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|---|---|---|
| **1.** | **Field of study** | **Environmental Hazard Engineering** |
| 2. | Faculty | Faculty of Natural Sciences |
| 3. | Academic year of entry | 2025/2026 (winter term) |
| 4. | Level of qualifications/degree | first-cycle studies (in engineering) |
| 5. | Degree profile | general academic |
| 6. | Mode of study | full-time |

| **7.** | **General information about the module** |
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| **Module name** | **Engineering methods of the geohazard results prevention and limitation** |
| Module code | W2-IZ-S1-312 |
| Number of the ECTS credits | 2 |
| Language of instruction | Polish |
| Purpose and description of the content of education | The course aims to present selected engineering methods of preventing and limiting the effects of geohazards, including weathering, suffosion, karst, soil mass displacement processes within slopes, and seismic hazards. Particular attention was paid to the occurrence of catastrophic climatic phenomena and limiting their effects and large forest and agricultural fires, preventing their occurrence, limiting development, and repairing the damage. In addition, water erosion and anti-erosion meliorations were taken into account. |
| List of modules that must be completed before starting this module (if necessary) | not applicable |

**8. Learning outcomes of the module**

| Code | Description | Learning outcomes of the programme | Level of competenc (scale 1-5) |
|---|---|---|---|
| U01 | he can use analytical, simulation and experimental methods to solve engineering tasks aimed at geohazards and limiting their effects as well as large forest and agricultural fires, preventing their occurrence, limiting development and repairing damage. In addition, water erosion and anti-erosion meliorations were taken into account | K01<br>U01<br>U03<br>U09<br>W01<br>W02<br>W03 | 3<br>3<br>3<br>3<br>3<br>3<br>2 |
| U02 | be able to solve practical engineering tasks using standards, norms and technologies specific to geohazards | U03<br>U12 | 3<br>4 |
| U03 | be able to prepare a well-documented paper on geohazards and make an oral presentation on specific geohazard issues in both Polish and English | U13 | 5 |

| 9. | Methods of conducting classes | |
|---|---|---|
| **Code** | **Category** | **Name (description)** |
| b01 | Problem-solving methods | Problem-based lecture<br>*an analysis of a selected scientific or practical problem accompanied by its assessment and an attempt to provide a solution to the issues presented in the lecture as well as the indication of the consequences of the proposed solution* |
| b04 | Problem-solving methods | Activating method – discussion / debate<br>*an exchange of views supported by substantive arguments leading to a clash of different views, a compromise or the identification of common positions; it proceeds according to previously agreed-upon rules regarding the time, manner and turn-taking as well as the principles of civil discourse; a discussion is not a competition but aims at finding the best solutions or presenting different points of view; its varieties include brainstorming, Oxford-style debate, panel discussion, decision tree, conference discussion; a debate is an orderly dispute between supporters and opponents of a viewpoint, usually specialists in the field or pre-selected representatives of a group dealing with a common problem* |
| c07 | Demonstration methods | Screen presentation<br>*a presentation of synthetic image content using computer graphics, e.g., a series of slides or other multimedia forms, usually accompanied by a commentary; typical components of a screen presentation include text organized into bulleted points, charts, images and animations, sometimes sound effects or music; a multimedia illustration of course content presented in the form of a projected image* |
| d02 | Programmed learning methods | Working with a programmed textbook<br>*working with a textbook containing instructional material covering part of or the entire curriculum of the module as well as a formula for studying the content; includes working with a subject textbook, an atlas, a catalogue, a problem book, etc.* |
| d03 | Programmed learning methods | Working with another teaching tool<br>*e.g. using websites in any way or according to the rules set by the teacher; or making use of other subject-specific tools* |
| f02 | Methods of self-learning | Individual work with a text<br>*searching for and acquiring new information using textbooks and other written sources (including their digital versions); searching for texts, selecting fragments for analysis/interpretation, using other texts to solve a problem related to the studied issue* |
| f03 | Methods of self-learning | Conceptual work<br>*a (mainly intellectual) activity carried out independently (or in a selected group) resulting in the creation of a concept, idea or project; creating a plan based on a vision; developing a general outline of a project; producing a simplified sketch of the variant versions of a procedure/product/work* |

| 10. | Forms of teaching | | | | |
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| **Code** | **Name** | **Number of hours** | **Assessment of the learning outcomes of the module** | **Learning outcomes of the module** | **Methods of conducting classes** |
| W2-IZ-S1-312_fs_1 | laboratory classes | 30 | course work | U01, U02, U03 | b01, b04, c07, d02, d03, f02, f03 |

| 11. | The student's work, apart from participation in classes, includes in particular: | | |
|---|---|---|---|
| **Code** | **Category** | **Name (description)** | **Is it part of the BUNA?** |
| a01 | Preparation for classes | Search for materials and review activities necessary for class participation<br>*reviewing literature, documentation, tools and materials as well as the specifics of the syllabus and the range of activities indicated in it as required for full participation in classes* | Yes |
| a02 | Preparation for classes | Literature reading / analysis of source materials<br>*reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source* | Yes |

| | | | |
|---|---|---|---|
| | | *materials to be used in class* | |
| b01 | Consulting the curriculum and the organization of classes | Getting acquainted with the syllabus content<br>*reading through the syllabus and getting acquainted with its content* | Yes |
| c02 | Preparation for verification of learning outcomes | Studying the literature used in and the materials produced in class<br>*exploring the studied content, inquiring, considering, assimilating, interpreting it, or organizing knowledge obtained from the literature, documentation, instructions, scenarios, etc., used in class as well as from the notes or other materials/artifacts made in class* | Yes |
| c03 | Preparation for verification of learning outcomes | Implementation of an individual or group assignment necessary for course/phase/ examination completion<br>*a set of activities aimed at performing an assigned task, to be executed out of class, as an obligatory phase/element of the verification of the learning outcomes assigned to the course* | Yes |

Information on the details of the module implementation in a given academic year can be found in the syllabus available in the USOS system: https://usosweb.us.edu.pl.