



Subject card

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| Subject name and code | Geology - Basics of Earth Science, PG_00044361 | | | | | | |
| Field of study | Civil Engineering | | | | | | |
| Date of commencement of studies | October 2020 | | Academic year of realisation of subject | | 2020/2021 | | |
| 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 | | assessment | | |
| Conducting unit | Department of Geotechnics, Geology and Marine Civil Engineering -> Faculty of Civil and Environmental Engineering | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr hab. Małgorzata Pruszkowska-Caceres | | | | |
| | Teachers | | dr hab. inż. Beata Jaworska-Szulc dr inż. Maria Przewłocka, doc. PG dr hab. Małgorzata Pruszkowska-Caceres | | | | |
| 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 | | | | | | |
| | Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/index.php?id=7396 Adresy na platformie eNauczanie: | | | | | | |
| 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 | | 5.0 | | 65.0 | 100 |
| 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_W15] Has knowledge of construction law and environmental impact of investment realisation | | Student attains basic knowledge on geotechnical and geological engineering documentations principles; student knows how to use current methods of subsoil study. | | [SW1] Assessment of factual knowledge | | |
| | [K6_U14] can read geological maps and profiles, recognizes most popular rocks and minerals, recognizes the soil-water conditions of construction site | | Student identifies and describes common rock forming minerals and common rocks – igneous, sedimentary and metamorphic. Student analyzes and interprets geological maps, cross-sections. | | [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment | | |
| | [K6_W07] has basic knowlede on natural processes (hydrological, hydraurical or geological) and its influence on building subsoil; understands specific aspects of surface and underground water, which constraints the design and exploitation of buildings and engineering objects | | 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. | | [SW1] Assessment of factual knowledge | | |

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| Subject contents | Lecture: geological time, the Earth's origin, the Earth's 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 | Understanding of issues included in Soil Mechanics learning program. General understanding of issues specified in the Geology learning program (Bases of the Earth Science), Quaternary Geology and Geomorphology in particular | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | colloquiums | 60.0% | 50.0% |
| | practical exercises | 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 4. Bażyński J., Dragowski A., Frankowski Z., Kaczyński R., Rybicki ,S., Wysokiński L. Zasady Sporządzania Dokumentacji Geologiczno-Inżynierskich. Wydawnictwa PIG; Warszawa 1999. | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | What are the main rock forming minerals of gabbro; indicate the stage of magma crystallization for this rock. Describe conditions of granite forming What are the main processes responsible for the Earth relief? What is soil liquefaction? | | |
| Work placement | Not applicable | | |