

POLITECHNIKA KRAKOWSKA IM. TADEUSZA KOŚCIUSZKI

KARTA PRZEDMIOTU

obowiązuje studentów rozpoczynających studia w roku akademickim 2021/2022

Wydział Inżynierii Lądowej

Kierunek studiów: Budownictwo

Profil: Ogólnoakademicki

Forma studiów: stacjonarne

Kod kierunku: BUD

Stopień studiów: I

Specjalności: Bez specjalności - studia w języku angielskim

1 INFORMACJE O PRZEDMIOCIE

NAZWA PRZEDMIOTU	Geologia
NAZWA PRZEDMIOTU W JĘZYKU ANGIELSKIM	Geology
KOD PRZEDMIOTU	WIL BUD oIS B9 21/22
KATEGORIA PRZEDMIOTU	Przedmioty podstawowe
LICZBA PUNKTÓW ECTS	2.00
SEMESTRY	1

2 RODZAJ ZAJĘĆ, LICZBA GODZIN W PLANIE STUDIÓW

SEMESTR	WYKŁAD	ĆWICZENIA AUDYTORYJNE	LABORATORIA	LABORATORIA KOMPUTERO- WE	PROJEKTY	SEMINARIUM
1	15	0	15	0	0	0

3 CELE PRZEDMIOTU

Cel 1 The course is designed to provide a knowledge to the basic issues of Geology - internal and external processes of the Earth System.

4 WYMAGANIA WSTĘPNE W ZAKRESIE WIEDZY, UMIEJĘTNOŚCI I INNYCH KOMPETENCJI

5 EFEKTY KSZTAŁCENIA

EK1 Wiedza Student will take knowledge of the Geology as the Earth Science and Earth History and overview of its basic principles. Student gets knowledge about geological materials and processes, know the main minerals and petrographic types of rocks that can be applied as raw materials (building stones, aggregates, clay minerals, salts and other chemical minerals); knows relationships between origin of the rock and its petrographic, structural and textural features and, mechanical properties.

EK2 Umiejętności Student is able to identify, examine and describe basic types of rocks and is able to select proper scientific method and proper tools for practical application.

EK3 Kompetencje społeczne Student is able to work in a team and plan, share and compile stages of the project and contribution of the team members.

EK4 Kompetencje społeczne Student will develop valuable skills including critical thinking, written communication, quantitative and technical literacy, teamwork, and problem solving.

6 TREŚCI PROGRAMOWE

LABORATORIA		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
L1	Mineral Identification: Physical and optical properties of minerals, Structure and classification of silicate minerals, Identify and describe the readily observable properties of minerals and use these properties to identify common minerals with the aid of a flowchart.	2
L2	Igneous Rock Identification: Textures and structures of Igneous rocks, Classification of Igneous rocks Volcanic , Plutonic and Hypabyssal Igneous rocks, Magmatism	2
L3	Sedimentary Rock Identification: Sedimentary structures (Physical structures, Biogenic sedimentary structures, Diagenetic structures), Sedimentary textures (Granulometric analysis, shape and roundness studies, surface textures), Petrography of rocks of clastic, chemical and biochemical origin (Conglomerates, Sandstone, Mudstone, Limestone & Dolomite), Evaporite, Phosphorite, Chert, Iron and Manganese rich sediments, Volcanogenic sedimentary rocks	2
L4	Metamorphic Rock Identification: Grades of Metamorphism, Common minerals of metamorphic rocks, Metamorphic Texture and Structures, Metamorphic facies, Metamorphism types & products	2
L5	Structural Geology/Geologic Maps Interpret and identify the major types of geologic structures (including faults) by completing the subsurface portions of block diagrams given only the outcrop patterns, Identify and describe erosional and depositional fluvial landforms on a map or photographic image.	2
L6	Construction of geological profiles and structural cross section in Geostar, Interpretation of profile sections across the geological maps.	2

LABORATORIA		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
L7	Elementary soil mechanics; Engineering classification of soils, index properties.	2
L8	The diagnosis and the description of the geological structure up to investment based on the map	1

WYKŁAD		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
W1	1. Dynamic Earth: course overview, geology overview, geologic time, Earth origins and structure, Earth as a system, the Rock Cycle, Continental Drift, Plate Tectonics	2
W2	Earth Materials: minerals, physical properties of minerals, mineral groups and resources, igneous rocks, magma origin and composition, types of igneous rocks, classification of igneous rocks, sedimentary rocks, types of sedimentary rocks, detrital sedimentary rocks, chemical sedimentary rocks, classification of sedimentary rocks, Sedimentary environments, sedimentary structures, metamorphic Rocks	5
W3	Surface Processes: Weathering & Soils, hydrologic cycle, landslides, streams & floods, groundwater, glaciers & ice ages, atmosphere, climate, deserts	2
W4	Tectonics: volcanoes & other igneous activity, earthquakes and earths interior, seismology, earthquake destruction, seismic waves and earths structure, mountain building, deformation, folds, faults, joints, mountain belts,	5
W5	Elementary soil mechanics: Engineering classification of soils, soil gradation, compaction, consolidation, effective stress, Mechanical and chemical weathering, soil profiles, physical and mechanical properties of soils, Classification of soil particle size and texture,	1

7 NARZĘDZIA DYDAKTYCZNE

N1 Lectures

N2 Laboratories

N3 Presentations

N4 Practical exercise

N5 Discussion