

COURSE OF DOCTORAL STUDIES

| Course title | Field of science (branch) code | University / Faculty | Institute / Department |
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| Fundamentals of Quaternary geology of glaciation areas | Natural Sciences (Geology) N 005 | Vilnius University / Faculty of Chemistry and Geosciences | Institute of Geosciences |
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| Study methods | Number of credits allocated | Study methods | Number of credits allocated |
| Lectures | | Seminars | |
| Individual work | 11 | Consultations | |
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| Course annotation | | | |
| <p>The aim of studies: 1) To learn the fundamental theories and propositions of Quaternary geology of glaciation areas, 2) to comprehend the principles of the stratigraphic subdivision and correlation of the Quaternary sedimentary sequences according to geological research data and methodology, and 3) master the principles of palaeogeographical interpretation of Quaternary sediments.</p> <p>Study content: I. Theoretical basis and tasks of Quaternary geology. Glaciations and the polyglacial theory. Climate stratigraphy. Glacial and interglacial periods, stadials and interstadials; criteria for their determination.</p> <p>Intertill and intra-till sediments, under till and till covering deposits. Cyclicity and rhythms of diverse rank. II. Development of Quaternary stratigraphic views, compilation and correlation of stratigraphic schemes, Quaternary stratigraphy of Europa and North America. III. Quaternary research methods, their complexity and reliability. Relative and absolute geochronology methods, their possibilities in solving Quaternary sedimentary stratigraphy distribution and correlation issues. IV. Features of the Quaternary sedimentary cover's geological structure and their contributing factors. Lithological composition, age and sedimentation environment of sediments. Continental and marine sedimentation and landforms. V. Practical use of the main propositions of Quaternary geology in research and economic activity. VI. Principles and legends of Quaternary geological mapping. Genetic and age indexing.</p> | | | |
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| Required readings | | | |
| Menzies J. & van der Meer J. 2018 Past Glacial Environments. 858 p. | | | |
| Quaternary glaciations-extent and chronology: a closer look, ed. by Jürgen Ehlers, Philip L. Gibbard, and Philip D. Hughes. Elsevier, 2011. 1126 p. | | | |
| Bennett M. R, Glasser N.F. 2009. Glacial Geology: Ice Sheets and Landforms. 385 p. | | | |
| Anderson D.E., Goudie A.S. and Parker A.G. 2007. Global Environments Through the Quaternary. Exploring Environmental Change. 359 p. | | | |
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| 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 | Dr. | <p>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. <i>Quaternary International</i>. 534. 18-29.</p> <p>Kaminskas D., Rudnickaitė E., Vaikutienė G., Bitinas A., Grigienė A., Buynevich I., Damušytė A., Pupienis D., Šinkūnas P. 2019. Middle and Late Holocene paleoenvironmental development of the Curonian Lagoon, Lithuania. <i>Quaternary International</i>. 501. 240-249.</p> <p>Stančikaitė, M., Šeirienė V., Kisielienė D., Martma T., Gryguc G., Zinkutė R., Mažeika J., Šinkūnas P. 2015. Lateglacial and early Holocene environmental dynamics in northern Lithuania: A multiproxy record from Ginkūnai Lake, <i>Quaternary International</i>. 357. 44-57.</p> |

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