

CATALOG OF ELECTIVE DISCIPLINES

7M01 - Pedagogical sciences

(Code and classification of the field of education)

7M015 - Teacher training in natural science subjects

(Code and classification of the direction of training)

0114

(Code in the International Standard Classification of Education)

M015 - Training teachers of geography

(Code and classification of the educational program group)

7M01506 - Geography

(Code and name of the educational program)

Master

(Level of preparation)

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Academic Committee of the OP
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Reviewed

At the meeting of the Quality Assurance Commission
Natural and Mathematical of the faculty
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Chairman of the Academic Council Oralkanova I.A.

Methods of geographical studies

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course reveals to undergraduates the general problems of methodology and methods of scientific geographical research. Undergraduates will get acquainted with the methods of complex physical and geographical research of natural and natural-anthropogenic Geosystems and the information base of modern physical geography. In the course of mastering the discipline, undergraduates develop the necessary skills in working with statistical materials and scientific economic and geographical literature, studying the object of geographical research, individual components of nature.

Purpose of studying of the discipline

to teach students to use a variety of field methods of physical and geographic research for the study components of nature and natural systems, to certain practical skills of collecting primary material on the subject of the study.

Learning Outcomes

ON3 Apply basic research methods, concepts and laws in the field of geography when explaining theoretical and practical tasks.

Learning outcomes by discipline

- Explain the main methods used in the course of performing geographical research;*
- to reveal the interrelationships of cartographic, geochemical, geophysical, mathematical, aero- and space methods and interpret the results obtained;*
- use various methods of studying physical and geographical objects.*

Prerequisites

Bachelor

Postrequisites

Methods of organization of tourist and local history activities

GIS Research Methods

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

During the training of this training course, students master the principles, methods and technologies of obtaining, collecting, processing and presenting Geographical Information, receive explanations about Geoinformation systems and conduct spatial data sampling in GIS. In the course of geocological research, undergraduates gain systematic knowledge about the possibilities and directions of Geoinformation mapping, the introduction of GIS technologies into practice, the use of cartographic and Geoinformation methods in the study of population geography.

Purpose of studying of the discipline

*The concept of geographic information systems. Simulation of spatial data in GIS. Basic principles of working with spatial databases. Geographical analysis using geo-information technologies Geo-information mapping in environmental studies
The introduction of GIS technologies in the practice of geocological research
Directions and possibilities of using cartographic and geo-information methods in studying population.
Cartographic works of social and demographic subjects. Geoinformational and spatial-statistical analysis. Use of global positioning systems and Earth remote sensing data.*

Learning Outcomes

ON3 Apply basic research methods, concepts and laws in the field of geography when explaining theoretical and practical tasks.

Learning outcomes by discipline

- of decoding digital aerial and satellite images for mapping.*
- the structure of GIS,*
- the possibility of their use in environmental research;*
- to use software for processing DDZ*
- to formulate requirements for GIS used in the field of nature management and environmental protection;*
- possess knowledge of methods and tools for processing space and aerial photographs, methods of using modern GIS technologies.*

Prerequisites

Bachelor

Postrequisites

Methods of organization of tourist and local history activities

Methods of economic geographical and sociological research

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

According to this training course, undergraduates receive systematic knowledge about the basic techniques and methods of economic and geographical research, political geography and geopolitics, geography of the main branches of the economy, their main geographical patterns, factors of location and development. Undergraduates form the necessary skills with the help of various theories and methods of economic and geographical research, which allows a comprehensive analysis of territorial socio-economic systems of various levels.

Purpose of studying of the discipline

To consider the main scientific methods used in economic, geographical and sociological research

Learning Outcomes

ON3 Apply basic research methods, concepts and laws in the field of geography when explaining theoretical and practical tasks.

Learning outcomes by discipline

- use methods of economic, socio-geographical research to solve educational, scientific and applied problems;
- to analyze the basic subject scientific and theoretical concepts of the essence, laws, principles and features of the phenomena and processes studied in economic and social geography;
- to apply scientific and reference literature for the formulation of problematic tasks when conducting economic and geographical research.

Prerequisites

Bachelor

Postrequisites

Methods of organization of tourist and local history activities

Technology of learning Geography at colleges and universities

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

The content of the discipline includes issues related to the formation of knowledge that constitutes the essence of pedagogical activity, awareness of its importance for the training of future teachers of geographical disciplines and the development of professional competencies of students. The course includes consideration of modern teaching technologies, means and forms of teaching used in teaching geography in universities. Undergraduates not only fully master learning technologies, but also consider the possibilities of practical

Purpose of studying of the discipline

the study of the conceptual foundations of innovative teaching technologies, methodological principles of teaching construction, conditioned by modern models of pedagogical technology and their application in teaching geography

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- to form ideas about various learning technologies and the possibility of their use in teaching geography;
- to show by concrete examples the features of technologies and their implementation in the educational process when studying geography in the secondary school and university;
- possess the skills of organizing individual and joint educational and project activities of students in the subject area of geography.

Prerequisites

Bachelor

Postrequisites

Methods of formation of functional literacy of students in geography lessons

The modular technology of training of geographical disciplines in the university

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course allows students to form competencies as the basis of professional training in the field of creating and applying modular technologies for teaching geography and preparing for their use in professional activities. The course involves the study of the conceptual foundations of pedagogical technologies, modular technology of teaching geography at a university, a competence-based approach in teaching geography. This course provides individualization of training in terms of content, pace of development, and independence.

Purpose of studying of the discipline

Formation of ideas about the geographic shell as a holistic material system, the constituent parts of which, its components, are in close cooperation and continuous development; about the unity of man and nature.

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical

skills of teaching and learning methods in universities.

Learning outcomes by discipline

- identify the features of modular learning technology;
- explain the problem of using modular learning technology in the educational process;
- analyze the specifics of the application of modular learning technology at different levels of education.

Prerequisites

Bachelor

Postrequisites

Methods of formation of functional literacy of students in geography lessons

Modern methods of teaching geography in the university

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course allows students to form competencies in the field of modern methods of teaching geography as the basis for professional training and readiness to use them in their professional activities. The course includes the study of the conceptual foundations of pedagogical technologies. When studying the course, modern methods of teaching geography at the university, innovative technologies of developing learning, ways of effective application of new innovative technologies are considered.

Purpose of studying of the discipline

the study of the conceptual foundations of innovative teaching technologies, methodological principles of teaching construction, conditioned by modern models of pedagogical technology and their application in teaching geography.

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- to form ideas about various learning technologies and the possibility of their use in teaching geography;
- to show by concrete examples the features of technologies and their implementation in the educational process when studying geography in the secondary school and university;
- possess the skills of organizing individual and joint educational and project activities of students in the subject area of geography.

Prerequisites

Bachelor

Postrequisites

Methods of formation of functional literacy of students in geography lessons

Global and regional geocology

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

In the course of studying this subject, graduate students fully familiarize themselves with the definitions, theoretical and methodological knowledge of global and regional geocology, geocological research methods, and the features and examples of the manifestation of anthropogenic activity in various geospheric shells. Branch and complex methods of geocology, complex ecological monitoring, expert analysis of the ecological and geographical condition of the territory. The main problems related to the environment and ways to solve them are considered.

Purpose of studying of the discipline

To study the features of ecosystems, the influence of anthropogenic factors on the occurrence of regional and local environmental problems.

Learning Outcomes

ON6 To identify the features of the interaction of nature and society at the present stage.

Learning outcomes by discipline

- To form an idea of the geocosphere as a global complex formation combining closely related geospheric shells: atmosphere, hydrosphere, lithosphere, pedosphere, biosphere;
- possess methods of landscape and geocological design, monitoring and expertise;
- to propose solutions to global and regional geocological problems.

Prerequisites

Bachelor

Postrequisites

Anthropogenic landscape science

Water resources management

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

This training course introduces undergraduates to the use of water resources, the study of water bodies and the design of water

management measures, ensuring respect for the environment, the presence of a common culture of nature management. In this direction, the ability to formulate the principles of rational use of the environment, to equip industry with knowledge of water management systems for economical, environmentally friendly industrial development based on low-water, non-toxic technologies.

Purpose of studying of the discipline

Familiarization of undergraduates with the basics of designing water management and water protection measures.

Learning Outcomes

ON6 To identify the features of the interaction of nature and society at the present stage.

Learning outcomes by discipline

- use regulatory legal acts, including technical regulatory legal acts that establish requirements for the water management system and the organization of economic and other activities, taking into account legislation on the protection of water resources;
- ▣ identify environmental aspects and harmful effects on water resources;
- develop and maintain documented procedures in the water management system in accordance with the requirements of relevant technical regulations.

Prerequisites

Bachelor

Postrequisites

Anthropogenic landscape science

Nature management and environmental protection

Discipline cycle	Basic disciplines
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

This training course introduces undergraduates to the rules of behavior in the process of performing professional tasks and in everyday life. Undergraduates also assess the environmental situation in the regions, give basic, general professional (general ecological) ideas about the theoretical foundations of environmental protection, forms environmental awareness, knowledge about the rules and regulations of environmental protection and the effective use of its resources.

Purpose of studying of the discipline

formation of an ecological attitude while mastering the concepts of a system of environmental protection measures, developing practical skills necessary for assessing a man-made negative impact on the environment.

Learning Outcomes

ON6 To identify the features of the interaction of nature and society at the present stage.

Learning outcomes by discipline

- analyze modern concepts of nature protection and rational use of natural resources;
- explain the forms and methods of rational nature management;
- to assess the current state of natural resources and the ways of their inexhaustible use.

Prerequisites

Bachelor

Postrequisites

Anthropogenic landscape science

Geography of the mining industry of the Republic of Kazakhstan

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

In this course, undergraduates consider in detail the mining industry as the most developed sector of the economy of Kazakhstan, the basic concepts and terms, the main mining centers, get acquainted in detail with the country's industry. The long-term plans of the Republic of Kazakhstan for the formation and development of the mining industry as a manufacturing industry engaged in the exploration of mineral deposits and their extraction from the subsoil are analyzed.

Purpose of studying of the discipline

to give students a comprehensive view of the extractive sector of the economy of the Republic of Kazakhstan.

Learning Outcomes

ON5 To link educational material on geographical disciplines for everyday professional activities, to be able to conduct research work in the framework of studying geography at school and universities.

Learning outcomes by discipline

- explain the patterns of development and changes in economic, financial processes, the history of the formation and development of the domestic industry;
- identify the main features of the location of mining and manufacturing industries industry;
- analyze the features and trends of development and placement main industries.

Prerequisites

Methods of geographical studies

Postrequisites

Anthropogenic landscape science

The geography of the service sector of the economy of Kazakhstan

Discipline cycle	Profiling discipline
Course	1

Credits count	5
Knowledge control form	Examination

Short description of discipline

This course will present the service sector as an indicator of the country's development at the world level. It considers the state of development of the service sector of the Republic of Kazakhstan as the main factor in the development of the state in the economy, education, medicine in Kazakhstan, trade, tourism and Recreation, which are the main sectors of the service sector in Kazakhstan.

Purpose of studying of the discipline

formation of a system of professional knowledge among undergraduates in the field of geography of the service sector

Learning Outcomes

ON5 To link educational material on geographical disciplines for everyday professional activities, to be able to conduct research work in the framework of studying geography at school and universities.

Learning outcomes by discipline

- characterize the main factors in the development of the service sector;
- identify problems in the development of certain types of services;
- analyze the development of the service sector of the country, region, city, administrative district.

Prerequisites

Methods of geographical studies

Postrequisites

Anthropogenic landscape science

Geography of the sectoral structure of the economy of Kazakhstan

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course fully considers the geography of the sectoral structure of the Republic of Kazakhstan, the stages of its economy (traditional economy, planned economy of socialist republics, the emergence and formation of a market economy), production and non-production sectors of the economy. In the course of mastering the course, graduate students analyze the features of the development and deployment of industrial complexes of various sectors of the economy, the sectoral structure of the economy of the economic districts of the Republic of Kazakhstan.

Purpose of studying of the discipline

to give an idea of the functioning of the branches of the structure of the economy of the Republic of Kazakhstan

Learning Outcomes

ON5 To link educational material on geographical disciplines for everyday professional activities, to be able to conduct research work in the framework of studying geography at school and universities.

Learning outcomes by discipline

- apply the theoretical and methodological foundations of the studied science in solving specific problems arising in various sectors of the economy of the Republic of Kazakhstan;
- to give an economic and geographical analysis and identify the key problems of the development of the main regions of the country;
- to find ways of rational use of natural resources.

Prerequisites

Methods of geographical studies

Postrequisites

Anthropogenic landscape science

Design technology

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

In this course, graduate students learn how to plan and organize research work, divide research activities into stages, formulate and set a research problem, create a research plan, analyze the study of a working problem in theory and practice, distinguish the object of research, create hypotheses and test them, use and analyze literary sources. . Learns to draw conclusions based on research, to work in a group, to defend one's point of view in public.

Purpose of studying of the discipline

formation of professional theoretical and methodological competence in the field organization of design and research activities of undergraduates, implementation project learning technologies

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- to describe the basics of research activities, the stages of project design and implementation, including its understanding and reflection of the results of activities;
- to form professional theoretical and methodological competence in the field of organization of project and research activities;
- use modern methods of organizing project activities.

Prerequisites

Technology of learning Geography at colleges and universities

Postrequisites

Methods of formation of functional literacy of students in geography lessons

Technology for developing creative tasks in geography lessons

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

In this course, graduate students learn the features, forms and methods of organizing joint and individual educational activities of students with a high level of education within the framework of technologies for the development of creative abilities, the important features of the concepts of "creativity", "developmental teaching", "technologies for the development of creative abilities", the development of creative abilities. get acquainted with the conceptual bases of technologies, consider their role in education and development of students, technological tools of pedagogical technologies.

Purpose of studying of the discipline

formation of competencies in the field of technologies for the development of creative abilities in teaching geography and readiness to use them in pedagogical and research activities.

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- To describe the typology, essential features and features of pedagogical technologies for the development of creative abilities in pedagogy and methods of teaching geography,*
- to use pedagogical technologies for the development of creative abilities and their elements in the design and conduct of modern geography lessons;*
- possess the skills of planning the educational process based on technologies for the development of creative abilities and analysis of its results, based on the set goals and planned learning outcomes.*

Prerequisites

Technology of learning Geography at colleges and universities

Postrequisites

Methods of formation of functional literacy of students in geography lessons

Game technologies in geographical education

Discipline cycle	Profiling discipline
Course	1
Credits count	5
Knowledge control form	Examination

Short description of discipline

In this course, graduate students get acquainted with the types of games, their origin and socio-pedagogical significance, the structure of communication in the game, the principles of organizing interaction, the features of the game, the requirements for its design and organization. Learns basic terms and concepts in the field of game technologies used in geographic education, psychological and pedagogical game technologies, methods of conducting game activities, use of game technologies in solving pedagogical professional tasks.

Purpose of studying of the discipline

formation of competence in the field of creation, organization and use of gaming technologies in geographical education and willingness to use the acquired knowledge in professional activities

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- Explain the basic terms and concepts in the field of gaming technologies used in geographical education;*
- to organize the educational process in accordance with the social, age, psychophysical and individual characteristics of students;*
- use game technologies in solving pedagogical professional tasks.*

Prerequisites

Technology of learning Geography at colleges and universities

Postrequisites

Methods of formation of functional literacy of students in geography lessons

Geoinformational modeling of natural-territorial complexes

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

This discipline studies the possibility of using GIS in educational and research activities and issues related to the acquisition of modern software in the field of cartography, Geoinformatics, Geoinformation modeling of natural processes. Depending on the course, the following questions include practical spatial data and GIS mapping and database design, modeling of natural processes, and the possibilities of Geoinformation systems in the study of natural-territorial complexes.

Purpose of studying of the discipline

to use the possibilities of geoinformation systems in the study of natural and territorial complexes.

Learning Outcomes

ON7 Develop educational resources and conduct research using modern means of geographical information technology.

Learning outcomes by discipline

- describe the methods of cartographic research;
- master the basic programs used in geoinformation modeling;
- to model spatial data and present them in the form of digital terrain models and thematic layers of electronic maps.

Prerequisites

GIS Research Methods

Postrequisites

The research work of a student, including an internship and the implementation of a master s thesis III

Integration processes in the study of geosystems

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The course of integration processes in the study of geosystems is aimed at forming students` ideas about the integral unity of all natural processes of the geographical sphere of the Earth and the system of knowledge about natural and natural-anthropogenic geosystems. The course covers issues related to geosystems, evolution and dynamics of geosystems, modern ideas about regional and planetary geosystems.

The course is devoted to the cultural genesis and civilizational worlds of society, forms an idea of the geosystems of the modern landscape industry.

Purpose of studying of the discipline

to form a system of knowledge on physical geography and geosystems, to teach to determine the dependencies in the formation of various geosystems, to analyze heterogeneous data about the territory in the relationship

Learning Outcomes

ON6 To identify the features of the interaction of nature and society at the present stage.

Learning outcomes by discipline

- to reveal the essence of integration processes in the world community;
- to understand and characterize the causes of processes and phenomena affecting the safety of the environment;
- evaluate international activities aimed at solving global problems of humanity.

Prerequisites

Global and regional geoecology

Postrequisites

Research practice

The use of GIS in the study of natural-territorial complexes

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

The discipline considers the possibilities of using geoinformation systems in the study of natural and territorial complexes. Geoinformatics in the field of landscape science and allows you to teach how to use GIS in educational and scientific research. The course covers issues related to the structure and content of GIS, the storage and presentation of information in GIS, the study of the environment, as well as methods of its practical use and the effective use of GIS in the educational process.

Purpose of studying of the discipline

to train undergraduates to apply GIS technologies in conducting research related to the environment

Learning Outcomes

ON7 Develop educational resources and conduct research using modern means of geographical information technology.

Learning outcomes by discipline

- Explain the classification and types of information systems;
- develop and design information systems based on geoinformation technologies;
- create simple cartographic works

Prerequisites

GIS Research Methods

Postrequisites

The research work of a student, including an internship and the implementation of a master s thesis III

Students research work organization and planning

Discipline cycle	Profiling discipline
Course	2

Credits count	5
Knowledge control form	Examination

Short description of discipline

This course allows students to form competencies in the field of organization, planning and conducting research work as the basis for the professional training of future teachers of geographical disciplines. The course includes the study of the essence of scientific knowledge, methods of scientific research, organization and planning of research activities. When studying the course, undergraduates realize the importance of research work, the ways of its organization, master the ways of its effective implementation in the scientific field.

Purpose of studying of the discipline

to acquaint undergraduates with the main types of scientific activity and the specifics of the implementation of scientific research.

Learning Outcomes

ON4 Formulate the results of experimental research work in the form of a report, a scientific report, a message, conclusions.

Learning outcomes by discipline

- formulate the principles of organization and planning of scientific work;
- plan and conduct an experiment, process measurement results, compare experimental results with theoretical models and formulate conclusions of scientific research;
- to make a report, term paper or article based on the results of scientific research.

Prerequisites

Research activity of students in geography

Postrequisites

Research practice

Fundamentals of scientific work and the methodology of dissertation research

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

Discipline Fundamentals of scientific work and the methodology of dissertation research provides in-depth knowledge of the organization of research work and research methodology. Allows students to master the skills of searching, selecting and analyzing the necessary literature, methods of conducting research based on special scientific knowledge, analyzing its results and designing scientific activities based on special scientific knowledge. Undergraduates not only receive the necessary information when writing a dissertation, doing science, but also master the basic skills of scientific research.

Purpose of studying of the discipline

formation of students' knowledge about the role of science in modern society and mastering the basic provisions on methodology, methods and methods of scientific research

Learning Outcomes

ON4 Formulate the results of experimental research work in the form of a report, a scientific report, a message, conclusions.

Learning outcomes by discipline

- apply the necessary methods of scientific research in the development of scientific papers;
- to organize and conduct scientific research in the process of preparing dissertations;
- to carry out the approbation and implementation of the research results into practice.

Prerequisites

Tertiary education

Postrequisites

Students research work organization and planning

Planning and conducting of pedagogical experiment in high school conditions

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

Discipline provides deepened knowledge of the field of conducting a pedagogical experiment as a scientific basis for the development of professional thinking. The course includes theoretical planning of research work, modern approaches to conducting a pedagogical experiment, the study of quantitative and qualitative research methods and techniques for using statistical methods, computer tools for processing, systematizing and presenting information.

Purpose of studying of the discipline

to form undergraduates' skills in planning and conducting a pedagogical experiment in a higher school environment

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- explain the methodology of pedagogical research;
- to form ideas about the methods of analyzing the state of the issue under study;
- to reveal the features of such methods as: observations, pedagogical experiment, mathematical processing of the obtained data.

Prerequisites

Tertiary education

Postrequisites

Students research work organization and planning

Agropology landscape studies

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

During this course, undergraduates consider the processes of genesis and evolution of agroecosystems, as well as ways of territorial organization of agricultural production on the principles of adaptation to their structural features. On the basis of the course, the study of agroecosystems at different levels and methods for studying their genesis, function and evolution, mainly adaptive reactions of cultivated and weed plants to the natural conditions of a particular area, are studied.

Purpose of studying of the discipline

formation of concepts and ideas about natural territorial complexes and agricultural landscapes: patterns of their formation, distribution, structure, development and use by future generations.

Learning Outcomes

ON5 To link educational material on geographical disciplines for everyday professional activities, to be able to conduct research work in the framework of studying geography at school and universities.

Learning outcomes by discipline

- Explain agro-climatic indicators - solar radiation, heat supply of land, moisture supply of the territory, wind regime, microclimate of the relief;
- to identify geomorphological lithological conditions - relief, absolute height above sea level, dismemberment of the territory, assessment of slopes;
- to determine the main types of soils, indicators of soil fertility of the agricultural landscape.

Prerequisites

Global and regional geoecology

Postrequisites

Research practice

Anthropogenic landscape science

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

In this course of study, undergraduates get acquainted with the stage of development of Landscape Ecology and master the scientific and methodological foundations and applied aspects of landscape geography and Landscape Ecology. Undergraduates form geosystem concepts, geoecological worldview about the unity of the landscape sphere of the Earth as the natural and natural-anthropogenic environment of humanity. He learns to study the natural anthropogenic complex, forming a geosystem image of the landscape sphere of the Earth.

Purpose of studying of the discipline

formation of concepts and ideas about natural territorial and anthropogenic complexes: patterns of their formation, distribution, structure, development and use by future generations

Learning Outcomes

ON5 To link educational material on geographical disciplines for everyday professional activities, to be able to conduct research work in the framework of studying geography at school and universities.

Learning outcomes by discipline

- Analyze the main directions of anthropogenization of landscapes;
- Perform calculations of natural and anthropogenic modifications of landscapes;
- To master methods of calculating natural and anthropogenic modifications of landscapes.

Prerequisites

Global and regional geoecology

Postrequisites

Research practice

Theoretical foundations of the emergence of urbanized landscapes

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

Within the framework of this training course, graduate students analyze the landscape structure of the city based on landscape geochemical maps and the potential pollution of landscape elements and components based on landscape maps. Researches and maps the technogenic block of urban landscapes, considers technogenic transformation and transformation of natural landscapes, anthropogenic relief forms, determines the sources of influence of urbanized landscapes and analyzes anthropogenic flows involved in natural migration cycles.

Purpose of studying of the discipline

formation of knowledge about the structure of urban and natural-territorial complexes, their functioning, dynamics and evolution, consideration of landscape planning issues

Learning Outcomes

ON5 To link educational material on geographical disciplines for everyday professional activities, to be able to conduct research work in the framework of studying geography at school and universities.

Learning outcomes by discipline

- To explain the organization of populated places and also the theory and practice of urban planning is an independent area of professional activity urban planning;
- to consider the concept and approaches to the classification of urban landscapes, their structure and dynamics;
- to characterize the main varieties of urban landscapes of the largest cities of the republic.

Prerequisites

Global and regional geoecology

Postrequisites

Research practice

Methods of formation of functional literacy of students in geography lessons

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course gives an idea of the formation of functional literacy, its structure considers the technology of formation of functional literacy of schoolchildren, the stages of scientific and methodological support of teachers in the formation of functional literacy of students.

The role of the geography course in the formation of functional literacy of schoolchildren is analyzed.

Teaches the selection of educational material aimed at the formation of functional literacy, the components of functional literacy according to PISA and its levels.

Purpose of studying of the discipline

Mastering the pedagogical experience of using PISA assignments for the development of functional literacy in geography lessons.

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- apply active learning strategies for the development of science literacy school students;
- create sample assignments for students that are identical to the types of PISA assignments;
- analyze the elements of PISA science literacy and identify the skills and strategies needed to successfully master the tasks.

Prerequisites

Technology of learning Geography at colleges and universities

Postrequisites

Research practice

Regulatory framework of the 12-year education system

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course introduces the rationale, goals and expected results of the transition to 12-year general secondary education, taking into account global trends and domestic experience, the structure of general secondary education, the main directions for updating the content of education, and the organization of the educational process. Provides for a system for assessing the expected results of education, managing the system of general secondary education, conditions for implementing the concept of 12-year general secondary education.

Purpose of studying of the discipline

To acquaint students with the rationale, purpose and expected results of the transition to a 12-year general secondary education, as well as with the features of the organization of the educational process, taking into account global trends and domestic experience.

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- Explain the reasons, purpose and expected results of the transition to 12-year general secondary education;
- analyze the structure of general secondary education, the main directions of updating the content of education, the features of the organization of the educational process;
- to assess the conditions for the implementation of the concept of 12-year general secondary education.

Prerequisites

Technology of learning Geography at colleges and universities

Postrequisites

Research practice

Scientific and methodological foundations of pre-profile and profile training of students in geography

Discipline cycle	Profiling discipline
Course	2
Credits count	5
Knowledge control form	Examination

Short description of discipline

This course considers the methodology of visual training of students in the geographic education system, the components of the methodological system of visual training of students in the process of teaching geography.

Studying a geography course at the undergraduate level allows you to make the most of the general educational and cultural studies potential of geography as a subject, helps graduates to self-identify in the rapidly changing world of the environment, to continue their education in the field of their choice, based on geographical knowledge and skill system.

Purpose of studying of the discipline

to form the ability to determine the place of geography courses in the system of specialized training.

Learning Outcomes

ON2 Apply modern pedagogical technologies in everyday professional activities in the process of teaching geography, to form practical skills of teaching and learning methods in universities.

Learning outcomes by discipline

- to prepare students for the construction of individual learning trajectories of schoolchildren, including gifted;

- to form students' methodological competence in the organization and implementation of the learning process in a specialized school;

- apply

modern methods and technologies, including

information, to ensure the quality

of the educational process at the profile level.

Prerequisites

Technology of learning Geography at colleges and universities

Postrequisites

Research practice