GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Basics of Earth Science, PG_00058730		
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	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	3.0
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 inż. Maria Przewłócka, doc. PG dr inż. Anna Gumuła-Kawęcka	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	15.0	15.0	0.0	45

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	45	5.0	31.0	81

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.	[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).	[SU2] Assessment of ability to analyse information [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.

Laboratory: minerals (definition, physical properties, origin, identification of basic minerals), igneous, sedimentary, metamorphic rocks (origin, mineral composition, textures, classification, identification);

Tutorials: geological intersection, 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	1.Mizerski W: Geologia dynamiczna. Wyd. Naukowe PWN,Warszawa 2006 (2004) 2. Książkiewicz M: Geologia dynamiczna. Wyd. Geologiczne, Warszawa 1979 3. Jaroszewski W: Przewodnik do ćwiczeń z geologii dynamicznej. Wyd. Geologiczne, Warszawa 1986 4. Czubla P, Mizerski W,Świerczewska-Gładysz E: Przewodnik do ćwiczeń z geologii. Wyd. Naukowe PWN, W-wa 2004	
	Supplementary literature	1. Jaroszewski W,Marks L, Radomski A: Słownik geologii dynamicznej. Wyd. Geologiczne, Warszawa 1985 2. Roniewicz P: Przewodnik do ćwiczeń z geologii dynamicznej. Polska Agencja Ekolog., Warszawa 1999 3. Thompson &Turk: Modern Physical Geology Saunders College Publishing, 1996	
	eResources addresses	Adresy na platformie eNauczanie: Podstawy nauk o ziemi - Moodle ID: 31664 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31664	
Example issues/ example questions/ tasks being completed	Indicate geological events occuring at divergent plate boundaries What are the main rock forming minerals of gabbro; indicate the stage of magma crystallization for this rock. Describe conditions of granite forming What is the subduction zone ? What are the main processes responsible for the Earth relief?		
Work placement	Not applicable		