Annex No. 5

to Ordinance No. 21/2019

**COURSE/MODULE SYLLABUS FOR UNIVERSITY COURSES/PhD STUDIES**

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|  | Course/module name in Polish and English  Geodynamics - selected issues/ Geodynamika - wybrane zagadnienia | | |
|  | Discipline  Earth and Environmental Science | | |
|  | Language of instruction  English | | |
|  | Teaching unit  Faculty of Earth Science and Environmental Management, Institute of Geological Sciences, Department of Structural Geology and Geological Mapping | | |
|  | Course/module code  USOS | | |
|  | Type of course/module *(mandatory or optional)*  optional | | |
|  | Field of studies (major, if applicable)  Geology | | |
|  | Level of higher education *(undergraduate (I cycle), Master’s (II cycle), 5 year uniform Master’s studies)*  Master’s (II cycle) | | |
|  | Year of studies *(if applicable*)  I/II | | |
|  | Semester *(winter or summer)*  winter/summer | | |
|  | Form of classes and number of hours  Lectures: 26  Teaching methods:  Multimedia lecture, presentation. | | |
|  | Name, title/degree of the teacher/instructor  Coordinator: dr Artur Sobczyk  Lecturer: dr Artur Sobczyk | | |
|  | Course/module prerequisites, in terms of knowledge, skills, social competences  General knowledge in the field of physics, physical geology, tectonics, structural geology, sedimentology, hydrology and geomorphology. | | |
|  | Course objectives  The lectures are aimed at acquainting students with selected methods for assessing geokinematic and geodynamic activity of the lithosphere, in particular the area of the Sudetes Mountains | | |
|  | Course content  Lectures:  Geodynamics and geokinematics (definitions, the scope of the conceptual, methodological categorization - the physical, stochastic, phenomenological). Indicators of geokinematics and geodynamics (geodetic, geological, archaeological and geomorphological). The global monitoring system of geokinematics and geodynamics. | | |
|  | Intended learning outcomes  W\_01 The student has knowledge about kinematic indicators of lithosphere (geodetic, geological and geomorphological). Has knowledge about the relationship between kinematics and geodynamics in relation to geological processes.  W\_02. The student knows examples of geokinematics and geodynamics in the historical geology scale.  W\_03 The student knows modern measuring tools and planetary measurement systems (concept of vertical, the concept of equipotential surface, vibrations own, tides, spiral waves, events).  W\_04. The student knows the world's geodynamic monitoring systems; the student knows the Polish geodynamic monitoring system.  U\_01 Student is able to interpret geometric anomalies of spatial and kinematic phenomena (measurement).  U\_02 The student can combine instrumental measurement effects with the spatial structure of a rock mass. | Symbols of learning outcomes for particular fields of studies:  K2\_W01, K2\_W03, K2\_W04, K2\_W05, K2\_W07, K2\_W09, K2\_W010  K2\_W01, K2\_W03, K2\_W04, K2\_W05, K2\_W07, K2\_W09, K2\_W010  K2\_W01, K2\_W03, K2\_W04, K2\_W05, K2\_W07, K2\_W09, K2\_W010  K2\_W01, K2\_W03, K2\_W04, K2\_W05, K2\_W07, K2\_W09, K2\_W010  K2\_U01, K2\_U02, K2\_U03, K2\_U04, K2\_U05, K2\_U06  K2\_U01, K2\_U02, K2\_U03, K2\_U04, K2\_U05, K2\_U06 | |
|  | Required and recommended reading *(sources, studies, manuals, etc.)*  Required reading  Pilqer, R., 2003. Geokinematics. Springer Verlag, 280 pp.  Schumm, S.A., Dumont, J.F. & Holbrook, J.M., 2006. Active Tectonics and Alluvial Rivers. Cambridge University Press, 290 pp. ISBN: 0521890586  Turcotte, D.L., Schubert, G., 1982. Geodynamics – Applicatons of Continuum Physics to Geological Problems. John Willey & Sons, New York, 450 pp.  Recommended reading  Allen, P.A., Allen, J.R.L., 1990. Basin Analysis: Pronciples & Applications. Blackwell Science, Oxford, 451 pp.  Artiuszkow, E.W., 1979. Geodynamika. Wydawnictwo Nauka, Moskwa, 327 pp.  Dadlez, R., Jaroszewski, W., 1994. Tektonika. PWN, 743 pp.  Kaczorowski, M., Wojewoda, J., 2011. Neotectonic activity interpreted from a long water-tube tiltmeter record at the SRC geodynamic laboratory in Książ, Central Sudetes, SW Poland. Acta Geodynamica et Geomaterialia, 8, 3: 1- 13.  Wojewoda, J., 2013. Wybrane wskaźniki aktywności geokinematycznej i geodynamicznej. <http://www.jw.ing.uni.wroc.pl/> | | |
|  | Assessment methods for the intended learning outcomes:  - writing a class report: K2\_W01, K2\_W03, K2\_W04, K2\_W05, K2\_W07, K2\_W09, K2\_W010, K2\_U01, K2\_U02, K2\_U03, K2\_U04, K2\_U05, K2\_U06. | | |
|  | Credit requirements for individual components of the course/module:  - writing a class report | | |
|  | Total student effort | | |
| form of student activities | | number of hours for the implementation of activities |
| classes (according to the plan of studies) with a teacher/instructor:  - lectures: 26 | | 26 |
| student's own work (including group-work) such as:  - being prepared for classes: 5  - reading the suggested literature:10  - writing a class report: 9 | | 24 |
| Total number of hours | | 50 |
| Number of ECTS credits | | 2 |