



Subject card

Subject name and code	Basics of Earth Science, PG_00058986						
Field of study	Environmental Engineering						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study		
Mode of study	Part-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Geotechnical and Hydraulic Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Małgorzata Pruszkowska-Caceres				
	Teachers		dr hab. Małgorzata Pruszkowska-Caceres				
			dr hab. inż. Beata Jaworska-Szulc				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	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		3.0		68.0	101
Subject objectives	Student gets acquainted with internal and external geological processes, their influence on abiotic environment of men; ability to interpret geological maps and cross-sections.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_W12		Student describes internal and external geological processes; explains natural geological threats; interprets the influence of geological processes on the Earth's relief and mineral composition.		[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge		
	[K6_U04] can recognize basic rocks and minerals, can create and read maps and geological and hydrogeological sections; can read and interpret geological documentation		Student identifies and describes common rock forming minerals and common rocks – igneous, sedimentary and metamorphic. Student analyzes and interprets geological maps, cross-sections, measurements of layer orientation (the dip and the strike).		[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment		
Subject contents	Lecture: geological time, the Earths origin, the Earths layers, basis of stratigraphy; internal processes (volcanism, plutonism, metamorphism); plate tectonic theory; basis of tectonics; isostasy; the rock cycle; external processes (weathering, erosion, mass wasting); glacial, stream, marine, eolian processes. Tutorials: minerals (definition, physical properties, origin, identification of basic minerals), igneous, sedimentary, metamorphic rocks (origin, mineral composition, textures, classification, identification); geological maps analysis, geological cross-section drawing						
Prerequisites and co-requisites	geography, chemistry level of secondary school						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	practical exercises		100.0%		20.0%		
	colloquiums		60.0%		30.0%		
	written exam		60.0%		50.0%		

Recommended reading	Basic literature	<p>1. Mizerski W: Geologia dynamiczna. Wyd. Naukowe PWN, Warszawa 2006 (2004)</p> <p>2. Książkiewicz M: Geologia dynamiczna. Wyd. Geologiczne, Warszawa 1979</p> <p>3. Jaroszewski W: Przewodnik do ćwiczeń z geologii dynamicznej. Wyd. Geologiczne, Warszawa 1986</p> <p>4. Czubla P, Mizerski W, Świerczewska-Gładysz E: Przewodnik do ćwiczeń z geologii. Wyd. Naukowe PWN, W-wa 2004</p>
	Supplementary literature	<p>1. Jaroszewski W, Marks L, Radomski A: Słownik geologii dynamicznej. Wyd. Geologiczne, Warszawa 1985</p> <p>2. Roniewicz P: Przewodnik do ćwiczeń z geologii dynamicznej. Polska Agencja Ekolog., Warszawa 1999</p> <p>3. Thompson & Turk: Modern Physical Geology Saunders College Publishing, 1996</p>
	eResources addresses	<p>Adresy na platformie eNauczanie:</p> <p>Geologia - Podstawy nauk o ziemi - Moodle ID: 31671 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31671</p>
Example issues/ example questions/ tasks being completed	<p>Indicate geological events occurring at divergent plate boundaries</p> <p>What are the main rock forming minerals of gabbro; indicate the stage of magma crystallization for this rock.</p> <p>Describe conditions of granite forming</p> <p>What is the subduction zone ?</p> <p>What are the main processes responsible for the Earth relief?</p>	
Work placement	Not applicable	