2.OPTIONAL COMPONENTS OF THE CYCLE OF CORE COURSES

Optional component 1

Course: **Kartography**
Intensity of the Course: 6 academic credits
Module Code: **FGS – 5**
Module Name: Physical geography subjects module
Prerequisites: Physical geography and naturalscience
Purpose: To form an idea of the relationship between the phenomena of nature and society, their spatial location, changes in time, cartographic images, geographical maps, their creation and use.
Short Description: Discipline-forms knowledge about geographical maps, types of cartographic images, carrying out measurement work on the map. Students know the theoretical foundations of cartography, the content of maps, mathematical and geodetic basics, elements. Classifies card types and types. Defines the scale, coordinate system, symbol on the map. He gets acquainted with the types of search and cartographic projects on maps, technologies for creating geographical maps. Understands the principles of mapping, creating a cartographic image and its transformation. Knows how to use geographical maps correctly.
Learning Outcomes in EP (LOP):
LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.
LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.
LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.
Learning Outcomes in Course (LOC):
LOC 1 - Owns the compilation of maps, the principles of map construction, the creation of a cartographic image and its transformation;
LOC 2 - Learns to distinguish geographical, topographic, cartographic map elements, types and types and classify maps;
LOC 3 - Can describe topographic and cartographic material and the results of geodetic measurements;
LOC 4 - Creates Scale, cartographic projections, topographic maps and plans.
Post requisites: Geology, Geoecology and nature protection, Geomorphology, landscape scienc, Hydrology, Topography with base of the geodesies

Course: **Computer design: registration of maps**
Intensity of the Course: 6 academic credits
Module Code: **FGS – 5**
Module Name: Physical geography subjects module
Prerequisites: Physical geography and naturalscience
Purpose: Explanation of the basics of computer graphics and digital design used to create thematic maps and atlases of various scales. Formation of practical skills in computer editing, processing and transformation of vector and digital images.
Short Description: The discipline studies the design of cartographic works, uses computer and network technologies, means of graphic representation in the preparation of various maps and atlases. Students systematize the technological process of compiling and creating, updating maps and atlases. Fulfills the requirements and technologies of publications. Selects line prints, background paints and inscriptions, halftone originals. He has the basics of computer literacy and design when creating maps and designing databases.
Learning Outcomes in EP (LOP):
LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.

LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.

LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 - Studies the scientific basis for the design of cartographic works;

LOC 2 - Can use cartographic design and methods of copying it on a computer, used when creating thematic maps and atlases of various scales;

LOC 3 - Works with computer methods of graphic preparation of originals;

LOC 4 - Know during the technological process of updating geographical maps, students are trained to apply automated means of graphic work in practice;

Post requisites: Geology, Geoecology and nature protection, Geomorphology, landscape scienc, Hydrology, Topography with base of the geodesies

Optional component 2

Course: **Geology**

Intensity of the Course: 7 academic credits

Module Code: **FGS – 5**

Module Name: Physical geography subjects module

Prerequisites: Physical geography and naturalscience, Kartography

Purpose: Explanation of the Earth's crust and inner layers, their composition, structure, movement, history of development. Formation of ideas about internal and external trends occurring in the Earth's crust and surface, the formation of ore riches, patterns of location, types of rocks and minerals.

Short Description: Discipline-forms knowledge about the origin and development of the Earth, the internal structure of the Earth, the composition of the Earth's crust, geological processes. Students know the internal structure of the Earth, patterns of development, structural elements. Describes the external and internal geological processes occurring in the bowels and on the surface of the earth. Knows about the origin of minerals and how to use them effectively. Determines the absolute and relative age of rocks. Compares rocks and minerals. Analyzes the geological map. Prepares the geological section.

Learning Outcomes in EP (LOP):

LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.

LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.

LOP 6 – Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.

Learning Outcomes in Course (LOC):

LOC 1 – Knows the patterns and history of the development of the earth's crust from ancient times to the present day.

LOC 2 – Characterizes the material composition of the earth and the earth's crust, geodynamic processes, evolution and systematization of the organic world.

LOC 3 – Knows the definitions of the main ways of age and lying position of rocks. There are types of minerals.

LOC 4 – Understand the content of the geochronological table and geological maps. Prepares the geological section.

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Course: **Geoecology and nature protection**
Intensity of the Course: 7 academic credits
Module Code: **FGS – 5**
Module Name: Physical geography subjects module
Prerequisites: Physical geography and naturalscience, Kartography
Purpose: Explain the concept of a geosystem, its connections with the main elements, differences, the influence of economic factors on the terrain. Formation of knowledge about the conservation of natural resources, their rational use, restoration, environmental protection.
Short Description: Discipline-forms knowledge on the issues of rational nature management, organization, management of natural resources at the regional level and socio-ecological and economic assessment, improvement of the state of natural resources and the environment. Students know how to optimize the environment, protect the animal and plant world. The state of the environment and human health are interrelated. Predicts the ecological state and sustainability of the environment. Protects the environment from pollution, calculates the costs incurred and payments for environmental pollution.
Learning Outcomes in EP (LOP):
LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.
LOP 6– Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.
LOP 10 – Knows how to protect the environment, discusses environmental issues, predicts the ecological state and sustainability of the environment, systematizes the relationship between the environment and man.
Learning Outcomes in Course (LOC):
LOC 1 – Knows the basic laws, principles and mechanisms of nature management;
LOC 2 –Knows the theoretical and methodological foundations of the economy of nature management, basic environmental and economic indicators;
LOC 3 – Knows methods of rational nature management, ways of rational use of natural resources with the help of new waste-free technologies;
LOC 4 – Understands the basics of geographical differences between an ecosystem and a geosystem;
Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Optional component 3

Course: **Geomorphology**
Intensity of the Course: 7 academic credits
Module Code: **FGS – 5**
Module Name: Physical geography subjects module
Prerequisites: Physical geography and naturalscience, Kartography
Purpose: Explanation of the origin, age, structural specificity of the earth, the development and distribution of elements on the Earth's surface, external and internal processes, anthropogenic factors of the formation of the Earth's surface.
Short Description: Discipline-forms knowledge about the terrain, its types and forms, age, origin, patterns of distribution. Students know the internal structure of the Earth, the history of development, the main stages of the development of the Earth. Classifies genetic types of relief, defines relief-forming processes. Describes the types and shapes of terrain. Analyzes the current dynamic changes of the Earth, geomorphological mapping. Discusses the effective use of land in the economy, anthropogenic factors of the formation of the Earth's surface.
Learning Outcomes in EP (LOP):
LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.
LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.
LOP 6 – Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.

LOP 12 – Is able to apply innovative methods of teaching geography and methods of practical activity, a system of criteria assessment. Has pedagogical and geographical experience, uses the results of research in professional activities.

Learning Outcomes in Course (LOC):

LOC 1 – Knows the forms and basic elements of the relief, the origin of the relief;

LOC 2 – Characterizes the factors forming the relief, the main types of relief;

LOC 3 – Understands the ways of formation of individual landforms and their components.

LOC 4 – Defines the types of terrain on the map.

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Course: **landscape scienc**

Intensity of the Course: 7 academic credits

Module Code: **FGS – 5**

Module Name: Physical geography subjects module

Prerequisites: Physical geography and naturalscience, Kartography

Purpose: Explain natural regional complexes (geosystems), natural and cultural landscapes, their structure, interrelation, patterns of development.

Short Description: The discipline explains the composition, structure and components of natural regional complexes (geosystems), natural and anthropogenic factors, the main patterns of formation and development of regional natural complexes, dynamics. Systematizes the construction and functioning of certain types of land landscape. Characterizes the structure and interrelation of natural and cultural landscapes. The lower geosystems (separate settlement, facies) and the higher geosystems (natural region, province) are interconnected.

Learning Outcomes in EP (LOP):

LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.

LOP 6 – Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.

LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 - Improve knowledge about the natural-territorial complex of landscapes, settlements and facies;

LOC 2 - Solves issues of nature protection and physical and geographical zoning.

LOC 3 – Compares natural-anthropogenic and cultural landscapes.

LOC 4 – Explains the trends and dynamics of natural and anthropogenic landscapes, their relationship with human economic activity.

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Optional component 4

Course: **Hydrology**

Intensity of the Course: 6 academic credits

Module Code: **FGS – 5**

Module Name: Physical geography subjects module

Prerequisites: Geology, Geomorphology

Purpose: Explain natural waters, the processes occurring in them, their relationship with the atmosphere, lithosphere and biosphere.

Short Description: Discipline-provides knowledge about the hydrosphere layer and its elements, hydrological phenomena and processes occurring in the hydrosphere, features of water bodies, their relationship with the environment. Students describe the processes taking place in natural waters, water reserves. Knows the hydrological regime of water bodies, water resources and ways of their effective use. Understands the water cycle in nature, the importance of water in human economic activity. They discuss hydrological problems and ways to solve them.

Learning Outcomes in EP (LOP):

LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.

LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.

LOP 6 – Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.

Learning Outcomes in Course (LOC):

LOC 1 - Ideas about hydrological processes are formed;

LOC 2 - Determines the water cycle in nature, the importance of water in human economic activity;

LOC 3 - Discusses hydrological problems and ways to solve them;

LOC 4 - Predicts the ecological state and sustainability of the environment.

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Course: **Topography with base of the geodesies**

Intensity of the Course: 6 academic credits

Module Code: **FGS – 5**

Module Name: Physical geography subjects module

Prerequisites: Geology, Geomorphology

Purpose: Training in methods for determining the shape and size of the Earth, mapping and planning changes and phenomena on its surface.

Short Description: Discipline provides types of cartographic images and topographic surveys, measuring work on the map. Students know the contents of a topographic map, will get acquainted with modern technologies for creating geographical maps. Students determine the position of points on the Earth's surface, geographical and rectangular coordinates, directional angles, azimuths, point height, orientation on the terrain. Knows, uses geodetic instruments (theodolites, levelers, electronic total stations). Creates topographic maps and plans. Conducts local geodetic measurements.

Learning Outcomes in EP (LOP):

LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.

LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.

LOP 11 –Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 – Can solve various geodetic problems based on a topographic map;

LOC 2 – Knows the symbols of topographic maps; can analyze topographic maps.

LOC 3 – Knows and applies in practice the principles of working with geodetic instruments, the theory of processing field measurement data;

LOC 4 – Carry out cartometric and graphical measurement and survey work on the ground using high-precision geodetic instruments;

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

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Optional component 5

Course: **Soil geography**
Intensity of the Course: 6 academic credits
Module Code: **FGS – 5**
Module Name: Physical geography subjects module
Prerequisites: Geology, Geomorphology
Purpose: Mastering knowledge about the formation of soils on earth, the relationship of soil-forming factors, spatial movement of soils.
Short Description: The discipline explains the factors and processes of soil formation, the process of soil formation, the alternate location of soils on the globe or in a certain region, movement, development trends, patterns of geographical distribution, relationships with the external environment. Students determine the structure, composition, and properties of the soil. Remembers soil types. Protects the soil from depletion. Offers the main ways to increase soil fertility. Creates soil maps.
Learning Outcomes in EP (LOP):
LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.
LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.
LOP 6 – Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.
Learning Outcomes in Course (LOC):
LOC 1 - Analyzes the structure, composition and properties of soils, trends in formation and development, patterns of geographical distribution;
LOC 2 - Determines the economic importance of soils and learns their rational use;
LOC 3 – Determines the physico-chemical properties of the soil;
LOC 4 – Apply experimental and analytical methods in practice in the process of soil formation;
Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Course: **Local history**
Intensity of the Course: 6 academic credits
Module Code: **FGS – 5**
Module Name: Physical geography subjects module
Prerequisites: Geology, Geomorphology
Purpose: Formation of knowledge about nature, population, economy, history and culture, settlements of a certain territory.
Short Description: The discipline comprehensively studies a certain territory. The discipline tells about the types and forms of local history work, its significance, the relationship of local history and ecology. Classifies natural, historical, cultural, and social places. Collects, systematizes information and data about the history and past of the region, culture, toponymy, economy, national characteristics of the population, natural and cultural-historical objects, monuments. Organizes excursions for various purposes.
Learning Outcomes in EP (LOP):
LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.
LOP 6 – Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.
LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.
Learning Outcomes in Course (LOC):
LOC 1 – Can use local history materials in the classroom, process and analyze various literary, cartographic, and statistical sources

LOC 2 – Make thematic lesson plans for local history, conduct extracurricular and extracurricular activities in local history;

LOC 3 – Design local history corners, exhibitions, and museums.

LOC 4 – Ability to organize research of the native land.

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Optional component 6

Course: **Toponymy**

Intensity of the Course: 6 academic credits

Module Code: **FGS – 5**

Module Name: Physical geography subjects module

Prerequisites: Physical geography of the world, Physical Geography of Kazakhstan

Purpose: Discipline is to form a general idea about the features of regional toponymic systems of the Earth, geographical terms and their role in toponymy.

Short Description: The discipline examines the concepts of toponymy, the theoretical foundations of toponymy, toponyms, the main groups of geographical names, factors influencing the formation of toponomic systems. The discipline studies geographical names, their origin, semantic meaning, essence, subdivisions of toponymy, toponyms and etymology, principles of word formation in toponymy, the law of series in cartographic toponymy, local development, current state, main groups, spelling and pronunciation. Students combine toponyms into groups, determine the meaning of geographical names.

Learning Outcomes in EP (LOP):

LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.

LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.

LOP 11 –Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 - Owns and applies in practice the main methods of toponymic research;

LOC 2 - It can characterize the toponymic systems of individual territories;

LOC 3 - Knows geographical terms and concepts, is able to analyze geographical concepts, theories and patterns;

LOC 4 - It shows various aspects of the study of geographical names and describes the main structural elements of toponymy.

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

Course: **Biogeography**

Intensity of the Course: 6 academic credits

Module Code: **FGS – 5**

Module Name: Physical geography subjects module

Prerequisites: Physical geography of the world, Physical Geography of Kazakhstan

Purpose: Explanation of the distribution, regularities of the location of plants and animals and their associations on the globe.

Short Description: The discipline forms knowledge about the geographical distribution of living organisms and their communities, the structure of vegetation and the structure of animal populations throughout the planet. The discipline studies the correlation of ecological and historical factors in the differentiation of biota and solves the problems of preserving the biodiversity of the earth and oceans. Students compare past and present features of the distribution of living organisms**.**

Learning Outcomes in EP (LOP):

LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.

LOP 6 – Predicts, determines, compares the causes of natural phenomena and trends, understands, describes the interrelationships of the components of nature.

LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 – The characteristics of plant and animal species determine whether they are under the influence of geomorphological, climatic, hydrographic factors.

LOC 2 – Knows the causes and ways of formation, the main stages of the development of flora and faunal complexes.

LOC 3 – Defines the modern boundaries of habitats, their structure, causes and patterns of changes in the number of endangered, rare economically significant plants and animals.

LOC 4 – The problems of the territorial distribution of plants and animals on earth, their location characterize the dependence on latitudinal-zonal and altitude-belt patterns.

Post requisites: Physical geography of the world, Physical Geography of Kazakhstan

2. OPTIONAL COMPONENTS OF THE CYCLE OF MAJOR COURSES

Optional component 1

Course: **Geographic information systems**

Intensity of the Course: 6 academic credits

Module Code: **EGS – 6**

Module Name: Economic geography subjects module

Prerequisites: Kartography, Computer design: registration of maps

Purpose: It teaches you to learn new information about the collection, storage, processing, analysis, presentation, distribution of data and, based on them, about geographical space.

Short Description: The discipline forms an idea of the structure, classification, functionality of geographical information systems, the development of a database of geographical information and systems. Students get acquainted with functional programs used for input, storage, processing, analysis, visualization of geographical information. Learn to use software, work in computer networks. Students form groups of geographical data, form and process types of cartographic works using geoinformation technologies.

Learning Outcomes in EP (LOP):

LOP 3 – Demonstrate knowledge of and adherence to ethical and legal norms in research and use of digital technologies. Apply security measures when working with digital information and data protection, promote the active, safe and ethical use of digital resources.

LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.

LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 – He is able to work with GIS technologies in data search, processing of graphic and cartographic materials during geographical research;

LOC 2 – Analyzes cartographic material for display on maps using a digital model;

LOC 3 – Creates electronic maps using GIS technologies.

LOC 4 – Generates the basic basic data of geoinformation systems.

Post requisites: Geopolitics and geourbanism, Practical geograph

Course: **Fundamentals of geoeconomics and country study**
Intensity of the Course: 6 academic credits
Module Code: **EGS – 6**
Module Name: Economic geography subjects module
Prerequisites: Kartography
Purpose: Explanation of the term, directions of geo-economics. To teach to analyze and make forecasts of the development of global economic trends and phenomena.
Short Description: Discipline-forms knowledge about the essence of the concept of geo-economics, the studied objects, the theoretical foundations of geo-economics, geo-economic strategy and geo-economic space, geo-economic research. Students know the categories of geo-economics, distinguish between microeconomics and economic geography, collects data on the socio-economic development of countries and territories, characterizes, compares the economic development of countries and regions, discusses, analyzes foreign and domestic economic policy, defines the role of countries and regions in geographical space.
Learning Outcomes in EP (LOP):
LOP 7 – Characterizes the economic and geographical position, compares, evaluates socio-economic development and the quality of recreational activities, knows, classifies, discusses, evaluates ways of effective use of natural resources.
LOP 8 – Knows the categories of geo-economics, determines the role of countries and regions in geographical space, compares geo-economic development, evaluates the geo-economic situation**.**
LOP 9 – Knows the essence, the main types of political geography, discusses external and internal geopolitics, administrative-territorial division and regional policy, political ideas. Compares urban agglomerations, discusses, analyzes strategic directions of urban development.
Learning Outcomes in Course (LOC):
LOC 1 - Defines the main factors and directions of functioning and development of geo-economic systems;
LOC 2 - Learn to distinguish between methods and tools for analyzing data on socio-economic processes and phenomena;
LOC 3 - Knows the peculiarities of the development of countries and regions in the world economy and international relations.
LOC 4 - Assesses the current economic condition of the countries of the world.
Post requisites: Geopolitics and geourbanism, Practical geograph

Optional component 2

Course: **Geopolitics and geourbanism**
Intensity of the Course: 4 academic credits
Module Code: **EGS – 6**
Module Name: Economic geography subjects module
Prerequisites: Economic and social geography of Kazakhstan, Economic, social geography of the world
Purpose: Formation of knowledge about the principles and methods of geopolitical theory, features of geopolitics. Explanation of the patterns of formation of urban systems, conditions of urbanization of specific geographical objects and countries of various types.
Short Description: The discipline forms knowledge about the principles, foundations, methods of geopolitical theory, the formation and development of geopolitics as a science, the features of geopolitics in the context of globalization. Students know the theory, the essence, the main types of political geography. Discusses the political ideas of domestic and foreign scientists. It resembles the main stages of the formation and development of urban systems, features of urban planning. Compares the rapid growth of the urban population, large cities and urban agglomerations. Discusses and analyzes the settlement of the population in cities, land use, strategic directions of sustainable urban development.
Learning Outcomes in EP (LOP):
LOP 7 – Characterizes the economic and geographical position, compares, evaluates socio-economic development and the quality of recreational activities, knows, classifies, discusses, evaluates ways of effective use of natural resources.
LOP 8 – Knows the categories of geo-economics, determines the role of countries and regions in geographical space, compares geo-economic development, evaluates the geo-economic situation**.**

LOP 9 – Knows the essence, the main types of political geography, discusses external and internal geopolitics, administrative-territorial division and regional policy, political ideas. Compares urban agglomerations, discusses, analyzes strategic directions of urban development.

Learning Outcomes in Course (LOC):

LOC 1 – Reveals the features of geopolitics, spatial representations of planetary trends and phenomena in general;

LOC 2 – Determines the causes and solutions of geopolitical problems;

LOC 3 - Defines the role of cities in the organization of space, their structure and dynamics of development;

LOC 4 - Reflects methodological complexes in the study of historical stages of urban development; develops the ability to solve modern problems of cities and urbanization.

Post requisites: Fundamentals of Educational research

Course: **Practical geograph**

Intensity of the Course: 4 academic credits

Module Code: **EGS – 6**

Module Name: Economic geography subjects module

Prerequisites: Economic and social geography of Kazakhstan, Economic, social geography of the world

Purpose: Formation of knowledge about geographical research and development when performing practical tasks in various spheres of human economic activity, design and regional planning of geosystem development.

Short Description: Discipline-forms knowledge about applied problems of geography, the importance of applied research. The discipline examines political, environmental, economic, demographic, food, energy problems and ways to solve them. Students describe the issues of territorial organization of society and nature, production and population, placement and rational use of economic facilities. Students define various geotechnical systems. Uses modern equipment and technologies to solve problems in society.

Learning Outcomes in EP (LOP):

LOP 7 – Characterizes the economic and geographical position, compares, evaluates socio-economic development and the quality of recreational activities, knows, classifies, discusses, evaluates ways of effective use of natural resources.

LOP 8 – Knows the categories of geo-economics, determines the role of countries and regions in geographical space, compares geo-economic development, evaluates the geo-economic situation**.**

LOP 9 – Knows the essence, the main types of political geography, discusses external and internal geopolitics, administrative-territorial division and regional policy, political ideas. Compares urban agglomerations, discusses, analyzes strategic directions of urban development.

LOP 10 – Knows how to protect the environment, discusses environmental issues, predicts the ecological state and sustainability of the environment, systematizes the relationship between the environment and man.

LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 – The economy is understood as the placement of objects, their rational use and sustainable development;

LOC 2 – Knows the possibilities of applied geography in solving environmental issues;

LOC 3 – Analyzes the scheme of changes in natural territorial complexes and the formation of geotechnical systems;

LOC 4 – Solves the problems of interaction between society and nature, ensures the territorial organization of production and population.

Post requisites: Fundamentals of Educational research

Optional component 3

Course: **Methods of physical and economic research**
Intensity of the Course: 5 academic credits
Module Code: **EGS – 6**
Module Name: Economic geography subjects module
Prerequisites: Methodology of teaching geography
Purpose: The content and application of traditional and new methods used in the study of geographical objects, natural phenomena and trends, forms knowledge about the ways of their application.
Short Description: The discipline studies the theory and practice of applying geographical research methods in conducting geographical education and geographical research. The discipline studies the essence of geographical research methods and objects of research, basic and modern methods. Students understand the essence of geographical research methods and classify geographical methods. Uses geographical methods in conducting experimental, experimental, analytical work. When studying geographical objects, phenomena, processes, geographical methods and techniques are used to create geographical records, obtain graphic material. Develops and discusses projects.
Learning Outcomes in EP (LOP):
LOP 4 – Knows the theoretical foundations of geographical science, the patterns characteristic of the globe, and their causes, creates, analyzes geographical maps and plans, conducts cartographic and geodetic measuring and field research.
LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.
LOP 12 – Is able to apply innovative methods of teaching geography and methods of practical activity, a system of criteria assessment. Has pedagogical and geographical experience, uses the results of research in professional activities.
Learning Outcomes in Course (LOC):
LOC 1 - Masters the theory and practice of applying geographical research methods in conducting geographical research;
LOC 2 - Uses modern methods of geographical research;
LOC 3 - Classifies geographical methods;
LOC 4 - Conducts observations and experiments on geographical research.
Post requisites: Fundamentals of Educational research

Course: **Recreational geography**
Intensity of the Course: 5 academic credits
Module Code: **EGS – 6**
Module Name: Economic geography subjects module
Prerequisites: Economic and social geography of Kazakhstan, Economic, social geography of the world
Purpose: Explanation of the functioning and development of territorial recreational systems, recreational resources, recreational areas.
Short Description: Discipline-forms knowledge about the recreational resources of the regions and the patterns of their geographical distribution. Students know recreational concepts and concepts, ways of effective use of recreational resources. Characterizes natural recreational resources in different regions of the world by geographical factors affecting them. Defines recreational places in individual countries and regions of the world. Assesses the state of recreational resources. Compares the quality of recreational activities among themselves. Connects recreational activities and the healthcare system.
Learning Outcomes in EP (LOP):
LOP 5 – Discusses the history, main problems, prospects of geographical science, characterizes the physical and geographical position, distinguishes natural territorial complexes and features of their location, defines geographical objects and recreational places.
LOP 7 – Characterizes the economic and geographical position, compares, evaluates socio-economic development and the quality of recreational activities, knows, classifies, discusses, evaluates ways of effective use of natural resources.

LOP 10 – Knows how to protect the environment, discusses environmental issues, predicts the ecological state and sustainability of the environment, systematizes the relationship between the environment and man.

LOP 11 – Defines geographical concepts and terms, the meaning of geographical names, knows, classifies, applies geography teaching tools, topographic tools, geodetic instruments, geoinformation technologies, methods of geographical research.

Learning Outcomes in Course (LOC):

LOC 1 – Knows natural recreational resources;

LOC 2 – Defines recreational places and organizes recreational activities;

LOC 3 – Assesses the state of recreational resources;

LOC 4 – Compares the quality of recreational activities among themselves.

Post requisites: Fundamentals of Educational research