MINISTER OF EDUCATION, SCIENCE AND SPORT OF THE REPUBLIC OF LITHUANIA

ORDER
ON APPROVAL OF THE DESCRIPTOR OF THE STUDY FIELDS OF PHYSICAL AND HUMAN GEOGRAPHY

10 May 2022 No. V-747
Vilnius

In accordance with Paragraph 11 of Article 53 of the Law on Higher Education and Research of the Republic of Lithuania:

1. I approve the Descriptor of the Study Fields of Physical and Human Geography (enclosed).

2. I determine that the higher education institutions have to adjust their study programmes to the Descriptor of the Study Fields of Physical and Human Geography approved by Clause 1 hereby until 01 September 2023.

3. I recognize Order No. V-927 of the Minister of Education and Science of the Republic of Lithuania of 27 August 2015 “On Approval of the Descriptor of the Study Fields of Physical and Human Geography” as invalid.

Minister of Education, Science and Sport Jurgita Šiugždinienė

APPROVED by Order No. V-747 of the
Minister of Education, Science and Sport of the
Republic of Lithuania of 10 May 2022

DESCRIPTOR OF THE STUDY FIELDS OF PHYSICAL AND HUMAN GEOGRAPHY

CHAPTER I
GENERAL PROVISIONS

1. Descriptor of the Study Fields of Physical and Human Geography (hereinafter referred to as the "Descriptor") shall govern the special requirements applied to the study programmes of the study field of physical geography (C05), which belongs to the group of fields of study in the physical sciences (C), and of the study field of human geography (J06), which belongs to the group of fields of study in social sciences (J). The Descriptor regulates the study fields of physical and human geography (hereinafter referred to as the "the study fields of physical and human geography") in the scope not covered by the General Requirements for the Studies approved by Order No. V-1168 of the Minister of Education and Science of the Republic of Lithuania of 30 December 2016 "On approval of the General Requirements for the Studies".

2. The requirements of the Descriptor shall apply to the first and second cycle university studies in the fields of physical and human geography.

3. The following qualification degrees are awarded on completion of the studies:

3.1. Upon completion of the studies in the field of physical geography (hereinafter referred to as the "the study field of physical geography"), a bachelor's/master's degree qualification degree in physical sciences, that is in conformity with the sixth/seventh level of the Lithuanian Qualifications Framework and the European Qualifications Framework for lifelong learning and first/second cycles of the Framework for Qualifications of the European Higher Education Area, attested by the diploma of bachelor's/ master's degree and its supplement issued by the higher education institution, is awarded.

3.2. Upon completion of the studies in the field of human geography (hereinafter referred to as the "the study field of physical geography"), a bachelor's/master's degree qualification degree in social sciences, that is in conformity with the sixth/seventh level of the Lithuanian Qualifications Framework and the European Qualifications Framework for lifelong learning and first/second cycles of the Framework for Qualifications of the European Higher Education Area, attested by the diploma of bachelor's/master's degree and its supplement issued by the higher education institution, is awarded.

4. In order to achieve an integrated studies of geography, it is recommended that studies in the fields of physical and human geography should be implemented in the framework of interdisciplinary or dual degree programmes. Studies of physical or human geography may be combined with studies in the biomedical, physical, humanities, social sciences or technology fields of study.

5. Interdisciplinary study programmes in physical and human geography, designed specifically with the intention to prepare new educators, may not be combined with studies of other study fields.

6. Requirements for the scope of study programmes:

6.1. University first cycle study programmes in physical or human geography must make up 240 or 210 credits. Interdisciplinary study programmes in physical and human geography must make up 240 credits. Where a field of study of physical or human geography is part of an interdisciplinary or dual degree programme (not applicable to interdisciplinary degree programmes in physical and human geography), a minimum of 180 credits shall be allocated to the field of physical or human geography;

6.2. University second cycle study programmes in physical or human geography must make up 120 or 90 credits. Interdisciplinary second cycle study programmes in physical or human geography must make up 120 credits. Where a field of study of physical or human geography is part of an interdisciplinary or second cycle programme (not applicable to interdisciplinary degree programmes in physical and human geography), a minimum of 60 credits shall be allocated to the field of physical or human geography;

7. Studies may be organised on a full-time and part-time basis.

8. There are no special requirements established in the Descriptor for the persons, who want to be admitted to the first cycle study programmes.

9. It is recommended that those admitted to second cycle studies should have acquired a bachelor's degree or higher upon completing study programmes in the fields of physical sciences, life sciences, humanities, engineering, social sciences, technology, mathematics, computer science, business and public management. Higher education institutions must assess applicants' readiness for second cycle studies and specify in the admission rules the graduates of which fields of study or programmes of university studies may be admitted directly and which may be admitted with supplementary studies. College graduates are required to undertake supplementary studies, the content and form of which are determined by the University. It is recommended that the volume of supplementary studies should not exceed 60 credits.

10. The aim of the studies of physical and human geography is to prepare, in cooperation with social partners and higher education communities in other countries, globally-minded specialists with geographic competences who can successfully integrate into the communities of Lithuania, Europe, and the world, and who will be able to work for the benefit of the society in public and private institutions and organisations, as well as pursue further studies in higher cycles of higher education.

CHAPTER II
CONCEPT AND SCOPE OF THE STUDY FIELD

11. Geography is a system of sciences, which analyses the Earth's geospheres and their interaction, spatial expression of human activity and physical processes that take place in the contact zone of the Earth's surface (geographic shell), and formation and evolution of territorial structures and systems that reflect them.

12. Contemporary geographical cognition includes:

12.1. Theoretical core of geography covering the methodology of geography, landscape geography that integrates spatial structures, general physical and general human geography reflecting physical/human nature;

12.2 Geospherically differentiated component-sectorial disciplines of physical and human geography;

12.3. Humanities, physical, biomedical and social sciences or their parts thereof as elements of periphery of interests of geographical cognition. System of geographical sciences and each geographical discipline has its own theoretical, historical, regional and applied sectors, where research object is interpreted in terms of aspects of interactions, summarising, development, distribution and possible use.

13. The aim of study programmes in the field of geography:

13.1. First cycle studies aim to prepare scientific research, environmental protection and land use planning specialists with a degree in the study field of geography, who are able to understand the patterns of formation, development and spatial differentiations of geospheres, landscape, social and economic systems in Lithuania and the rest of the world, apply analytical methods and information technology, who are familiar with general principles of sustainable development and environmental protection, understand the importance of lifelong learning and are able to continue studying for a Master's degree;

13.2. Second cycle studies aim to prepare specialists with a degree in the study field of geography and provide them with skills necessary for work that includes solving various geography related problems in the fields of research, spatial planning and maintenance, exploitation of natural resources, environmental protection and in economic and governmental institutions framework, as well as for doctoral studies; trained professionals must be able to deal with existing and emerging geographic and land use planning related issues.

14. The main aims of study programmes of the study field of geography shall be:

14.1. In first cycle studies it is aimed to:

14.1.1. Cultivate specialists in the study fields of geography, who will have acquired the necessary amount of knowledge and motivation to work in accordance with their qualifications, and continue their education or training further;

14.1.2. Provide students with an opportunity to acquire integrated competence in the field of geography;

14.1.3. Provide the knowledge and skills necessary for shaping environmental research and environmental protection oriented thinking paradigm;

14.1.4. Develop a critical approach and a sense of civil liability for the Earth and for one's own country;

14.1.5. Encourage students' interest in current interdisciplinary academic issues;

14.2. In second cycle studies it is aimed to:

14.2.1. Expand and deepen students' general competence in the field of geography;

14.2.2. Provide knowledge and skills needed for different geographic and land use planning related problems;

14.2.3. Develop students' ability to carry out scientific work and solve a wide range of geographic and land use planning related problems;

14.2.4. Develop constructive systemic thinking, forward-looking approach, planning and design skills, and a sense of civic responsibility.

15. Learning outcomes in the study fields of physical and human geography are focused on the acquisition of newest knowledge in the areas of work and study, which requires critical understanding of theories and principles, cognitive and practical skills, professional skills and ability to apply innovative approach at work. They are necessary when solving complex, predictable and unpredictable geography related issues in professional work and study fields.

CHAPTER III
GENERAL AND SPECIAL LEARNING OUTCOMES

16. After completing the first cycle studies, the following learning outcomes should be achieved:

16.1. knowledge and its application. The person:

16.1.1. has fundamental knowledge of physical (study field of physical geography) and social (study field of human geography) phenomena and their qualitative and quantitative expression;

16.1.2. is familiar with definitions of geographical concepts, phenomena and processes, has knowledge about physical and anthropogenic patterns of geospheres' evolution and their interaction, orientation and intensity of these processes, as well as formal inventory knowledge about geographical objects;

16.1.3. has knowledge of geographical research methods, geographical information systems (GIS), cartographical, mathematical and other geographic information acquisition, its analysis and interpretation methodology;

16.1.4. has knowledge about spatial integration and differentiation patterns of physical and human phenomena, interrelationship between the geographical environment and landscape elements, dynamic processes and cycles on-going within the geographical environment, in various

geosystems (study field of physical geography) or anthroposystems (study field of human geography) of different spatial scale and their influence on humanity (human economic activity);

16.1.5. is familiar with changes happening in nature (study field of physical geography) and society (study field of human geography) and their interaction in space and time, the extent of critical changes and their forecast;

16.1.6. is able to assess coherently and critically the emerging differences in physical (study field of physical geography) or human (study field of human geography) environment, as well as use theories, raise hypotheses, formulate explanations, emphasize the strengths and weaknesses of different concepts;

16.1.7. is able to apply knowledge when identifying and analysing new research problems relating to relevant study fields, plan their solution strategies and combine elements of theory and practice when realising pragmatic insights;

16.1.8. is able to apply knowledge of the humanities to the achievement of the objectives of the profession of the study fields of geography, to form a scientific philosophical worldview, to acquire the erudition and develop self-expression;

16.2. research skills. The person:

16.2.1. is able to plan territorial studies and experiments on physical (study field of physical geography) and/or human (study field of human geography) phenomena and processes, as well as those taking place in the landscape, formulate a territorial research problem, select research methodology and equipment, and carry out the research safely;

16.2.2. is able to apply the latest geographical research methods, general principles of physical (study field of physical geography) and human (study field of human geography) sciences, analyse processes happening in geospheres (study field of physical geography) or anthroposphere (study field of human geography) on a local, regional and global levels;

16.2.3. is able to monitor and measure quantitative and qualitative aspects of physical (study field of physical geography) or human phenomena (study field of human geography), independently carry out monitoring in nature observations, document information and present research reports.

16.3. special abilities. The person:

16.3.1. is able to analyse scientific publications describing physical (study field of physical geography) and/or human (study field of human geography) and landscape research, and to use databases, laboratory equipment, experimental systems and other information sources;

16.3.2. is able to process, evaluate, analyse and interpret data describing natural (study field of physical geography) and/or human (study field of human geography) and landscape phenomena and processes, and summarise information on a specific subject;

16.3.3. is able to grasp the theoretical principles of territorial physical (study field of physical geography) and/or human (study field of human geography) and landscape phenomena and processes that underpin newly developed research methodologies and technologies;

16.3.4. is able to evaluate decisions to use physical (study field of physical geography) and/or human (study field of human geography) and landscape resources in a holistic manner, balancing costs, benefits, safety, quality, reliability and environmental impacts;

16.3.5. understands new and significant scientific work and developments in physical (study field of physical geography) and/or human (study field of human geography) and landscape phenomena and processes in these fields of science;

16.3.6. is able to carry out expertise on territorial systems and processes, and to plan, regulate and manage natural (study field of physical geography) and/or other spatially explicit human activities (study field of human geography);

16.3.7. is able to create maps representing spatial distribution of phenomena and processes and collect, structure and analyse geo-referenced data using GIS technology, mathematical and statistical techniques;

16.3.8. is able to organise, carry out and coordinate territorial design work of natural resources use and environmental protection (study field of physical geography) and/or other societal activities (study field of human geography);

16.4. social skills:

16.4.1. is able to responsibly evaluate social, cultural, economic and political indicators and changes of social life as well as interaction between nature and society;

16.4.2. is able to evaluate decisions from an ethical, legal, social, economic and security point of view;

16.4.3. is able to work and adapt in changing (dynamic) or new situations and work in a team;

16.4.4. is able to present practical results of their work to the public and organise successful realisation of these results in a market economy;

16.5. personal abilities. The person:

16.5.1. is able to formulate arguments, present research findings and conclusions to different audiences both orally and in writing;

16.5.2. is able to find information from primary and secondary sources, including search for operational information, as well as to systematise and structure information;

16.5.3. is able to employ legal acts and other documents, and rely on them in practice;

16.5.4. is able to assess mathematical and statistical analysis, data accuracy, information summaries and its visual presentation;

16.5.5. has information technology use skills: uses information networks and databases, and develops computerised graphical documentation;

16.5.6. has time management and organisational skills, written communication skills, as well as skills allowing them to verbally present and defend scientific works;

16.5.7. Has independent learning skills needed to ensure continuous professional development;

16.5.8. is able to communicate and convey knowledge of the subject and terminology in correct Lithuanian language (or another language in which the studies are organised) both orally and in writing, as well as to converse on the subject related topics in at least one foreign language.

17. After completing the second cycle studies, the following learning outcomes should be achieved:

17.1. knowledge and its application. The person:

17.1.1. is familiar with cognitive paradigms of landscape and geosystems, and features of dynamic processes and their cycles happening in modern geographical environment;

17.1.2. is aware of characteristics of physical (study field of physical geography) and/or human (study field of human geography) phenomena and landscape spatial differentiation process, especially in Lithuania, the Baltic region and Europe as well as their influence on the development of society;

17.1.3. is aware of physical (study field of physical geography) and/or human (study field of human geography) mutual links between the geographical environment and landscape elements, and the problems they cause;

17.1.4. is aware of the latest theories and paradigms in specialised systematic physical (study field of physical geography) and/or human (study field of human geography) branches of geography;

17.1.5. is familiar with methods used to predict changes in nature (study field of physical geography) or society (study field of human geography) and their interaction in space and time, and the use and application of such methods when solving practical problems;

17.1.6. is familiar with the principles of land management, environmental design, land use and environmental protection;

17.1.7. is familiar with GIS, cartographical, mathematical and other geographic information acquisition, analysis and interpretation methodologies;

17.1.8. is able to apply the acquired knowledge when formulating scientific problems and theoretically justifying scientific research on physical (study field of human geography) and/or human phenomena (study field of human geography) and landscape;

17.1.9. is able to apply geographic knowledge when carrying out expertise of physical (study field of physical geography) and/or human (study field of human geography) phenomena, regulating natural resources use (study field of physical geography), and/or other spatially distinctive human activities (study field of human geography), managing and planning.

17.2. research skills. The person:

17.2.1. is able to analyse territorial phenomena on the basis of one or more theoretical approaches while combining theory and practice, comprehensively use various geographic analysis methods, GIS, mathematical models, statistical methods and analytical work skills;

17.2.2. is able to plan, organise, carry out and report on scientific and applied territorial research on physical (study field of physical geography) and/or human (study field of human geography) phenomena and landscapes;

17.3. special abilities. The person:

17.3.1. is able to identify the strengths and weaknesses of spatial theories and concepts;

17.3.2. is able to consistently and critically evaluate differences emerging in the world of humanity and its living environment that formed due to physical (study field of physical geography) and/or human (study field of human geography) processes;

17.3.3. has a strong environmental, protectional (natural geography) and/or sustainable development (study field of human geography) self-awareness;

17.3.4. is able to think systematically, integrate ideas, formulate hypotheses, concepts and research objectives, and critically analyse data and projects related to the research and use of physical (study field of physical geography) and/or human (study field human geography), and landscape phenomena and processes;

17.3.5. is able to plan land use, landscape forming and protection measures;

17.3.6. is able to perform mapping through the use of modern technology and use cartographic, analytical statistical methods and GIS technology in research;

17.3.7. is able to apply numerical mathematical models to the assessment of physical (study field of physical geography) and/or human processes (study field human geography);

17.4. social skills. The person:

17.4.1. is able to combine independent and group work; has organisational skills;

17.4.2. has the essential career planning skills and knows how to communicate in the national and international sphere;

17.4.3. is able to present research results to the public;

17.5. personal abilities. The person:

17.5.1. has future-oriented and logical thinking, and the ability to formalise and model;

17.5.2. is able to assess qualitative and quantitative information and perform evaluations, when there is information missing or it appears controversial;

17.5.3. is able to analyse and critically evaluate legislation and other documents;

17.5.4. is able to analyse problems, formulate conclusions and rational arguments, make decisions, write investigation reports and prepare scientific articles;

17.5.5. is responsible, motivated, and creative and works for the benefit of the society;

17.5.6. is able to study in order to grow professionally;

17.5.7. is able to use correct Lithuanian language (or another language in which the studies are organised) orally and in writing in professional activities.

CHAPTER IV
TEACHING, LEARNING AND ASSESSMENT

18. Teaching should be based on continuous integration of latest developments in the study process. Implementation of programmes in the field of geography is based on competent and

qualified university lecturers, who seek to teach their students how to learn and organise their knowledge, are capable of improving teaching and learning contents and choosing the appropriate student-centred teaching and achievement assessment methods, develop new, more effective training methods and encourage the desire for lifelong learning.

19. Teaching (learning) must be based on fundamental knowledge of geography and the content of latest achievements in the field of geography science. Teaching methods should expand the understanding of conceptual geography fundamentals, be adequate when it comes to possible rendering of current academic achievements in the field of geography, facilitate conditions in which the aims of a study programme will be able to achieve the necessary knowledge and skills, as well as enhance professional competence.

20. Teaching methods should be consistent with the lifelong learning (continuous learning) concept, which requires the encouragement of development of the lifelong learning concept over the course of studies, so that as a part of their studies students should be trained and encouraged to acquire learning skills. Didactic system must orient the study process towards the development of students' ability to learn based on current knowledge in the field of geography.

21. Teaching and studying (learning) must be based on clear objectives formulated by both the lecturer and the student, that are in line with the objectives and learning outcomes of the study programme. 17.4.3. Study methods must be effective and varied; they must be applied using existing facilities and equipment efficiently. Learning must be oriented towards the systematisation of knowledge, their spatial understanding, knowledge and modelling of territorial systems and their interactions.

22. The choice of study methods (teaching and learning) must ensure the opportunity to achieve learning outcomes. General and special study methods can be applied: active (problem analysis and decision making classes, teaching and professional practice, preparing reports and presentations, discussions, project work, research and other methods oriented towards active and independent learning for students), interactive (subject's electronic training courses, conferences, using virtual environment, web pages providing training materials and products of video lectures) and other methods considered to be a part of traditional learning concept (lectures, workshops, seminars, etc.), as well as cartographic analysis, thematic and topographic mapping, GIS application and field testing methods. The same methods may be applied in different cycle studies, but the content and degree of complexity of given tasks should vary, as well as students' self-sufficiency rate and other.

23. Higher education institution, by setting the assessment procedure, allows teachers to choose assessment methods. Learning outcomes of a subject studied by a student are evaluated according to a ten-point grading system. Geography studies' student achievement evaluation system should allow monitoring progress when working towards the expected results, notice deviations at the right time, enable continuous feedback and create preconditions for correction. Evaluation criteria describe the achieved mandatory learning outcomes, which enable teachers awarding students with an appropriate grade. Assessment procedure, assessment system and assessment criteria should be based on the principles of validity, reliability, clarity, usefulness and impartiality.

24. When assessing learning outcomes of a student, the following types of evaluation can be applied: cumulative (learning outcomes are evaluated with the help of interim tests), collegial (students are examined by a competent commission comprising geography professionals including academics, professional practitioners and representatives of social partners- commission), as well as diagnostic (carried out in order to determine student's achievements and progress made at the end of a studied topic or part of a course). Evaluation methods, among others, may include a written or oral examination, individual or group based oral interview, testing, cognitive (ideas and concepts) maps, case studies, practical training report and its defence, final thesis and its defence.

25. At the beginning of semester teacher informs students about the learning outcomes' evaluation procedure, pointing out a comprehensive program of the subject, its aims, expected learning outcomes, learning outcomes' assessment framework, which is specific for the subject

(the influence of intermediate tests on the final grade, learning outcomes that will lead to having to repeat the course of a subject, whether it is possible to reseat a test, etc.), and the evaluation criteria.

26. Students must receive appropriate feedback on the work they carried out in a timely manner. Evaluation of carried out work and learning outcomes must be accompanied by constructive comments based on clear evaluation criteria. Students should be given the opportunity to discuss many aspects of their studies, including their final evaluation, with their evaluator. Meaningful feedback must be maintained constantly while both learning outcomes evaluation process and prerequisites for teaching and studying should be continuously improved.

27. Evaluation of learning outcomes must orient study process towards the development of students' ability to learn relying on current knowledge in the field of geography.

CHAPTER V
REQUIREMENTS FOR IMPLEMENTATION OF STUDY PROGRAMMES

28. Study programme may be implemented by qualified and competent lecturers carrying out fundamental research or experimental development research, who are familiar with graduates' future job conditions and are able to help students prepare themselves for their future professional or academic activities in the field of geography.

29. Lecturers' general competence is assessed based on the following criteria: academic level of education, variety of acquired education, practical scientific research project experience, teaching experience, ability to communicate in correct Lithuanian language orally and in writing as well as ability to communicate in languages most widely used in geographical community, readiness and initiative to develop more effective teaching methods, fruitful and productive scientific research and project development activities reflected in publications, implemented projects, participation in scientific conferences and scientific associations, personal interest in students' needs and provision of continuous academic assistance. Lecturers must be able to properly advise students in the areas of study and career planning, and be familiar with assessment procedures and accreditation criteria applied to study programmes in the field of geography.

30. Lecturers' competency is assessed in accordance with the criteria set by a relevant higher education institution.

31. Competent teachers, who are widely recognised practitioners in their field of study and hold at least a Master's degree or an equivalent higher education qualification, may be invited to teach applied subjects.

32. The final thesis evaluation commission must be composed of competent scientists conducting research in the field of geography. The Head of the Commission must be an active scientist holding a doctoral degree in science, who is familiar with professional work specifics facing future graduates and works in another higher education, science, business or manufacturing institution.

33. Questions regarding subject curriculum should be addressed to subject teachers and independent assignment, final thesis, project and professional practice supervisors, who shall consult students according to study plans or students' individual needs.

34. Advice on the organisation of studies and the choice of study model is provided in accordance with the procedures laid down by the higher education institution. University career centres organise and coordinate students' career planning activities and organise individual and group consultations.

35. Successful implementation of the study programme shall require the following material base:

35.1. Auditoriums shall meet hygiene and safety requirements, they shall be equipped with modern audio and video equipment, as well as demonstration tools;

35.2. Laboratory equipment and apparatus must be sufficient to allow students to learn applying modern research methods; each student must perform tasks using the equipment necessary to realise programme strands within the study field of geography (hydrological, meteorological, geodetic and mapping devices, soil research equipment, computers and subject relevant learning programmes, computer models, GIS equipment, etc.), study practice related inventory and facilities, learn how to use research equipment when analysing the results obtained; while they study and carry out scientific and project work, students are given the opportunity to use university labs and other educational facilities according to their study plan or individual needs, subject to prior agreement with Faculty (Institute) administration;

35.3. When organising study practice, it is advisable to have stationary practice facilities fitted with necessary material equipment or a mobile study practice organisation system; to enrich geographers' academic preparation, it is advisable to organise a complex study practice outside of Lithuania, which would help them to get to know geographic diversity of the environment of other countries and provide the opportunity to learn the differences between geographical regions;

35.4. For the application of the acquired skills in practice, it is recommended to organise a professional practice in public or private sector institutions, enterprises and organisations of professional interest; the list of such establishments and the procedure for organising the practice shall be determined by the branch of the higher education institution conducting the study programme, in accordance with the legislation in force and the procedure in force at the higher education institution;

35.5. The number of textbooks for each subject, educational books or lecture summary notes kept in a library should meet students' needs; libraries must be equipped with a sufficient number of computers and appropriate computer software and information equipment (literary directories, search engines, Internet connection interface for searching larger library databases, access to full-text scientific publications, databases and other sources of information at the disposal of universities);

35.6. The number of used computers must comply with the programme requirements; all computers must be equipped with standard text and the required graphic software packages, have Internet connection as well as modern educational programs;

35.7. The material base must ensure the possibility for people with special needs to study. It is recommended that students be given access to the material base available for study and research-related activities during their free time.

36. Higher education institutions must provide opportunities for students to provide feedback to lecturers and administration, and to participate in study programme curriculum committees and other activities of higher education institutions.

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