COURSE INFORMATION SHEET

University: Catholic University in Ružomberok	
Faculty: Faculty of Education	
Course code: KGE/Ge-BD103A/22	**Course title:** Physical Geography 1 (Geology for Geographers)
Type and range of planned learning activities and teaching methods: **Form of instruction:** Lecture / Seminar **Recommended study range:** **hours weekly:** 2 / 1 **hours per semester:** 26 / 13 **Teaching method:** on-site	
Credits: 3	**Working load:** 75 hours
Recommended semester/trimester: 1.	
Level of study: I.	
Prerequisities:	
Requirements for passing the course: Itroductory state of geoscientific knowledge in students will be reviewed at the beginning of the semester by an entrance test and verified by the level of acquired knowledge during the exit examination, which will be included in the evaluation of the final oral exam. The student takes the final exam only if he achieves an evaluation of more than 40 points out of a possible 100 points during the exit examination. During the oral exam, the student answers three out of a selection of 54 questions and receives a final grade from the FG1 subject. Subject evaluation: A – 100%-93%, B – 92%-85%, C – 84%-77%, D – 76%-69%, E – 68%-60%, Fx – 59%-0%	
Learning outcomes of the course: After completing the subject, the student will acquire the following knowledge, skills and competences: - the student understands the position of the Earth in the planetary system and its origin - the student knows the structure of the lithosphere, the composition of the earth's crust, endogenous processes and the geodynamic development of the Earth, - knows the processes of formation and deformation of rocks, formation of minerals and accumulation of sediments. He classifies abiotic natural products into rock and mineral systems. - understands the distribution of land and oceans as a result of continental drift and global tectonics. He knows the mechanisms of movement of tectonic plates, types of lithospheric interfaces, and causes of seismic activity - knows the regional-geological division of Slovakia, understands the geological structure of the Western Carpathians and their position within the geological units of Europe - knows the historical development of the Earth, the geological time scale and geological periods.	
Course contents: 1. Earth as a body of the planetary system, characteristics of the planets, composition and differentiation of the mass of the solar system and cosmological hypotheses of its origin and formation. 2. Chemical and material composition of the Earth, properties, origin and classification of minerals, rock-forming minerals and distribution of rocks.	

3. Structure of the Earth, geosphere and their interfaces, composition and structure of the earth's crust and lithosphere, MOHO, earth's mantle and discrodencies, earth's core, mechanism of generation of earth's magnetism.
4. Endogenous processes: magmatism and volcanism, plutonic, subvolcanic and volcanic bodies, magmatic crystallization and igneous rocks, lavas, volcanoes and pyroclastic products.
5. Metamorphism and deformation of rocks, temperature-pressure conditions of rock transformation, crystalline slates, continuous and discontinuous structures, geometry of folds, fault tectonics, dips, slips, nappes, etc.
6. Exogenous processes: denudation and erosion of the earth's surface, rock cycle - weathering, transport, sedimentation and lithification, facies and environments of formation of sedimentary rocks, etc.
7. Geodynamic phenomena, mountain-forming and land-forming processes, seismicity, distribution of earthquakes according to origin, depth and intensity, distribution of earthquakes, etc.
8. Lithospheric plate tectonics, evidence of continental drift, driving forces of plate movement, passive and active continental margins, oceanic and continental plates and their interfaces.
9. Divergent boundaries, riftogenesis, mid-ocean ridges, creation and expansion of oceans. Convergent lithospheric interfaces, subduction zones, deep-ocean trenches, volcanic arcs, collision of lithospheric plates, orogeny and formation of mountain ranges.
10. Historical geology, main stratigraphic terms - discordance, hiatus, transgression, regression, etc., principles and methods of determining the relative and absolute age of rocks.
11. The geological time scale and the main geological periods in the development of the Earth.
12. Geological structure of Europe - shields and slabs, Caledonian, Hercynian and Alpine orogenic systems. The position of the Western Carpathians in the system of Central European Alps.
13. Geological structure of the Western Carpathians, regional-tectonic division, units of the Tatra-Fatra, Vepor and Gemer zones, core mountain ranges, volcanic mountains, Neogene basins, Klippen belt and the Outer Western Carpathians units

Recommended or required literature:

SOTÁK, J., 2016: Structure, composition and dynamics of the Earth. VERBUM – KU Ružomberok publishing house, ISBN 978-80-561-0416-3 (CD)
SOTÁK, J., 2016: Geological past and paleogeography of the Earth. VERBUM – KU Ružomberok publishing house, ISBN 978-80-561-0415-6 (CD)
BIZUBOVÁ, M., 1998: Fundamental geology for geographers. University scripts, Faculty of Science, UK, Bratislava, 135 p.
BÓNOVÁ, K., 2017: Fundamental geology for geographers. University scripts, UPJŠ Košice, 123 p. Available on the Internet: https://uge-share.science.upjs.sk/webshared/uge_web_files/studium/ucebnice_skripta/Bonova
HÓK, J., KAHAN, Š. & AUBRECHT, R., 2001: Geology of Slovakia. PRIF UK Bratislava, 46 pp., Available on the Internet.
PLAŠIENKA, D (ed.), 2006: Geological structure and development of the Western Carpathians. 125 p. Available on the Internet.

Language of instruction:
Slovak

Notes:

Course evaluation:
Assessed students in total: 49

A	B	C	D	E	FX
14.29	18.37	18.37	20.41	18.37	10.2

Name of lecturer(s): doc. RNDr. Ján Soták, DrSc.

Last modification: 31.08.2022

Supervisor(s):

Guarantor:

Administrátor Systému

People responsible for the delivery, development and quality of the study programme:

prof. ThDr. Rastislav Adamko, PhD., doc. Mgr. Marek Babic, PhD., doc. RNDr. Pavel Bella, PhD., prof. PaedDr. Mgr. art. Rastislav Biarinec, ArtD., prof. Irina Chelysheva, DrSc., prof. PaedDr. František Dlugoš, PhD., Mgr. Juraj Dvorský, PhD., prof. PhDr. Ingrid Emmerová, PhD., doc. Tatiana Korenkova, CSc., prof. PaedDr. Milan Ligoš, CSc., doc. Mgr. Eva Litavcová, PhD., doc. PaedDr. Peter Mačura, PhD., prof. PhDr. David Papajík, PhD., doc. Ing. Miroslav Saniga, CSc., prof. Nóra Séllei, PhD., DrSc., PhDr. ThLic. Martin Taraj, PhD., Prof. Ing. Peter Tomčík, PhD., prof. Dr. phil. fac. theol. Peter Volek, doc. Ing. Igor Černák, PhD.