Annex No. 5

to Ordinance No. 21/2019

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

|  |  |  |  |
| --- | --- | --- | --- |
|  | Course/module name in Polish and English  Deformation of sediments and sedimentary rocks/ Deformacja osadów i skał osadowych | | |
|  | Discipline  Earth and Environmental Science | | |
|  | Language of instruction  English | | |
|  | Teaching unit  Faculty of Earth Science and Environmental Management, Institute of Geological Sciences | | |
|  | 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: 12  Seminars: 12  Teaching methods:  Multimedia lecture, individual work, group work, presentation, discussion. | | |
|  | Name, title/degree of the teacher/instructor  Coordinator: dr hab. Stanisław Burliga  Lecturer: dr hab. Stanisław Burliga, dr Szymon Belzyt  Seminar instructor: dr hab. Stanisław Burliga, dr Szymon Belzyt | | |
|  | Course/module prerequisites, in terms of knowledge, skills, social competences  Overall knowledge in geology. | | |
|  | Course objectives  The purpose of the lecture is to introduce to the methods of recognition, description, analysis and interpretation of syn- and post-sedimentary deformation structures in sediments and sedimentary rocks. The seminar focuses on discussion on selected issues related to sediment and sedimentary rock deformation, based on presentation prepared by individual students after thorough studies of relevant papers. | | |
|  | Course content  Lecture:  Introduction to sedimentary rock and deformation analyses. Soft-sediment deformation. Diagenesis and deformation. Climatic controls on sediment deformation. Dissolution-precipitation processes and their effects. Shale- and evaporite- related deformation in sediments. Structural analysis of sedimentary complexes.  Classes:  Analysis and discussion of selected case studies on sediment and sedimentary rock deformation. Examples of presentations: deformation related to drying out of sediments; seismites. Diagenetic deformation of sediments | | |
|  | Intended learning outcomes  W\_1 Knows the bases of distinguishing, classification and description of sedimentary and tectonic structures; the geological processes influencing the origin, evolution and post-sedimentary alteration and deformation; is familiar with the bases of structural analysis in sediments and sedimentary rocks  U\_1 Is able to describe, critically analyse and interpret deformational structures in sediments and sedimentary rocks, as well as to acquire, analyse, interpret, present and discuss relevant published papers  K\_1 Realizes the need of the self-education in the area of progres in uderstanding geological processes related to sediements and sedimentary rocks. Critically evaluates published data and is capable to present them to an audience and attend in discussion, as well as to write an essay on the paper study results. | Symbols of learning outcomes for particular fields of studies  K2\_W01, K2\_W02, K2\_W03, K2\_W04, K2\_W08, K2\_W09  K2\_U02, K2\_U03, K2\_U04, K2\_U05, K2\_U06, K2\_U07, K2\_U08  K2\_K01, K2\_K02, K2\_K03, K2\_K04, K2\_K07 | |
|  | Required and recommended reading *(sources, studies, manuals, etc.)*  Recommended reading  Leeder, M. 2011. Sedimentology and Sedimentary Basins: From Turbulence to Tectonics. Wiley-Blackwell, 769 pp.  Davis, G.H., Reynolds, S.J. 1996. Structural Geology of rocks and regions. John Wiley & Sons 776 pp.  Hsu, K.J., 2007. Physics of Sedimentology: Textbook and Reference. Springer-Verlag, 240 pp. | | |
|  | Assessment methods for the intended learning outcomes:  - individual semester paper: K2\_W01, K2\_W02, K2\_W03, K2\_W04, K2\_W08, K2\_W09, K2\_U02, K2\_U03, K2\_U04, K2\_U05, K2\_U06, K2\_U07, K2\_U08.  - oral presentation: K2\_U02, K2\_U03, K2\_U04, K2\_U05, K2\_U06, K2\_U07, K2\_U08, K2\_K01, K2\_K02, K2\_K03, K2\_K04, K2\_K07. | | |
|  | Credit requirements for individual components of the course/module:  - semester paper (individual) – above 50% of credit points  - presentation (individual) – above 50% of credit points  - preparing and implementing a project (individual or group). | | |
|  | 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:  - lecture: 12  - seminar: 12 | | 24 |
| student's own work (including group-work) such as:  - tutorial: 12  - preparing final presentation: 10  - preparing final paper: 4 | | 26 |
| Total number of hours | | 50 |
| Number of ECTS credits | | 2 |