COURSE OF DOCTORAL STUDIES

Course title	Field of science (branch) code	University / Faculty	Institute / Department
Problems of geomorphology	Natural Sciences (Geology) N 005	Vilnius University / Faculty of Chemistry and Geosciences	Institute of Geosciences /

Study methods	Number of credits allocated	Study methods	Number of credits allocated
Lectures		Seminars	
Individual work	**9**	Consultations	

Course annotation

The aim of the course: to acquire knowledge on the main theoretical questions in geomorphology and geomorphological analysis, to evaluate the recent achievements in geomorphology, to get acquainted with the application of geomorphological methods in geology and other scientific disciplines. Content: Research methods in geomorphology. Endogenic and exogenic processes forming the Earth's surface and their interaction. Weathering processes and morphology of soils. Global morphology and tectonics, morphology of plate interior, boundaries and volcanically active areas. Karst processes and geomorphology. Geomorphology of mountains and slopes. Geomorphology of glacial and periglacial areas. Fluvial, coast, aeolian geomorphology. Evolution of relief forms, caused by climate change and sea-level fluctuations. Long-term evolution of relief forms. Planetary morphology.

Required readings

Summerfield M.A. 2013. Global Geomorphology: An Introduction to the Study of Landforms. 537 p.

Greeley R. 2013. Introduction to Planetary Geomorphology. 238 p.

Shroder J.F. (Ed.), 2013. Treatise on Geomorphology. Vol. 1-14. ISBN 978-0-08-088522-3

Burbank D.W., Anderson R.S. 2012. Tectonic Geomorphology. 454 p.

Huggett R.J. 2011. Fundamentals of Geomorphology. 516 p.

Geomorphology - Journal – Elsevier. ISSN: 0169-555X

Charlton R., 2008. Fundamentals of Fluvial Geomorphology. 234 p.

Goudie A.S. (Ed.), 2004. Encyclopedia of Geomorphology. 1156 p.

Česnulevičius A. Geomorfologija. "Jandrija". Vilnius, 1998.

Sugden D.E. John B.S. 1976. Glaciers and Landscape: A Geomorphological Approach. 384 p.

Consulting lecturers Name, surname	Degree	The most important works in the field of science (branch) have been published during the last 5 years
Petras Šinkūnas	Phd	Kaminskas D., Rudnickaitė E., Vaikutienė G., Bitinas A., Grigienė A., Buynevich I., Damušytė A., Pupienis D., Šinkūnas P. 2019. Middle and Late Holocene paleoenvironmental developement of the Curonian Lagoon, Lithuania. Quaternary International. 501. 240-249. Šeirienė V., Šinkūnas P., Stančikaitė M., Kisielienė D., Gedminienė L. 2019. Late Middle Pleistocene interglacial sediments from Buivydžiai site, eastern Lithuania: A problem of chronostratigraphic correlation. Quaternary International. 534. 18-29.
Lauras Balakauskas	PhD	Andronikov A.V., Rudnickaitė E., Lauretta D.S., Andronikova I.E., Kaminskas D., Šinkūnas P., Melešytė M. 2015. Geochemical evidence of the presence of volcanic and meteoritic materials in Late Pleistocene lake sediments of Lithuania. Quaternary International. 386. 18-29. Daumantas, Liudas & Balakauskas, Lauras & Spiridonov, Andrej. (2020). Machine learning reveals the role of the landscape in the dynamics of human settlement rules between the Palaeolithic and Iron Ages in Lithuania. Quaternary International. 565. 10.1016/j.quaint.2020.09.004. A. Spiridonov. L. Balakauskas, R. Stankevič, G. Kluczynska, L. Gedminienė, M. Stančikaitė 2019. Holocene vegetation patterns in the southern Lithuania indicate astronomical forcing on the millennial and centennial time scales. Science of the Total Environment. Scientific Reports 9, 14711.

Approved by the doctoral committee of Geology (N 005) on 1st of December 2022 (No. (7.17 E) 15600-KT-467).

Committee Chairman prof. dr. Sigitas Radzevičius