field of study</b>	Geology						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2028/2029		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	3	<b>Language of instruction</b>			English		
<b>Semester of study</b>	5	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Laboratory of Geomorphological Reconstructions -> 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 Karol Tylmann				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	0.0	0.0	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		34.0	50
<b>Subject objectives</b>	Getting knowledge about the current possibilities of using cosmogenic nuclides in geological research.						
<b>Learning outcomes</b>	<b>Course outcome</b>	<b>Subject outcome</b>			<b>Method of verification</b>		
	[GEOLL3_W04] knows and understands phenomena and processes occurring in the past and today in the interior of the Earth and on its surface, defines the methods of how to study them	Knows and understands the phenomena and processes occurring in the past and present in the interior of the Earth and on its surface, which can be analyzed using cosmogenic isotopes, defines methods of their study.			[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report		
	[GEOLL3_U03] is able to use source information in Polish and English, including archival and electronic databases, in the field of geological issues	Can use source information, in Polish and English, including archival and electronic databases, in the field of cosmogenic isotopes.			[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report		
	[GEOLL3_K03] is willing to exercise caution and criticism in receiving information from scientific literature, the Internet and other media related to natural sciences	Be cautious and critical in accepting information from the scientific literature, the Internet and other media relating to isotopic research.			[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report		
	[GEOLL3_U02] has the skill of analytical and synthetic way of reasoning leading to correct inference based on the results obtained or the facts presented	Has the ability to use analytical and synthetic reasoning leading to correct conclusions based on the results of isotopic analyses.			[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report		
	[GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences	Has a knowledge and understanding of the terminology appropriate for the use of cosmogenic isotopes in Earth sciences.			[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report		

Subject contents	<p>Potential and limits of the application of cosmogenic nuclides in geology.</p> <p>Examples of the cosmogenic nuclides applications in geology.</p> <p>Computer and statistical tools used in analysis of the cosmogenic nuclides results.</p> <p>Processing of given results of exposure dating with cosmogenic nuclides.</p>											
Prerequisites and co-requisites												
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="456 465 794 495">Subject passing criteria</th> <th data-bbox="799 465 1137 495">Passing threshold</th> <th data-bbox="1142 465 1481 495">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="456 501 794 530">Oral presentation</td> <td data-bbox="799 501 1137 530">51.0%</td> <td data-bbox="1142 501 1481 530">70.0%</td> </tr> <tr> <td data-bbox="456 537 794 566">Attendance and activity in class</td> <td data-bbox="799 537 1137 566">51.0%</td> <td data-bbox="1142 537 1481 566">30.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Oral presentation	51.0%	70.0%	Attendance and activity in class	51.0%	30.0%
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Example issues/ example questions/ tasks being completed	<p>Cosmogenic dating of moraines in Scotland</p> <p>Surface exposure dating of rock-fall in Tatra</p>											
Work placement	Not applicable											

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