

## COURSE DESCRIPTION

### NATURAL RISK PHENOMENAS

Academic year 2026/2027

#### 1. Programme-related data

|                                       |   |
|---------------------------------------|---|
| 1.1. Higher Education Institution     | Babeş–Bolyai University Cluj-Napoca           |
| 1.2. Faculty                          | Faculty of Geography                          |
| 1.3. Department                       | Department of Geography of the Hungarian Line |
| 1.4. Field                            | Geography                                     |
| 1.5. Level of study                   | MSc   |
| 1.6. Degree programme / Qualification | Ecotourism and sustainable development        |
| 1.7. Form of education                | Full-time education                           |

#### 2. Course-related data

|                          |                                   |               |   |                         |              |
|--------------------------|-----------------------------------|---------------|---|-------------------------|--------------|
| 2.1. Course title        | <b>NATURAL RISK PHENOMENAS</b>    |               |   | Course code             | GMM6104      |
| 2.2. Course coordinator  | assoc. prof. dr. Dombay Ştefan    |               |   |                         |              |
| 2.3. Seminar coordinator | dr. Magyari-Sáska Zsolt, lecturer |               |   |                         |              |
| 2.4. Year of study       | I                                 | 2.5. Semester | 1 | 2.6. Type of assessment | Exam         |
| 2.7. Course status       | Compulsory                        |               |   | 2.8. Course type        | Core subject |

#### 3. Total estimated time (hours per semester of teaching activities)

|   |    |                       |    |                                   |              |
|---|----|-----------------------|----|-----------------------------------|--------------|
| 3.1. Number of hours per week   | 4  | of which: 3.2. course | 2  | 3.3. seminar/ laboratory/ project | 2            |
| 3.4. Total of hours in the curriculum   | 56 | of which: 3.5. course | 28 | 3.6. seminar/ laboratory          | 28           |
| <b>Time allocation for individual study (IS) and self-taught activities (ST)</b>          |    |                       |    |                                   | <b>hours</b> |
| Learning from textbooks, course materials, bibliography, and notes (IS)                   |    |                       |    |                                   | 36           |
| Additional research in the library, on subject-specific electronic platforms, and on-site |    |                       |    |                                   | 25           |
| Preparing seminars/ laboratories/ projects, assignments, reports, portfolios, and essays  |    |                       |    |                                   | 25           |
| Tutoring (professional guidance)  |    |                       |    |                                   | 5            |
| Examinations  |    |                       |    |                                   | 3            |
| Other activities  |    |                       |    |                                   |              |
| <b>3.7. Total hours of individual study (IS) and self-taught activities (ST)</b>          |    |                       |    | <b>94</b>                         |              |
| <b>3.8. Total hours per semester</b>  |    |                       |    | <b>150</b>                        |              |
| <b>3.9. Number of credits</b>   |    |                       |    | <b>6</b>                          |              |

#### 4. Prerequisites (where applicable)

|                         |   |
|-------------------------|---|
| 4.1. curriculum-related | - |
| 4.2. skills-related     | - |

#### 5. Specific conditions (where applicable)

|                                 |   |
|---------------------------------|---|
| 5.1. course-related             | video projector, laptop                     |
| 5.2. seminar/laboratory-related | computer network, internet, video projector |

#### 6.1. Competencies resulting from the completion of the degree programme (as referred to in the curriculum)

| Professional competencies |            |
|---------------------------|------------|
| Competency code           | Competency |

|                                 |   |
|---------------------------------|---|
| <b>PC1</b>                      | Key knowledge in the field of Geography/Geography of Tourism, including scientific research methodology, scientific modelling, geographic information systems (advanced theoretical and practical knowledge of the fundamental aspects related to the geographical component in tourism and land use planning; use of sector-specific knowledge for the operational component, tourism operations, geobranding, territorial diagnosis, substantiation studies of spatial planning policies and territorial development strategies, and identification of tourist resources for capitalisation), ESCO 2632.5 Geographer/geography, scientific research methodology, scientific modelling, GIS, statistics and ESCO 2632.5 Geographer/geography/geographical areas relevant to tourism/travel, tourism and leisure).  |
| <b>PC2</b>                      | Sector-specific knowledge in the field of Geography / Geography of Tourism (tourism planning and development, tourism mapping, green practices, tourism legislation): Know the geographic area and tourist destinations in detail; analyse data through flexible and pertinent use of evaluation criteria and methods relevant to: the particularities of a region, protection of local and traditional products, traditional Romanian village, and capitalization of cultural heritage; create thematic maps, including tourist and customized maps; design computer graphics for the production of visualization, cartographic and promotional materials and tools using a combination of GIS resources and GDS (Graphic Design Suites) digital graphics; provide technical expertise and specialized consultancy in different geographical, cultural-historical, socio-economic contexts; mediate and facilitate the understanding of tourism development related concepts; organize marketing and advertising activities for tourist destinations and events by using techniques for the development, management and valorisation of tourism products; develop collaborative and communication relations with various stakeholders involved in tourism and spatial planning; know the structure, functionality and operations specific to a destination management organization (DMO); manage administrative and economic bodies in tourism and related fields; teach Geography and Tourism courses.(ESCO 2632.5 Geographer/geography/geographical areas relevant to tourism/travel, tourism and leisure) |
| <b>Transversal competencies</b> |   |
| <b>Competency code</b>          | <b>Competency</b>   |
| <b>TC2</b>                      | S2 - Information skills - Collecting, storing, monitoring, and using information; Conducting studies, investigations, and tests; maintaining records; managing, evaluating, processing, analysing, and monitoring information and projecting outcomes (from ESCO S2.0-S2.9)   |
| <b>TC5</b>                      | S5 - Working with computers - Using computers and other digital tools to browse, search, filter, organize, store, retrieve, and analyse data, to collaborate and communicate with others, to create and edit new content - licensed or open-source software products for editing (Office Suite), navigation, GIS (ArcGIS online, QGIS, etc.), digital graphics (CorelGDS, Inkscape, Canva, etc.) (from ESCO S5.0, S5.2, S5.5, S5.6, S6.7).  |

## 6.2. Learning outcomes relevant to the degree programme (as referred to in the curriculum)

| <b>Learning outcomes targeted by the subject</b> |   |   |
|--|---|---|
| <b>Competency code</b>                           | <b>Knowledge and comprehension</b>  | <b>Specific academic skills</b>   |
| <b>PC1, TC2</b>                                  | 1. The student/graduate identifies, explains and operationalizes in an advanced theoretical and practical manner the fundamental aspects underlying the geographical component in tourism and spatial planning issues, including scientific research methodology, scientific modeling, geographic information systems; analyzes, explains and evaluates the geographical characteristics of a region and tourist destination in detail. | 1. The student/graduate uses specialized concepts for: the operative component, operations, geobranding, territorial diagnosis, studies to substantiate territorial planning policies and territorial development strategies, and identification of the tourist offer for exploitation. |

|                       |  |   |
|-----------------------|--|---|
| PC2, TC1,<br>TC4, TC5 | 2. The student/graduate explains, reports and integrates the characteristics of the components of tourism: attractiveness resources, infrastructure, services and tourist circulation; describes, defines and discusses the tourist market at international, regional and local levels; analyzes the essential features of tourist destinations worldwide. | 2. The student/graduate conceives and develops tourism products and services; conceives and operationalizes tourist routes, routes and circuits; develops studies for the development of communities through tourism; implements and evaluates tourism activities from the perspective of sustainability and green practices; conceives strategies for community regeneration and resilience; reports facts/creates specialized content by promoting cultural or natural heritage values in relation to tourism development; develops and implements strategies, policies and models for tourism development. |
|-----------------------|--|---|

## 7. Subject-specific learning outcomes

|  |
|--|
| <b>Knowledge and comprehension</b>   |
| Understanding the fundamental concepts of geographic risk, hazard, and vulnerability in the context of tourism and spatial planning.   |
| Knowledge of the main types of risk phenomena (meteorological, hydrological, geomorphological) and their impact on tourism activities. |
| Understanding the principles of hazard classification and the mechanisms of risk perception by communities and tourists.               |
| Acquiring vulnerability assessment methods and hazard management strategies for tourist destinations.                                  |
| Understanding the methodology of frequency analysis in natural risk assessment.  |
| <b>Specific academic skills</b>  |
| Ability to identify, classify, and systematize risk phenomena specific to a region or tourist destination.                             |
| Skills in the practical application of frequency analysis for risk quantification within research projects.                            |
| Ability to conduct vulnerability assessment studies of tourism infrastructure and resources to various natural hazards.                |
| Ability to propose mitigation measures and risk management solutions for developing the resilience of local communities                |
| Ability to use GIS tools for risk mapping and their integration into territorial diagnostic studies.                                   |

## 8. Contents

| 8.1. Course   | Teaching and learning methods                        | Remarks |
|---|--|---------|
| Geographic risks, general notions.<br>Systematization of risk phenomena.          | Heuristic exposure with active-participatory methods | 2 hours |
| Meteorological risk phenomena   | Heuristic exposure with active-participatory methods | 8 hours |
| Hydrological risk phenomena   | Heuristic exposure with active-participatory methods | 4 hours |
| Geomorphological risk phenomena   | Heuristic exposure with active-participatory methods | 4 hours |
| Classification and perception of hazards  | Heuristic exposure with active-participatory methods | 2 hours |
| Hazard Management   | Heuristic exposure with active-participatory methods | 2 hours |
| Getting Started in the Vulnerability Study  | Heuristic exposure with active-participatory methods | 2 hours |
| Vulnerability assessment  | Heuristic exposure with active-participatory methods | 4 hours |
| <i>Bibliography</i>   |  |         |
| 1. Borsy Z. (1998), Általános természetföldrajz. Nemzeti Tankönyvkiadó, Budapest. |  |         |



Date of entry:  
13.04.2026

Signature of course coordinator

Dombay Ştefan

Signature of seminar coordinator

Magyari S. Zsolt

Date of approval in the department:  
28.04.2026

Signature of the head of department

Máthé Csongor