Annex No. 5

to Ordinance No. 21/2019

COURSE SYLLABUS FOR UNIVERSITY COURSES

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|  | Course/module name in Polish and English  New trends in stratigraphy/Nowe trendy w stratygrafii | | |
|  | Discipline  Earth and Environmental Science | | |
|  | Language of instruction  English | | |
|  | Teaching unit  Faculty of Earth Science and Environmental Management, Institute of Geological Sciences, Department of Stratigraphical Geology | | |
|  | Course/module code  USOS | | |
|  | Type of course/module *(mandatory or optional)*  optional | | |
|  | Field of studies (major, if applicable)  Geology (spec. Applied Geoscience) | | |
|  | 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 | | |
|  | Semester *(winter or summer)*  winter | | |
|  | Form of classes and number of hours  Seminar: 20  Teaching methods  presentation, discussion | | |
|  | Name, title/degree of the teacher/instructor  Coordinator: Dr Alina Chrząstek  Seminar instructor: Dr Alina Chrząstek | | |
|  | Course/module prerequisites, in terms of knowledge, skills, social competences  Basic knowledge in the field of paleontology and historical geology. | | |
|  | Course objectives  The aim of the course is to complement knowledge on the stratigraphy of information on new research methods and techniques and possibility of their use in the stratigraphical and paleoenvironmental interpretation.  Seminar form will help students to learn how to prepare and present paper. | | |
|  | Course content  The current state of knowledge on stratigraphy and new methods and techniques of stratigraphical studies will be presented mainly on examples from recent papers, but also from handbooks. Some cases from different sedimentary basins will be considered. Special unformal methods (eg. chemostratigraphy, strontium isotope stratigraphy, event stratigraphy, biostratigraphy, ecostratigraphy, ichnostratigraphy and others) will be taken into account. | | |
|  | Intended learning outcomes  P\_W01 Student has knowledge on the historical geology and related sciences.  P\_W02 knows modern research methods and techniques used in the stratigraphy and the current state of knowledge.  P\_W03 knows the terminology and stratigraphic nomenclature.  P\_U01 can see the relationship between  the rock record and geological events.  P\_U02 can search for required information and make their selection to develop a given topic.  P\_U03 uses English-language scientific literature in the field of geological sciences.  P\_U04 is able to critically analyze and make a choice of information in the field of geological sciences.  P\_U05 can present the scientific paper and take a scientific discussion.  P\_K01 understands the need for updating and deepening knowledge of Earth sciences. | Symbols of learning outcomes for particular fields of studies, e.g. *K\_W01\**, *K\_U05, K\_K03*  K2\_W02, K2\_W03,  K2\_W06  K2\_W08  K2\_U01, K2\_U04  K2\_U03  K2\_U02  K2\_U03  K2\_U07  K2\_K01 | |
|  | Required and recommended reading *(sources, studies, manuals, etc.)*  Required reading:  Brenner, R.L., McHarque, T.R., 1988. Integrative stratigraphy. Concepts and Applications. Prentice Hall.  Doyle, P., Bennett, M.R. (eds.), 1998. Unlocking the stratigraphical record, Advances in Modern Stratigraphy. Wiley and Sons.  Hallam, A., Wignall, P.B., 1997. Mass Extinctions and their Aftermath. Oxford  University Press.  Recommended reading:  Mángano, M.G., Buatois, L.A., MacNaughton, R.B., 2012. Ichnostratigraphy. In: Knaust, D. & Bromley, R.G. (eds), Trace fossils as indicators of sedimentary environments. Developments in Sedimentology, 64: 195-208.  McArthur, J.M., Howarth, R.J., Shields, G.A., 2012. Strontium isotope stratigraphy. In: Gradstein, F.M., Ogg, J.M., Schmitz, M., Ogg, G. (eds), Geologic Time Scale, Elsevier, 127-144.  Ratcliffe, K.T., Zaitlin, B.A., 2010. Application of Modern Stratigraphic Techniques: Theory and Case Histories. SEPM Special Publication, 94. SEPM Society for Sedimentary Geology.  Walliser, O.H., 1996. Global Events and Event Stratigraphy, Springer-Verlag, Berlin – Heidelberg – New York.  Waterhouse, J.B., 2007. The significance of ecostratigraphy and need for biostratigraphic hierarchy in stratigraphic nomenclature. Lethaia, 9: 317-326.  Weissert, H., Joachimski, M.M., Sarnthein, M., 2008. Chemostratigraphy. Newsletters on Stratigraphy, 42: 145-179. | | |
|  | Assessment methods for the intended learning outcomes:  Seminar: oral presentation, discussion. K2\_W02, K2\_W03, K2\_W06, K2\_W08, K2\_U01, K2\_U02, K2\_U03, K2\_U04, K2\_U07, K2\_K01. | | |
|  | Credit requirements for individual components of the course/module:  Seminar:  - attendance is obligatory,  - oral presentation,  - participation in the discussion. | | |
|  | 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:  - seminar: 20 | | 20 |
| student's own work (including group-work) such as:  - consultation: 5  - reading the suggested literature: 5  - preparing papers/presentations/projects: 20 | | 30 |
| Total number of hours | | 50 |
| Number of ECTS credits | | 2 |