Basics of the Project Management

Аннотация:
This educational and methodical complex is built on the principle of a route, following which you will be able to build a project concept from a project idea and present it to a potential investor, customer or partner. This is the itinerary of a big business game. At each station (topic)— they are waiting for you new information and tasks. By completing them, you will gain new knowledge and skills that will help you build your own project. Your project is a path from an idea to a result (product, event, technology, product or service). At the beginning of the path, you define the idea of the project. Your task is to prepare a presentation for a potential investor (customer) by the final lesson. He should be happy to agree to invest in your project (or in you). If you try hard, a business game can turn into a reality, a study group —
into a real project team, and the expert you will be speaking to is an investor who will really give you the first financial resources for the implementation of the project or invite you to work. You have a real chance to open your own business, or at least acquire such competencies that will allow you to do it in the future.

Цель:
The purpose of the course "Basics of the Project Management" is to purposefully form a number of skills that allow students to implement their ideas in the form of projects, to be an active participant in the project activities.

Задачи:
The objectives of the course are to acquire skills in:
1. generating a project idea;
2. creating an effective project team;
3. development of the project plan and business model of the project;
4. evaluating the market and competitors of the project idea;
5. definition of the suitable sources of project financing;
6. evaluation of necessary resources for project implementation and construction of financial plan (estimate) of the project;
7. evaluation of investment attractiveness;
8. evaluation of project risks;
9. presentation of the project to the interested parties.

Financial literacy

Аннотация:

Изучение дисциплины «Финансовая грамотность» ориентировано на получение учащимися знаний о современных финансовых рынках, особенностях их функционирования и регулирования и возможностях населения в сфере управления личными финансами. В рамках курса изучаются основные финансовые институты, особенности финансового поведения потребителей, современные технологии финансового обслуживания, основы финансового планирования и безопасности потребителя при работе с финансовыми инструментами, налогообложение физических лиц.

The study of the discipline "Financial Literacy" is focused on obtaining students' knowledge about modern financial markets, the peculiarities of their functioning and regulation, and the capabilities of the population in the field of personal finance management. The course examines the main financial institutions, features of consumer financial behavior, modern financial service technologies, fundamentals of financial planning and consumer safety when working with financial instruments, taxation of individuals.

Цель:

Формирование культуры экономического мышления и базовых компетенций в области экономической и финансовой грамотности, необходимых для ориентации и социальной адаптации учащихся к происходящим изменениям в жизни общества.
Formation of a culture of economic thinking and basic competencies in the field of economic and financial literacy, necessary for the orientation and social adaptation of students to the ongoing changes in society.

Задачи:

- сформировать базовые компетенции в области финансовой грамотности,
- сформировать общее представление об особенностях современных финансовых рынков;
- обучить технологиям анализа финансовой информации;
- выработать практические навыки принятия финансовых и экономических решений.
- to form basic competencies in the field of financial literacy,
- to form a general idea of the features of modern financial markets;
- to teach financial information analysis technologies;
- develop practical skills in making financial and economic decisions.

Foreign Language (English)

The given course of English is determined for bachelor or specialist students of non-linguistic faculties for foreign students who study English as a foreign language. During this course students acquire linguistic and intercultural knowledge, develop speaking, listening, and writing skills on everyday and academic topics, form lexical and grammatical skills necessary for academic and professional activity. The course is aimed mainly at covering such topics as "Going to University", "Welcome to Russia", "Perm Krai" as well as "The UK", for the students should also be aware of intercultural and other facts connected with Great Britain.

Цель:

The aim of the course is to develop students' communicative competences in mastering listening and speaking skills alongside the skills of translation from Englsish into Russian and vice versa..

Задачи:

The objectives of the course are:
- to learn some contemporary information about Russia, Perm Krai and the United Kingdom
- to master speech skills in speaking, listening, reading, and writing paying special attention to the first two,
- to develop skills of translation,
- to study basic vocabulary and terminoligy in the students' major.

General theory of systems

Аннотация:

Содержание дисциплины «Общая теория систем» охватывает круг проблем, связанных с изучением теоретических и методологических основ анализа, синтеза и управления сложными системами. Рассматриваются прикладные вопросы общей теории систем, а также методы системного анализа.
Дается представление о количественных методах исследования в естественных науках, приводится разбор примеров и ситуаций из практики исследования организаций и рыночных структур. При этом особое внимание уделяется не детальному изучению количественных методов, а освоению методологических приемов, способов формализации, структуризации и обработки информации и возможности их применения для исследований в естественных науках. Программой дисциплины предусмотрены следующие виды контроля: рубежный контроль в форме письменных контрольных работ и контроль самостоятельной работы студентов в устной форме.
Аттестация по усвоению содержания дисциплины проводится в форме зачета

The content of discipline "General Systems Theory" covers a range of problems associated with the study of theoretical and methodological foundations of analysis, synthesis, and management of complex systems. The issues of general systems theory application, as well as methods of systems analysis are being studied. An idea of quantitative research methods in the natural sciences is given, examples and situations of research of organizations and market structures are analyzed. At the same time, special attention is paid not to the detailed study of quantitative methods, but to the development of methodological techniques, methods of formalization, structuring and processing of information and the possibility of their application in research in natural sciences. In the middle of the course there are midterm written and oral tests and at the end of the course there is a final test.

Цель:

Формирование навыков анализа и исследования сложных систем с целью их практического применения в профессиональной деятельности.

Formation of skills in analysis and research of complex systems for the purpose of their practical application in professional activities.

Задачи:

Выработка компетенций в области анализа, синтеза и управления организационными системами, включающих:
• умение представлять реальные объекты в виде развивающихся систем с выделением элементов и связей между ними;
• владение методами идентификации, анализа, структуризации и формализации систем;
• освоение подходов к исследованию характеристик качества функционирования систем;
• практическое освоение перспективных направлений системного анализа в естественных науках.

Development of competencies in the analysis, synthesis, and management of organizational systems, including:
• ability to represent real objects as developing systems with the identification of elements and connections between them;
• proficiency in methods of identification, analysis, structuring, and formalization of systems;
• mastering approaches to studying the characteristics of the quality of system functioning;
• practical mastering of promising directions of system analysis in natural sciences.

History

The discipline "History" is focused on the knowledge of the driving forces and laws of the historical process, the specifics of Russian history, the ability to analyze historical events and processes. The content of the discipline covers a range of problems associated with the definition of the place and role of Russia in the world historical process. As a result, students will learn the specifics of social, economic, and political processes at different stages of Russian history.

Цель:
The aim of the course is to form the general cultural competence of the graduate associated with knowledge and respect for the historical heritage and cultural traditions of the country, tolerant perception of social, ethnic, religious and cultural differences, the ability to analyze the main stages and patterns of historical development of society.

Задачи:
- to form a scientific understanding of the main stages of Russian history;
- to identify general and particular features of the Russian historical process;
- to contribute to the formation of the student's personality, combining scientific worldview, respect for historical heritage, patriotism;
- to teach students to express and justify their position on issues related to the historical past of our country.

Life safety

Аннотация:

The discipline "Life safety" is aimed at ensuring a favorable living conditions of people and their activities, to protect the person and environment from the hazardous or harmful effects, at shaping of common cultural possession of basic skills means to protect staff at work and the other population from the possible consequences of accidents, natural disasters .
The subject of the discipline "Life safety" is the issues security interaction of human with his environment and protect people from hazards in an emergency.

Цель:

The purpose of the discipline is to form in future specialists an idea of the inseparable unity of effective professional activity and the requirements of human safety and security. The implementation of these requirements guarantees the preservation of human performance and health, prepares him for action in extreme conditions.

Задачи:

The main objectives of the discipline are as follows: providing students with theoretical knowledge and practical skills necessary to create a comfortable state of the environment in the areas of work and recreation of a person; identification of negative environmental impacts from negative impacts; implementation of measures to protect humans and the environment from negative impacts; ensuring the sustainable functioning of economic facilities in accordance with the requirements of safety and environmental friendliness in normal and emergency situations; making decisions on the protection of personnel and the public from the possible consequences of accidents, catastrophes, natural disasters, as well as taking measures to eliminate their consequences; forecasting the development of negative impacts and assessing the consequences of their actions.

Logics

Аннотация:

The course "Logics" is aimed at mastering the basic concepts of logic, techniques and methods, rules and laws of rational thinking. Students get acquainted with the nature and specifics of logical knowledge. The content of the course includes logical analysis of natural language, classical logic statements. Particular attention is paid to the analysis of forms of thinking - concept, judgment and inference, such logical procedures as deductive reasoning, the formation of concepts and operations on them, definition, induction, analogy, as well as methods of argumentation, proof and refutation.

Цель:

The purpose of the discipline: to develop the skills of analytical thinking, based on the ability to analyze from the standpoint of logical correctness of their own reasoning and reasoning of the opponent, both mental content and written.

Задачи:

Tasks of studying the discipline:
- to form students' understanding of the forms and laws of logical thinking, to explain to them the methodology of a formal-logical solution of the most typical scientific and practical problems;
- to teach future specialists to consciously use the initial principles of logical correct thinking, when creating skills to form a harmonious and convincing thought.

Philosophy

Аннотация:

The discipline is aimed at the formation of knowledge about the major achievements of world philosophical thought, the current state of scientific and philosophical knowledge, the relationship of philosophical thought with the development of natural science, social and humanitarian sciences, social and historical practice, the problems of Russia's development. The course of philosophy includes two sections: general philosophy and social philosophy, which consider problems: the world as a system, the problem of the essence of the world, its unity and diversity, the problem of the essence of consciousness, its origin, structure and relationship with man, the problems of development and knowledge of the world, truth and practice, society as a complete system, laws of social development, principles and different approaches of historical typology of society, the life of society, especially postindustrial society, globalization processes, the essence and the essence of the historical process, the essence of the social and political science. The content is based on the idea of the historical process as a development of human essence.

As a result of mastering the discipline students become familiar with the main directions of world and domestic philosophical thought as a reflection of the cultural diversity of the modern world in its historical development, which allows you to use this knowledge to analyze modern social reality, social processes, the prospects for social development. The connection of philosophy with natural sciences and social and humanitarian sciences will allow to use scientific, systematic and interdisciplinary approaches to knowledge of nature and society, to solve the problems of science and practice. In philosophical science its very subject is dialectical, which creates favorable conditions for dialectical analysis, teaches to understand phenomena and processes as complex, being in development, including many dialectically interrelated sides, develops the ability to analyze problem situations as a system, identifying its components and connections between them, teaches to see, set and solve problems, see the relationship between different fundamental problems, develops the ability of substantive, essential, nomological their solution.

Цель:

The purpose of the course of philosophy is the formation of knowledge about the main achievements of world philosophical thought, the current state of scientific and philosophical knowledge, the connection of philosophical thought with the development of natural science, social sciences and humanities, and general historical practice. The assimilation of philosophical knowledge is considered as an indispensable condition for the formation of a personal worldview, intellectual abilities, ability to lead discussions, to defend the arguments of science convincingly, to creatively apply this knowledge.

Задачи:

- to give knowledge about the subject and the main problems of philosophy, its main directions and stages of development, about modern philosophical systems;
- to find out the role of philosophy in the development of society, the natural, social and technical sciences, art and culture in general;
- based on the principles of science and pluralism, to promote the formation of a realistic humanistic worldview, personality development, and creative thinking skills.

Physical training

Аннотация:

Для студентов всех направлений подготовки и специальностей модуль «Физическая культура» реализуется в рамках дисциплины «Физическая культура» базовой части Блока 1 программ бакалавриата и специалитета в объеме 72 академических часа (2 зачетные единицы). Дисциплина содержит информацию, необходимую для изучения теоретической части программы. Вся программа разделена на 2 учебных периода. В первом учебном периоде предусмотрено изучение таких разделов программы как:
- Физическая культура в общекультурной и профессиональной подготовке студентов;
- Биологические основы физической культуры и спорта;
- Физическая подготовка в системе физического воспитания;
- Врачебный контроль и самоконтроль занимающихся физическими упражнениями и спортом;
- Основы здорового образа жизни. Физическая культура в обеспечении здоровья;
-Средства физической культуры для лиц с ОВЗ, направленные на их реабилитацию и включение в здоровую социальную среду;
- Профессионально-прикладная физическая подготовка.
Во втором учебном периоде предусмотрено изучение таких разделов программы как:
- Основы здорового образа жизни. Физическая культура в обеспечении здоровья;
- Основы методики самостоятельных занятий физическим и упражнениями;
- Спорт. Индивидуальный выбор видов спорта или системы физических упражнений;
- Особенности занятий избранным видом спорта или системой физических упражнений;
- Профессионально-прикладная физическая подготовка.
Также учебной программой предусмотрено обучение правильному проведению диагностики состояния функциональных систем организма человека, таких как: дыхательная, нервная, сердечно-сосудистая , мышечная системы и общая работоспособность организма.

For students of all directions of preparation and specialties the Physical culture module is implemented within discipline "Physical training" of a basic unit of Blok of 1 programs of a bachelor degree and specialist programme in volume of the 72nd class period (2 test units). The discipline contains the information necessary for a study of a theoretical part of the program. All program is partitioned into 2 educational periods. The study of such sections of the program as is provided in the first educational period:
- Physical culture in common cultural and vocational training of students;
- Biological fundamentals of physical culture and sport;
- Physical training in system of physical training;
- Medical monitoring and self-checking engaged in physical exercises and sport;
- Bases of a healthy lifestyle. Physical culture in support of health;
- Professional and application-oriented physical training.
The study of such sections of the program as is provided in the second educational period:
- Bases of a healthy lifestyle. Physical culture in support of health;
- Bases of a technique of independent occupations physical and exercises;
- Sport. Personal choice of sports or system of physical exercises;
- Features of occupations by the selected sport or system of physical exercises;
- Professional and application-oriented physical training.
Also training program provided training in the correct performing diagnostics of a status of the functional systems of a human body, such as: respiratory, nervous, cardiovascular, muscular systems and general operability of an organism.

Цель:

The formation of students in the University of physical culture of the individual, manifested in the readiness for future professional activities, one of the important conditions of which is - knowledge of socio-biological and psychophysical foundations of mental work.

Задачи:

The objectives of the course coincide with the main objectives of physical education in high school. Among them: - understanding of the social role of physical culture of the individual; - acquisition of students ' knowledge of the biological foundations of physical culture; - acquisition of knowledge about the basics of the theory and methodology of physical education and sports training and mastering students of sports terminology. This will facilitate mutual understanding between the student and the teacher and expand the General cultural needs of students; - formation of belief in the need for regular physical training and sports and a motivated attitude to a healthy lifestyle (HLS); - understanding of the special importance of physical exercise for mental workers.

Sociology

Аннотация:

Дисциплина имеет целью дать целостное представление о социологической науке, показать ее значение для познания общества и решения актуальных проблем социальной жизни. Акцент сделан на аналитическом подходе к изучению проблемного поля современной социологии, ее понятийного аппарата, концепций и теорий, позволяющих глубже понимать процессы, происходящие в обществе.
Курс состоит из трех теоретических частей. В первую часть включены темы, раскрывающие научный статус социологии, становление и развитие социологической теории, методологию и методы социологического исследования. Во второй части представлены темы, рассматривающие общество как социальную систему и его базовые понятия: социальная структура и стратификация, социальные институты и процессы. В третьей части внимание студентов сконцентрировано на социологических концепциях культуры, социокультурном подходе к анализу социальной жизни, социокультурных процессах. Курс ориентирован на развитие социологического мышления, способности научно осмысливать и объяснять социальные явления.

The course is aimed at introducing students to sociology as a means to study society and develop ideas for advancing social progress in important spheres of social life. The course is focused on analytical thinking, conceptual apparatus, approaches, and theories that guide to deeper understanding of social processes and forces. The course consists of three theoretical parts. The first part considers the scientific status of sociology, the origins and development of sociological theories, methods of data collection, and research methodology. The second part presents an overview of social institutions, social structure, social change, and society as a system. The third part introduces students to ethnography of culture. After completing the course, students are expected to have developed sociological thinking, the capacity to understand and explain social phenomena scientifically.

Цель:

Course scope. The course is intended to develop a holistic understanding of social phenomena and processes, of structure and specificity of theoretical sociological knowledge, of the applied nature of sociology as science.

Задачи:

Course objectives are:
- to suggest comprehension of sociology as a science and educational course;
- to represent the basic sources of sociology emerging as science;
- to develop understanding of classical and contemporary sociological theories and approaches;
- to introduce into analysis of social issues, processes, and change;
- to give an overview of research methods.

Sport

Аннотация:

For students of all areas of training and specialties, the discipline "Sport" is implemented in the amount of 328 academic hours (8 trimesters) to ensure the physical fitness of students, including professionally-applied ones. The indicated academic hours are obligatory for mastering and are not transferred to credit units. In each trimester, the following sections are provided for independent study: cross-training, athletics, ski training, general physical training, stretching, sports.
The discipline program "Sport" is aimed at:
- the implementation of the principle of variability, the more complete implementation of a personality-oriented approach to the educational process, the planning of the content of educational material, taking into account the health status of students;
- on the implementation of the principle of sufficiency and structural conformity of program material, its direct orientation to generally applied and personally significant physical training;
- for the acquisition by students of knowledge, skills and fitness activities, manifested in the ability to conduct classes on their own to improve health, improve physical development and physical fitness, both in educational activities and in various forms of outdoor activities and leisure.
For students with disabilities, classes in the sports section "Chess" are provided as an alternative to classes with increased motor activity.

For students of all directions of preparation and specialties discipline "Sport" is implemented of 328 class periods (8 trimesters) for support of physical fitness of students, including professional and application-oriented character. The specified class periods are mandatory for mastering and aren't transferred to test units. The following sections are provided in each trimester for an independent study: the cross preparation, track and field athletics preparation, ski preparation, general physical training, stretching, sports.
The program of discipline "Sport" is directed:
- on implementation of the principle of variability, completer implementation of the personal oriented approach to educational process, on planning of maintenance of a training material taking into account the state of health of students;
- on implementation of the principle of sufficiency and structural conformity of program material, its direct orientation to all-application-oriented and personal and significant physical training;
- on acquisition by students of knowledge, the skills of sports and improving activities which are shown in ability independently to give classes in solidifying of health, enhancement of physical development and physical fitness, both in the conditions of educational activities, and in different forms of the active recreation and leisure.

Цель:

The goal of mastering the discipline is to form the physical culture of the individual and the ability to use the various means of physical culture, sports and tourism in order to preserve and promote health, psychophysical training and self-preparation for future professional activities through
ensuring the stages of formation of competencies stipulated by educational standards.

Задачи:

The tasks of the discipline are:
- preservation and strengthening of students' health, promoting the proper formation and comprehensive development of the body, maintaining high performance throughout the entire period of study;
- understanding of the social significance of applied physical culture and its role in the development of the personality and preparation for professional activity;
- knowledge of the scientific and biological, pedagogical and practical fundamentals of physical culture and a healthy lifestyle;
- the formation of a motivational and axiological attitude towards physical culture, an attitude towards a healthy lifestyle, physical improvement and self-education of the habit of regular exercise and sports;
- mastering the system of practical skills that ensure the preservation and strengthening of health, mental well-being, development and improvement of psychophysical abilities, qualities and personality traits, self-determination in physical culture and sports;
- acquisition of personal experience in enhancing motor and functional capabilities, ensuring general and professional-applied physical fitness for a future profession and life;
- the acquisition by students of the necessary knowledge of the basics of the theory, methodology and organization of physical education and sports training, preparation for work as public instructors, coaches and judges;
- creation of the basis for creative and methodologically reasonable use of physical culture and sports activities for the purposes of subsequent life and professional achievements;
- improving the sportsmanship of student-athletes.

Chemistry

Аннотация:

Курс "Химия" разработан с целью формирования у студентов естественно-научных направлений общего химического мировоззрения и развития химического мышления. Включает разделы, посвященные теории строения атомов, теории химической связи, закономерностям протекания химических реакции, теории растворов, химии элементов и их соединений. Основное внимание уделено установлению связи между строением веществ и их превращениями.
В лекционном курсе рассмотрены общие теоретические основы аналитической химии, представляющие базу для дальнейшего освоения предмета. Изложены методы качественного анализа и техника его выполнения. Подробно рассмотрены способы выражения концентрации растворов. Дана характеристика количественных методов анализа. Наряду с титриметрическим и гравиметрическим методами представлены основы электрохимических, спектрофотометрических и хроматографических методов анализа. Изучаемый материал базируется на курсах общей и неорганической химии.
Лабораторные и практические занятия способствуют лучшему усвоению теоретического материала. Экспериментальная работа в лаборатории формирует у студентов практические навыки работы с веществом, химической посудой, умением формулировать и решать поставленную задачи.
Лабораторные работы дают практические навыки по определению качественного состава вещества дробным методом анализа, помогают освоить технику выполнения титриметрического анализа. Приобретенные знания студенты могут использовать при выполнении полевых анализов.

The course "Chemistry" is designed with the aim of forming a general chemical worldview and the development of chemical thinking among students of natural sciences. Includes sections devoted to the theory of the structure of atoms, the theory of chemical bonds, the laws of the course of chemical reactions, the theory of solutions, the chemistry of elements and their compounds. The main attention is paid to establishing the connection between the structure of substances and their transformations.
In the lecture course, the general theoretical foundations of analytical chemistry are considered, which represent the basis for further mastering the subject. The methods of qualitative analysis and the technique of its implementation are stated. Ways of expressing the concentration of solutions are considered in detail. The characteristics of quantitative methods of analysis are given. Along with titrimetric and gravimetric methods, the fundamentals of electrochemical, spectrophotometric and chromatographic methods of analysis are presented. The material studied is based on courses in general and inorganic chemistry.
Laboratory and practical exercises contribute to a better assimilation of theoretical material. Experimental work in the laboratory forms students' practical skills in working with a substance, chemical utensils, the ability to formulate and solve tasks.
Laboratory work provides practical skills for determining the qualitative composition of a substance by the fractional method of analysis, and helps to master the technique of performing titrimetric analysis. Students can use the acquired knowledge when performing field analyzes.

Цель:

To acquaint students with the theoretical foundations of general, inorganic and analytical chemistry. Master the technique of performing qualitative analysis and titrimetric analysis.

Задачи:

Know:
- basic laws of chemistry; have an idea of the modern structure of the atom, the structure of matter; chemical properties of the main classes of inorganic compounds; have an idea of the direction of the chemical reaction, the state of chemical equilibrium and the conditions for its displacement.
- theoretical foundations of analytical chemistry; the law of action of the masses; Ostwald's dilution law; mathematical expression of hydrogen and hydroxyl indicators, ionic strength of a solution; balance between liquid and solid phases; solubility product; ways of expressing the concentration of solutions; calculations in titrimetric methods of analysis.

Be able to:
- draw up equations for exchange chemical reactions, redox reactions and complexation reactions; carry out calculations according to the equations of chemical reactions (calculate the mass of a substance, the mass of a solution, the concentration of a solute in a solution, the pH of a solution), problems with an excess or deficiency of a substance, using gas laws.
- to carry out basic operations to conduct a qualitative analysis using a semi-micro method; calculate the amount of substance required to prepare a solution with a given concentration; carry out calculations related to the transition from one concentration to another; use measuring utensils; prepare and fill in the burette correctly; choose a suitable indicator; correctly count the titrant volume; calculate the results of titrimetric determinations.

Acquire skills: in the implementation of a qualitative analysis of an unknown substance; in determining the alkalinity and total hardness of water; in calculating the results of quantitative determinations; in solving computational problems; in the presentation of the analysis results and in the correct maintenance of the work log.

Possess knowledge of the chemical nature of material objects and is able to apply them in solving practical problems in their professional activities in the field of biology, geology, geography and related sciences.

Digital geography in industry 4.0

Аннотация:

The discipline discusses the basics of the use of digital spatial data in the modern development of the economy and society.

Цель:

Purpose of the educational complex. The purpose of this discipline is to provide methodological support for students in the process of mastering the discipline, as well as the formation of students' knowledge in the field of spatial data in modern geographical science.

Задачи:

The objectives of the course are:
- the study of modern technologies in the field of geographical sciences and from applications in the professional field;
- the study of the regulatory framework for the development of modern digital geography;
- the study of ethical norms and rules when using digital spatial data in the professional activities of a geographer.

Experimental methods in ecology

Аннотация:

В дисциплине рассматриваются принципы организации и проведения исследований с применением инструментальных методов изучения природных объектов; раскрываются теоретические основы моделирования экспериментальных исследований, математического планирования и обработки результатов эксперимента. На лабораторных занятиях студенты будут осваивать методы исследований качества воздуха, природных вод, почв, ответных реакций организмов на загрязнение. Будут планировать и проводить экологический эксперимент, обосновывать достоверность полученных данных на основе математической статистики.

The discipline examines the principles of organization and conduct of research using instrumental methods of studying natural objects; reveals the theoretical basis of modeling experimental research, mathematical planning and processing of experimental results. In the laboratory classes students will learn methods of research quality of air, natural waters, soils, the response of organisms to pollution. They will plan and conduct an ecological experiment, justify the reliability of the data obtained on the basis of mathematical statistics.

Цель:

To master modern methods of environmental research, analysis and statistical processing of experimental data

Задачи:

1. Mastering the methods of laboratory ecological experiment.
2. Mastering the methods of assessing the quality of water, air, soil.
3. Application of methods of mathematical processing to the results of experimental environmental studies.

Fundamentals of Biology and Ecology

In the discipline considers the basic theory of biology (cell, chromosome, and evolutionary), metabolism, ontogeny, heredity and variation, biological diversity and its protection, human origins and the relationship of social and biological in its evolution.

Цель:

- to systematize and improve knowlebge on the most fundamental concepts of biology and ecology
- to improve terminology level in argumentation in professional area

Задачи:

1. To form an understanding of the essence of life and to teach how to formulate the basic properties of living matter
2. To form knowledge of the main levels of organization of life.
3. To form an idea of the origin and evolution of life on our planet.
4. To teach to understand the mechanisms of functioning of living organisms and their genetic basis
5. To form knowledge of the basic theories of biology
6. Develop knowledge of the basics of outecology, demecology and synecology, understanding of the biosphere.
7. To form an idea of biodiversity and to formulate the main problems of its preservation.

Geoecological base of natural resource management

Аннотация:

The course involves the formation of universal and professional competencies. The work uses a number of modern teaching technologies aimed at developing systems thinking, research skills, and the ability to work in a team and achieve planned results. When conducting practical classes, we use: a project approach with elements of mental activity, schematization of existing processes and phenomena in modern environmental management, gamification of processes.
Lectures contain the theory of the basics of nature management and conservation of the natural environment, the history of interaction between man and nature, and the existing model of nature management. The role of man at various stages is widely covered, with special attention paid to human thinking technologies and emerging systems of division of labor. The role of specialists in the field of ecology and nature management in the past, present and future is considered in detail.
Considerable attention is paid to the urban and industrial environment as the most changed spaces as a result of human activity. The lecturers focus on existing problems and consider approaches to solving geo-ecological problems.

Цель:

Structuring of the educational process, formation of the educational and methodological mechanism for the development of competencies

Задачи:

Trimester #1

1. Formation of knowledge of the fundamental principles and laws of nature management, geographical, environmental aspects and the history of interaction between man and nature, legal bases of nature management, cause-and-effect relationships in complex natural and natural-anthropogenic systems, technological and methodological aspects of restoring the natural environment, systems of division of labor in different epochs of civilization
2. Formation of analytical and thinking skills, schematization of complex natural and natural-anthropogenic systems and processes, correct positioning and goal setting in the design solution of tasks
3. Formation of project and team work skills with elements of research and analytical thinking when solving problems; public protection of work results and conducting discussions. Formation of supra-professional skills of stress management and time management

Geography

Аннотация:

The discipline “Geography” is a compulsory discipline for study. It is an important discipline to form the correct vision of the world, to acquire the specific knowledge of working with geographical informational resources, to outline the theoretical, methodological and practical trends in geographical science.

Цель:

Purpose of academic discipline is to create the necessary knowledge and learning skills about Geography as a science. This course will show the students how to identify and compare socio-economic and geoecological geographical trends; apply various sources of geographical information to conduct observations of natural, socio-economic and geoecological processes and phenomena, their changes under the influence of various factors; to make a comprehensive geographical description of regions and countries of the world; tables and diagrams reflecting the geographical patterns of various phenomena and processes; use the acquired knowledge and skills in practical activities and everyday life.

Задачи:

Tasks of academic discipline:

1. To create skills of working with geographical maps;
2. To form knowledge of different geographic objects and knowledge about basic geographical sciences;
3. To acquire the knowledge about the history of geography, the era of great geographical discoveries;
4. To form the ability to search and use various sources of geographical information, including Internet resources, to describe, characterize, explain and evaluate a variety of geographical phenomena and processes, life situations;
5. To form the geographical knowledge and skills necessary for continuing education in the areas that require a serious geographical knowledge base.

Geoinformatics

Аннотация:

The discipline is aimed at developing students' skills in using and applying the basic methods of organizing, storing and modeling spatial data in geographical research.

Цель:

The purpose of this course is to provide methodological support for students in the process of mastering the discipline, as well as the formation of basic theoretical knowledge of students in the field of geoinformation technologies and in their practical application in scientific research of the natural environment.

Задачи:

The objectives of the course are:
developing students' professional skills in the field of geoinformatics based on modern computer and geoinformation technologies;
possession of the main methods of storing and modeling spatial data using GIS technologies;
gaining skills to work with professional geographic information systems;
application of the studied methods in practice.

Geology

Аннотация:

The course "Geology" is aimed at obtaining and mastering general and special knowledge about the origin and structure of the Earth, its geological history, chemical composition and physical structure of the earth's crust and subcrustal shells, comparative characteristics of the structure and composition of the Earth and terrestrial planets, its geological history, chemical composition and physical structure of the earth's crust and other geospheres of the Earth, Comparative characteristics of the structure and composition of the Earth and the terrestrial planets. The course assumes the admission of students the most general knowledge about the Constitution, the principles of formation and evolution of geological objects; about natural, natural and technogenic conditions and factors of the emergence and development of endogenous and exogenous geological processes; about the geological environment and the consequences of technogenesis. The practical section of the discipline is aimed at mastering by students the skills of field identification and a qualified description of geodynamic phenomena and forms, drawing up geological reporting documentation used in the practice of geological services.

Цель:

The purpose of the discipline - to provide students with the most general knowledge about the structure, principles of formation and evolution of geological objects; about natural, natural-technogenic conditions and factors of occurrence and development of endogenous and exogenous geological processes; about the consequences of human activity on nature and society.

Задачи:

The objectives of the discipline is to form the students the following basic skills:
- the ability to identify geological objects, geological phenomena and processes, using the basic knowledge gained about the conditions and factors of their formation, mechanisms of development and forms of manifestation;
- ability to work with geological literature, geological and cartographic material for various purposes determined by scientific and practical tasks

Informatics

Аннотация:

The course will give the basic skills to the students to make them both computer and information literate. The discipline focuses on theoretical foundations of informatics and information technology, application software includes word processor, data analysis and spreadsheets, working with databases, basics of algorithmization and programming, network technologies, social and legal aspects of informatization, information security issues.

Цель:

The purpose of studying the discipline "Informatics" is the formation of basic competencies in computer science and information technology, universal and pre-professional competencies that are necessary for the formation of personality of a highly educated specialist.

Задачи:

1. form an understanding of the concept of "information", its presentation, how it is stored and processed;
2. form an understanding of knowledge representation methods and intelligent information systems;
3. provide insight into information modeling;
4. teach students to use information technology in their professional activities effectively;
5. introduce to the basics of modern information technologies and their development trends;
6. introduce to the basic technical, software methods and information protection when working with information systems.

Mathematics

Аннотация:

Дисциплина предназначена для освоения базовых понятий линейной алгебры и математического анализа. В результате изучения дисциплины студент получит знания основ математики в объеме, достаточном для осуществления профессиональной деятельности; изучит основные теоретические методы математики, получит навыки решения математических задач.

The discipline is designed to master the basic concepts of linear algebra and mathematical analysis. As a result of studying the discipline the student will gain knowledge of the basics of mathematics in a sufficient volume to carry out professional activities; learn the basic theoretical methods of mathematics, get skills to solve mathematical problems.

Цель:

To form ideas about the most important concepts of mathematics, mathematical models and mathematical methods used in the social, humanitarian, legal and medical-pharmaceutical sciences.

Задачи:

To achieve these goals it is necessary to solve the following tasks:
- to form ideas about the role and place of mathematics in world culture;
- to form an understanding of the importance of mathematics in different sciences;
- to acquaint with examples of the application of concepts and methods of linear algebra and mathematical analysis in social, humanitarian, legal, medical-pharmaceutical and another sciences.;
- to form skills and abilities for usage of mathematical tools in a future professional activity of students of highlighted training directions and specialties.

Требования к уровню освоения содержания:

The course is based on elementary school courses of mathematics, geometry and algebra.

Physics

Аннотация:

Дисциплина представляет собой курс общей физики на английском языке для студентов географического факультета, специализирующихся в области экологии. Включает в себя все разделы физики, необходимые в дальнейшем для освоения узкопрофильных предметов, связанных с географией, химией и экологией.

The discipline "Physics" is oriented on English-speaking students of Geography faculty which are specialized in a field of ecology. This course includes all branches of physics which are necessary for the study of narrow-purpose subjects connected with geography, chemistry, and ecology.

Цель:

The course of "Physics" is included into the natural-science cycle of disciplines which is compulsory for study. The discipline forms the natural-science world outlook, develops the fundamental understanding of physical phenomena, permits to generalize the data of observations, gives practical experience and experimental skills.

Задачи:

After the course, the students should be able:
- to know the basics laws of physics;
- to solve practical problems;
- to use the laboratory and statistical methods in practice.

Soil science

Аннотация:

Дисциплина направлена на приобретение знаний основных положений науки почвоведения, представлений о факторах и процессах почвообразования, разнообразии почв и их свойствах, почвенных ресурсах мира, факторах деградации и методах рационального использования и охраны почвенного покрова. Дисциплина необходима для формирования полной научной картины мира, понимания законов и методов естественных наук.

The discipline is aimed at acquiring knowledge of the main provisions of the science of soil science, ideas about the factors and processes of soil formation, soil diversity and their properties, soil resources of the world, degradation factors and methods of rational use and protection of soil cover. The discipline is necessary for the formation of a complete scientific picture of the world, understanding the laws and methods of the natural sciences.

Цель:

The purpose of the discipline is to form knowledge about soils-natural biocosal systems, their properties, formation, distribution, ecological and national economic significance.

Задачи:

1. Formation of knowledge about the characteristics, composition and properties of the soil.
2. Mastering the methods of soil diagnostics.
3. Acquisition of knowledge about the factors of soil formation and soil-forming processes.
4. Study of the main types of soils, patterns of their geographical distribution.

Study of geospheres

Аннотация:
Discipline «Studies of Geospheres» is a series of professional disciplines in the direction - Ecology and Nature Management, Bachelor qualification. Discipline focuses on development of professional competencies of the graduate: know the basics of the theory of landscape studies, the basic teachings of the hydrosphere, atmosphere and biosphere. Contents covers the range of issues related to the functioning of biosphere processes governed by the living matter of the planet, and are based on homeostatic environment of mankind. Program of discipline provides the following types of controls: the input control - in the form of oral questioning, mid control - in the form of oral questioning, written tests, practical training, a written test, monitor students' independent work in written and oral forms (writing essays, essay writing testing).

Цель:
Formation of knowledge about the Earth spheres.

Задачи:
1. To form knowledge about the atmosphere, physical and chemical processes occurring in it. An interaction of the atmosphere with outer space and the underlying surface.
2. To study of the surface waters distribution and the relationship of the water bodies hydrological regime with the catchments physical and geographical conditions.
3. To form knowledge in the landscape science field, geosystem ideas about the unity of the Earth's landscape sphere as a natural and natural-anthropogenic environment of life and human activity.
4. To form knowledge about the biosphere, understanding of modern biospheric processes, the ability to assess them systematically.

Basics of energetic of water and internal parts of the earth

Аннотация:

The discipline is aimed at studying the range of problems associated with the regulation of anthropogenic impact on water bodies. Key topics of the course: water use and environmental protection, the use of water resources for production purposes.

Цель:

Formation of modern ideas about the importance of water resources in the economic activity, their use, protection and reproduction, the skills of managing the water management activities of nature users in the basins of water bodies.

Задачи:

1. Deepen knowledge about the basic properties of water and its role in nature and industry, as well as ideas about the functioning of the river basin as a complex integral system.
2. Get acquainted with the legal sources of the “Water Law” of the Russian Federation, with modern approaches to managing the use and protection of the water fund.
3. To form skills in applying the methodological foundations of hydrological and environmental calculations for the quantitative assessment of diffuse pollution of rivers; mastering skills in the use of modern software products for computer calculation of standards for permissible wastewater discharge.
4. To study the main water protection measures and methods of water purification in the process and as a result of water use.

Basics of solar power

Аннотация:

Solar energy-based technologies have seen remarkable development in the last decades. This is observed all across the world. The concerns related to cost and availability of fossil fuels, effects of climate change due to use of fossil fuels are the primary drivers behind the usages of these technologies. With such motivation, several research groups around the world are working in the field of solar energy. It includes scientists and engineers of diverse background such as physics, chemistry, materials science, mechanical engineering, electrical engineering etc.

The educational course gives an overview of energy usage in developing countries, solar thermal systems (heating and cooling), energy storage, and solar cells. Students will consider the basic principles of solar energy collecion and transformation.

Цель:

The course aims to develop students' understanding of the basic principles of using solar energy, various methods of collecting and converting energy, and their effectiveness.

Задачи:

The objectives of the course are to introduce the basic engineering approaches in the field of solar energy: the use of various solar collectors (systems with a central tower, distributed parabolic reflectors and Fresnel mirrors, small-sized parabolic mirrors) and solar cells. Basic astronomical and astrophysical information, methods for calculating the apparent position of the Sun, methods for evaluating the efficiency of heat engines and thermodynamic cycles used in modern energy are also given.

Basics of wind power

Аннотация:

Wind energy is one of the oldest sources of energy used by mankind, comparable only to the use of animal force and biomass. In the past few decades, growth in the wind energy sector has been most phenomenal among all the renewable sources of energy.

The course considers recent development and fundamentals of wind energy utilization, taking into account the geographical and physical facts and models of the wind. The typical systems of wind generators and approaches to wind farms building are considered.

Цель:

The purpose of the course is to familiarize students with the basic physical principles of wind energy and modern engineering solutions in this area.

Задачи:

The objectives of the course are:
formation of ideas about the physical nature of the wind and the features of its occurrence on a planetary and local scale;
familiarization with the basic principles of hydro- and aerodynamics, significant for calculating the performance and efficiency of wind farms

Biological research methods in environmental engineering

Аннотация:

The discipline involves preparation for solving professional problems in accordance with the profile focus, the definition of problems, tasks and methods of scientific research. Allows you to get new information based on observations, experiments, scientific analysis of empirical data. Abstracting scientific papers, compiling analytical reviews of accumulated information in world science and production activities, summarizing the results obtained in the context of previously accumulated knowledge in science, formulating conclusions and practical recommendations based on representative and original research results, identifying and diagnosing environmental problems, developing practical recommendations on the conservation of the natural environment, waste management of production and consumption - skills acquired during the course.

Цель:

Obtaining knowledge about the main directions in the development of eco-technologies, about the priority directions for the formation and synthesis of environmentally friendly and energy-saving technologies for waste disposal and remediation of contaminated areas, about the application of an environmental approach in assessing the safety of technologies.

Задачи:

1. To gain knowledge about the greening of technologies and industries, about the main sources of environmental pollution on a global and regional scale, about the main directions in the development of eco-technologies;
2. Get acquainted with the system of state standards in the field of biosphere protection and rational use of natural resources;
3. Learn to apply an ecological approach to assessing the safety of technologies of various types.

Ecological monitoring

Аннотация:

The discipline is aimed at studying the stages of environmental monitoring (environmental observations, assessment and forecast), the features of the organization of monitoring at different levels (global, state, regional, local), the organization of component-by-component monitoring. Key topics of the course: environmental observations, global, regional and local monitoring.

Цель:

The formation of knowledge of the theoretical foundations and methods of environmental monitoring also has the ability to use them in practice.

Задачи:

1. To form the skills to assess the ecological situation, predict changes in the natural environment and organize an observation system.
2. Expand ideas about the current state and prospects for the development of environmental monitoring.

Ecological projection and expertise

Аннотация:

The discipline includes the study of theoretical ideas about various types and types of environmental expertise, methodological foundations of environmental design. In the discipline, the fundamentals of the environmental justification of economic and other activities in the pre-investment period will be revealed in a meaningful way. Key topics of the course: assessment of the impact of economic activity on the environment (EIA), environmental design of energy facilities, environmental design of environmental protection facilities.

Цель:

Formation of students ' environmental justification of economic and other activities in pre-investment and project documentation and skills in using methods and principles of environmental impact assessment and conducting state environmental expertise.

Задачи:

1. Familiarize yourself with the methodology and methods of geographical and environmental reviews and the legal framework for various types and types of environmental reviews.
2. To develop the skills of analyzing theoretical, methodological and practical methods of environmental justification of economic and other activities at the pre-investment and investment stages (project scheme, feasibility study, design, construction and operation of the facility), as well as analysis of specific projects and materials of environmental impact assessments of large projects .
3. To form ideas about international practice in the field of environmental impact assessment and environmental expertise.

Economy of natural resource management

Аннотация:
The discipline "Economy of nature resource management" examines the nature and consequences of interaction between man (society) and the natural environment, the economic mechanism of nature management in the Russian Federation; ecological and economic analysis and assessment of sectoral and regional features of nature management in Russia.

Цель:
The discipline is focused on the formation of students' skills and abilities of analytical and practical activities in the field of environmental economics.

Задачи:
1. Know the basic foundations of nature management economics;
2. Know the basic concepts of economic development, taking into account the environmental factor;
3. Be able to analyze the nature and consequences of interaction between man (society) and the natural environment;
4. Understand the economic mechanism of nature management in the Russian Federation;
5. Fcquire the skills of environmental and economic analysis and assessment of sectoral and regional features of environmental management in Russia.

Environment and New Energetics

Аннотация:

The discipline is aimed at the formation of professional competencies of the graduate: readiness to participate in the planning and implementation of measures for the management and optimization of nature management, the organization of field and laboratory work, the preparation of estimates and reporting documentation for the management of nature; to master modern methods of natural science research, data analysis, design.

Цель:

The study of modern scientific ideas about the sustainable development of mankind and ideas about the use of new energy in the interests of sustainable development.

Задачи:

1. Deepening knowledge in the field of sustainable development of mankind;
2. Formation of conceptual ideas and practical skills for assessing global environmental problems and ways to solve them;
3. Mastering modern methods of energy production;
4. Study of domestic and foreign experience in the use of alternative energy.

Geochemistry of Environment

Аннотация:

The discipline is aimed at the formation of knowledge of the theoretical foundations of geochemistry, the ability to apply them and act on the basis of practical experience. In the discipline, ideas about the basics of geochemistry as a science that studies the chemical composition of the Earth's shells and processes occurring in various geospheres will be meaningfully disclosed, methods of geochemical research, general patterns of dispersion, concentration and migration of chemical elements will be considered. Special attention will be focused on the application of geochemical approaches in the study of natural and technogenic landscapes, solving a wide range of environmental problems associated with technogenic environmental pollution. Key topics of the course: general patterns of element migration, geochemistry of natural landscapes.

Цель:

The study of the theoretical foundations of geochemistry, obtaining basic knowledge about the modern scientific picture of the world based on the provisions, laws and methods of natural sciences, the study of methods of field environmental research.
Formation of knowledge about the patterns of migration, concentration and dispersion of atoms in the landscape sphere of the Earth; about the chemical structure of natural and man-made landscapes.

Задачи:

1. To study the general patterns of migration, concentration and dispersion of atoms in landscapes.
2. Consider the geochemical structure of biogenic landscapes of the Earth.
3. Master the methods of ecological and geochemical research.
4. Be able to assess the impact of technogenesis on the geochemical structure of landscapes.

Geoinformational technologies in ecological engineering

Аннотация:

The course is aimed at considering the problems associated with the use of geographic information systems and technologies in nature management and environmental protection. Key topics of the course: the importance of GIS for nature management, GIS in the field of environmental protection. The content covers a range of discipline problems associated with the use of geographic information systems and technology in environmental management and environmental protection.

Цель:

Formation of modern ideas about the use of geoinformation technologies (GIS) in the field of nature management and environmental protection.

Задачи:

1. Getting an idea of the role and place of GIS technologies, their application for solving fundamental and applied problems;
2. Mastering the basic ideas, principles and patterns in the modeling of space-time systems;
3. Learn to understand and correctly apply GIS technologies in the design of alternative energy facilities and in environmental engineering;
4. Mastering the skills of practical work using GIS technologies;
5. Study of the possibility of using remote sensing data as a highly informative and up-to-date source of environmental data.

Introduction in specialization

Аннотация:
The course is aimed at obtaining primary knowledge in the field of ecology, nature management and geoecology. Within the framework of the discipline, the importance of the professional competencies of an ecologist for society will be considered. Key topics of the course: environmental factors of the environment (including anthropogenic impact), rational nature management.

Цель:
Deepening ideas about the relationship between man and nature, the components of the natural environment and their relationships. In addition, the expansion of knowledge about the basic sciences of the ecological cycle and applied disciplines in this area.

Задачи:
1. Master the basic concepts of ecology, nature management, geoecology;
2. Form ideas about the composition and structure of the biosphere, the concept of an ecosystem.
3. Deepen knowledge about the basic provisions, about the body and the environment: environmental pollution, environmental protection equipment and technologies, principles of rational use of natural resources.

Law fundamentals of natural resource management and environmental conservation

Аннотация:

Environmental law is a very young branch of Russian law. However, the importance of this branch of law in the Russian legal system is already evident today.

The natural resources of the Russian Federation are not so much a source of satisfaction of human needs, as the basis of life and activity of the peoples inhabiting the territory of Russia. The task of environmental law is to preserve the environment for the present and future generations of people.

The complexity of studying this discipline is predetermined by the volume of this discipline, a large number of international, foreign and domestic legal acts regulating the relevant relations. In addition, the environmental legislation of any country is very dynamic: the legislator strives to maximize the improvement of environmental and legal norms in order to comply with trends. Thus, the national project of the Russian Federation "Ecology" sets such targets as effective management of production and consumption waste, reduction of air pollution in large industrial centers, improvement of the quality of drinking water for the population, environmental improvement of water bodies, and conservation of biological diversity. Achieving these targets is unthinkable without simultaneously improving environmental legislation.

Цель:

Study of the system of legal regulation of nature management and environmental protection, formation of skills of interpretation and application of legal norms. The study of this discipline should pursue the goal not only of obtaining theoretical knowledge, but also of forming an ecological culture and an eco-oriented way of behavior.

Задачи:

Course objectives: professional training of students in the field of legal regulation of environmental management and environmental protection, the formation of the ability to navigate in international, foreign and Russian legislation in the field of environmental management and environmental protection, to work with legal acts and their application in practice.

Nature Conservation

Аннотация:

The course "Nature Conservation" forms an idea of modern forms of territorial nature protection, the peculiarities of their functioning and design, is aimed at increasing the level of knowledge of students in the field of nature protection, mastering new practical skills in the field of nature conservation and deepening the existing knowledge about the environment

Цель:

The educational and methodological complex contains the necessary information for a full-fledged study of the discipline "Nature Protection and conservation".

Задачи:

1. Get philosophical and methodological foundations of knowledge in the field of nature protection and conservation;
2. To understand the system of specially protected natural areas as an integral condition for sustainable development on a global, regional and local scale;
3. Obtain the necessary knowledge, skills and abilities in the field of management and design of protected areas, as well as assessment of the state of protected natural areas and the effectiveness of their systems.

Physico-chemical research methods in environmental engineering

Аннотация:

The course provides an explanation of instrumentation methods in the analysis of environmental objects from the sampling and sample preparation to the modern techniques of analysis of different types of pollutants.

Цель:

The goal of this course is to familiarize students with various modern instrumental methods of analysis of pollutants in environmental objects and to compare their characteristics

Задачи:

1. To give an overview of the modern analytical methods and techniques in the analysis of environmental objects;
2. To teach students to choose an appropriate method/technique in respect of the object to analyze and the analyte(s) to determine in this object;
3. To practice in solving some typical problems of analysis.

Rate setting of atmospheric pollution

Аннотация:
The content of the discipline covers a range of problems related to anthropogenic impact on the atmospheric air. During the development of the discipline, discusses possible impacts on the atmospheric air in the production process and the composition of emissions from enterprises of various industries, we study the impact of various pollutants on the atmosphere and human health, students are trained to analyse international standards and environmental documentation, examine methods and means to reduce negative impact on atmospheric air. The discipline program provides the following types of current control: entrance control in the form of an oral survey, current control-in the form of protection of laboratory work, interim certification.

Цель:
Formation of students ' modern ideas about the possible negative impact on the atmospheric air of various industries, the composition and properties of pollutants, their impact on human health, and ways to reduce the negative impact on the atmospheric air.

Задачи:
1. Formation of knowledge about the types of impact on the atmospheric air of various industries;
2. Study of the composition, properties, features of origin and possible negative effects on the atmospheric air and human health of various pollutants and physical factors;
3. Study and analysis of existing international standards in the field of atmospheric air protection;
4. Formation of knowledge about methods and means of reducing the negative impact on the atmospheric air.

Rate setting of wastes

Аннотация:

The discipline is aimed at obtaining knowledge about the assessment of the quality of the environment, the functioning of ecosystems, and the anthropogenic impact on the environment. In addition, when studying the discipline, attention will be focused on the economic aspects of the interaction between society and nature. Key topics of the course: legal regulation of activities in the field of waste management in the Russian Federation, organization of a system for collecting municipal solid waste.

Цель:

Formation of knowledge about the management of production waste, the ability to predict man-made disasters and environmental risks, the ability to plan measures to prevent and eliminate the consequences of man-made disasters.

Задачи:

1. Learn the value orientations about waste management as the most important condition for the development of production with minimal environmental impact.
2. Deepen knowledge about the basic properties of waste and their hazard classes, the formation of ideas about the formation, accumulation and transportation of waste and their negative impact on the environment.
3. To get acquainted with the legal sources of the legislation of the Russian Federation in the field of waste management, familiarization with modern approaches to the formation, accumulation, transportation, disposal of waste, with the main activities and methods of waste disposal.
4. To acquire skills in applying the methodological basis of calculations for assessing the negative impact of waste on the environment, in using modern software products for computer calculation of waste generation standards.

Rate setting of water pollution

Аннотация:
The content of the discipline covers a range of problems related to the regulation of anthropogenic impact on water bodies. The program of the discipline provides the following types of control: entrance control in the form of an oral survey, current control in the form of protection of laboratory work, interim certification. The discipline is aimed at studying the range of problems associated with the regulation of anthropogenic impact on water bodies. Key topics of the course: water use and environmental protection, the use of water resources for production purposes.

Цель:
Formation of students modern ideas about the importance of water resources in economic activity, their use, protection and reproduction, skills of management of water management activities of nature users in the basins of water bodies, regulation of the level of pollution of water bodies

Задачи:
1. Deepening of knowledge about the basic properties of water and its role in nature and industry, formation of ideas about the functioning of the river basin as a complex integrated system;
2. Study of methods for rationing water pollution
3. Study of the main water protection measures and methods of water treatment in the process and result of water use.

Technogenic systems and ecological risks

Аннотация:
The course is aimed at developing students' ecological and environmental outlook. The discipline deals with the problems of formation of technogenic ecosystems as a consequence of anthropogenic impact on the environment, modern conceptual framework and methodological approaches to environmental diagnosis, priority areas of environmental risk reduction.

Цель:
Formation of students ' understanding of the environment as a system that develops over time and is influenced by natural and anthropogenic factors; familiarity with modern conceptual foundations and methodological approaches to solving the problem of ensuring safety and sustainable human interaction with the natural environment; development of ecological and environmental outlook.

Задачи:
In the course of training, students are called upon to (1) study the concepts of technogenic ecosystem, environmental risk and public health risk; (2) familiarize themselves with modern methods of environmental regulation and environmental diagnostics; (3) master the methodology of risk assessment as the basis for decision-making in predicting the possible dangerous development of natural and anthropogenic processes; (4) apply the acquired knowledge in experimentally simulated and spontaneously occurring situations of increased environmental danger.

Urboecology

Аннотация:

The course "Urboecology" is aimed at considering such issues as man and his place in nature, urban and rural environment, assessment of the ecological situation in the urban environment, design and planning of the urban environment, the regulatory framework in the field of urboecology, economic mechanisms in the field of urboecology.

Цель:

The study of the main issues and problems in the field of interaction between man and the environment in human settlements.

Задачи:

1. Get acquainted with the concept of the urban environment, the basics of demography and urbanism, environmental problems of cities.
2. To form skills in solving issues of design and planning of the urban environment.

English for effective communication

Nowadays it is essential to know the English language both to make a successful career in any professional field and communicate with people from different cultural backgrounds in everyday life. The aim of this course is to train bachelor students to communicate in English both verbally and in the written form in business environment and everyday life. To achieve this aim it is necessary to develop receptive (reading, listening), productive (speaking, writing) and translation skills in students.

Цель:

The aim of the course is to develop bachelor students' competence in intercultural communication in the English language.

Задачи:

The tasks of the course are to develop students' listening, reading, speaking and translation skills in order to make them able to use English for business and everyday communication

Требования к уровню освоения содержания:

A2 (or higher) level of English is desirable

English for public speaking

Аннотация:

.В ходе курса студенты изучат аспекты английского языка, связанные с публичными выступлениями. Курс содержит 3 подраздела: навыки для публичных выступлений, подготовка к выступлению и визуализация выступления. Первый раздел посвящен введению в тему публичных выступлений и рассматривает такие аспекты как виды публичных выступлений и великие публичные выступления. Вторая тема рассматривает три стадии выступления: подготовка, непосредственно выступление и анализ выступления. Третий блок посвящен информации, связанной с созданием презентации, в частности, использование инфографиков, как средство визуализации и использование различных современных технологий, которые помогут улучшить выступление.

In the given course the students will study English in the aspect of public speaking. The course includes 3 topics: Public Speaking Skills, Preparing for Public Speaking, Information Visualization Techniques. The first topic is devoted to the introduction to public speaking and introduces genres of public speaking and provides examples of prominent speeches. The second topic implies the three stages of a speech: preparation, delivering the speech, the reflexion on the speech. The third topic is devoted to the infromation connected with the visual presentation skills, including the use of infographics as a means of visualization; some other modern techniques and technologies that help improve the delivery are provided in this topic.

Цель:

The aim of the course is to develop students' communicative competence paying special attention to mastering listening ang speaking skills.

Задачи:

The objectives of the course are:
- to learn some contemporary information about the English language and English-speaking countries,
- to master speech skills in speaking, listening, reading, and writing paying special attention to the first two,
- to develop public speech skills in English,
- to study verbal and some other echiniques of effective presentations

Требования к уровню освоения содержания:

B1 (or higher) level of English is desirable

Innovative economy and technological entrepreneurship

Аннотация:
Инновационная экономика означает введение хозяйственной деятельности в условиях производства уникальной продукции, совершенно новой по своим технологическим особенностям. Традиционно категорию "инновации" рассматривают с разных позиций: товара, услуги и технологии. Характеризуя уровень развития инновационной продукции и технологии в государстве, ориентируются на объемах выпуска, сопоставляемых с объемом ВВП и финансированием. Роль технологического предпринимательства в быстро изменяющих геополитических условиях становится все более актуальной, т.к. напрямую связана с достигнутым технологическим укладом и с обеспечением экономической независимости страны. В процессе изучения дисциплины обучающиеся научатся оценивать рыночную доля технологической продукции, проводить анализ конкурентоспособности продукции, а также учитывать влияние негативных воздействий на предпринимательскую деятельность. Обучающиеся смогут осуществлять исследование рынков технологической продукции, разрабатывать бизнес-план, с помощью эконометрических методов выявлять факторы, способные либо оказывающие влияние на развитие предпринимательской среды.

An innovative economy means the introduction of economic activity in the conditions of production of unique products, completely new in their technological features. Traditionally, the category "innovation" is considered from different positions: goods, services and technologies. When characterizing the level of development of innovative products and technologies in the state, they are guided by output volumes compared with the volume of GDP and financing. The role of technological entrepreneurship in a rapidly changing geopolitical environment is becoming increasingly relevant, because. is directly related to the achieved technological order and to ensuring the economic independence of the country. In the process of studying the discipline, students will learn to assess the market share of technological products, analyze the competitiveness of products, and also take into account the impact of negative impacts on business activities. Students will be able to research the markets for technological products, develop a business plan, using econometric methods to identify factors that can or have an impact on the development of the business environment.

Цель:
Обучение практическим навыкам в области исследования конкурентоспособности инновационной технологической продукции.
Training in practical skills in the field of researching the competitiveness of innovative technological products.

Задачи:
Сформировать умения в области оценки конкурентоспособности инновационной продукции;
Способствовать освоению знаний в области ключевых особенностей технологического предпринимательства;
Сформировать представления относительно введения инновационной деятельности.
To form skills in the field of assessing the competitiveness of innovative products;
Contribute to the development of knowledge in the field of key features of technological entrepreneurship;
To form ideas regarding the introduction of innovative activities.

Man in the environment

Аннотация:

This course is addressed to students interested in a sufficiently long stay outside populated areas in conditions of partial or complete autonomy. Within the framework of the course, various manifestations of the autonomous existence of a person in the natural environment are considered: forced autonomy - survival alone or as part of a group, business autonomy - associated with field research, production and other activities, recreational and entertainment autonomy - active and combined tourism, others close to him holiday destinations.

The purpose of this course is to provide students with basic knowledge, skills and abilities that enable them to independently comfortably and as safely as possible stay in various natural landscapes.

The course "Man in the natural environment: safety, work, rest" is a set of three logically connected blocks - theoretical (learning basic knowledge), technical (development of the necessary skills to ensure individual and collective life, including the basics of technology for the most massive types of active tourism - hiking, water, mountain, speleo-) and tactical (development of skills related to decision-making in various conditions, including the threat of an emergency and the state of the current emergency).
After study of discipline, student have to:
1. Knows the principles of solitary life support in the natural environment in the mode of planned and forced autonomy
2. Knows the principles of life support in the natural environment as part of a group in the mode of planned and forced autonomy
3. Basic skills for ensuring individual and collective life in various natural landscapes of the temperate climate zone have been formed
4. Able to make tactical decisions regarding movement in various natural landscapes of the temperate climate zone under various conditions, including the threat of an emergency and the state of the current emergency
5. Able to make tactical decisions regarding movement in various natural landscapes of the temperate climate zone in the current emergency situation

This course is addressed to students interested in a sufficiently long stay outside populated areas in conditions of partial or complete autonomy. Within the framework of the course, various manifestations of the autonomous existence of a person in the natural environment are considered: forced autonomy - survival alone or as part of a group, business autonomy - associated with field research, production and other activities, recreational and entertainment autonomy - active and combined tourism, others close to him holiday destinations.

Цель:

acquisition by students of basic knowledge, skills and abilities, providing the possibility of their independent comfortable and maximum safe stay in various natural landscapes

Задачи:

1. Acquisition of basic knowledge regarding life support (alone and as part of a group)
2. Formation of the necessary skills to ensure individual and collective life, including the basics of technology for the most massive types of active tourism
3. Development of skills related to decision-making in various conditions, including the threat of an emergency and the state of the current emergency

Politics in the modern world

Аннотация:
The discipline on «Contemporary Politics» aims to form: 1) knowledge about modern politics; 2) the ability tounderstand political problems and processes in different historical and cultural contexts.

Дисциплина «Политика в современном мире» направлена на формирование у студентов знаний о мире политике в разнообразных исторических и культурных контекстах, а также способности ориентироваться в политическом и политико-культурном разнообразии современного мира в контексте его политико-исторического развития.

Цель:
To provide insight into the contemporary politics and ways of its learning.

Задачи:
1. to form knowledge about politics as public sphere;
2. to form knowledge on political, cultural, ideological, value, and institutional features of policy-making
3. to form knowledge on the concepts of political science

Sphere of concepts of the Russian language

Аннотация:
Содержание дисциплины охватывает круг вопросов, связанных с новейшими направлениями в лингвистике: концептологией, языковой картиной мира, когнитивной лингвистикой, лингвокультурологией, а также такими проблемами, как языковое сознание, речевая деятельность, культура, национально-культурные особенности языкового сознания и речевого поведения и т.д. В процессе освоения дисциплины студенты получат углубленное представление о формальных и смысловых особенностях русской картины мира, узнают об основных концептах как смысловых единицах, формирующих этническую основу русского самосознания. В результате обучающийся сможет: 1) выявлять в текстах разного типа и правильно интерпретировать национально значимые смыслы; 2) различать в коммуникации русские ценности от других национальных ценностей; 3) на основе верной интерпретации концептуального содержания текста определять цели и задачи его автора; 4) верно квалифицировать воплощаемые в тексте ценностные смыслы – явные (открытые) и неявные (скрытые); 5) уметь видеть формирующиеся в языке новые концепты и определять перспективы их развития.

The content of the discipline covers a range of issues related to the latest trends in linguistics: conceptology, linguistic worldview, cognitive linguistics, linguoculturology, as well as problems such as language consciousness, speech activity, culture, national-cultural features of language consciousness and speech behavior, etc. The students will gain an in-depth understanding of the formal and semantic features of the Russian picture of the world, learn about the basic concepts as semantic units that form the ethnic basis of Russian self-consciousness. As a result, the student will be able to: 1) identify nationally significant meanings in texts of different types and correctly interpret them; 2) distinguish Russian values from other national values in communication; 3) determine the goals and objectives of its author based on the correct interpretation of the conceptual content of the text; 4) correctly qualify the value meanings embodied in the text – explicit (open) and implicit (hidden); 5) be able to see new concepts emerging in the language and determine the prospects for their development.

Цель:
The purpose of this discipline is to form a philologist–researcher focused on the study of the interaction of the facts of language and culture; the formation of students' anthropocentrically oriented view of language as the main part of a culture, as a way of transmitting socio-cultural information and representation of national values.
Mastering the theoretical and practical sections of the course increases the initial level of proficiency in the Russian language in general and its conceptual sphere in particular for the successful solution of professional tasks and creates conditions for further self-education.

The entrance test is carried out by written testing at the first practical lesson.

Задачи:
The whole course includes:
1) introduction to the Russian conceptology as an interdisciplinary science;
2) consideration of the main models of culture representation in language – linguomental (concept, worldview) and communicative (linguistic personality, discourse);
3) study and testing of methods of conceptual and linguoculturological analysis of linguistic and textual material, including broad extralinguistic knowledge about the world, about the social context, about various aspects of the Russian linguistic picture of the world, as well as about the principles of Russian speech communication;
4) formation of linguistic and cultural competence among the students, including an adequate understanding of the cultural layer of speech and speech behavior reflected in texts and acts of proper Russian and intercultural communication.

Digital Intelligence for life and career

Аннотация:

Дисциплина предназначена для студентов, желающих повысить компетентность в сфере цифровых технологий на английском языке. В курсе рассматриваются вопросы, связанные с так называемыми "большими данными" (Big Data), цифровым этикетом (при ведении соцсетей, деловом общении). Курс также помогает разобраться в правильных и надежных источниках информации на наглийском языке, в приемах улучшения электронного имиджа и продвижения себя/бизнеса онлайн.

The course is aimed at the students who study Englsih and seek proficiency in discussing digital technologies in Englsih. The course studies the questions connected with Big Data, digital etiquette (while using social networks). The students wil lalso learn how to communicate online safely and find secure and credible sources of information online. They will also learn how to promote one's digital image online and not to spoil somehow.

Цель:

The aim of the course is to develop students' communicative competence paying special attention to the sphere of digital technologies

Задачи:

The objectives of the course are:
- revise tsome issues of contemporary English language and the culture of English speaking countries
- master language skills in reading, writing, speaking and listening.
- develop the XXI century skills (critical thinking, communication, collaboration, creativity, interaction, etc.).

Требования к уровню освоения содержания:

Taking the course of Foreign Language (English) [для англоязычных ОП] is desirable

Emotional intelligence in professional activity

Аннотация:

Изучение дисциплины направлено на формирование у студентов представлений об обнаружении и управлении своими и чужими эмоциями.
В содержании дисциплины рассматриваются коммуникативные трудности, препятствующие эффективному решению профессиональных задач, внимательность к эмоциям, управление собой, корректное управление поведением других людей. Это позволяет обучающимся получить опыт применения эмоциональной саморегуляции, уважения своих и чужих границ, разрешения эмоционально напряженных ситуаций.
Результатом освоения дисциплины является развитие умений и навыков, связанных с прогнозированием эффективной профессиональной деятельности, с превращением эмоции в управляемый ресурс, который позволит достичь личностного и профессионального успеха

The study of the discipline is aimed at forming students' ideas about the detection and management of their own and other people's emotions.
The content of the discipline deals with communication difficulties that impede the effective solution of professional problems, attentiveness to emotions, self-management, correct management of the behavior of other people. This allows students to gain experience in applying emotional self-regulation, respecting their own and others' boundaries, and resolving emotionally stressful situations.
The result of mastering the discipline is the development of skills related to the prediction of effective professional activity, with the transformation of emotions into a manageable resource that will allow you to achieve personal and professional success.

Цель:

The study by students of emotional intelligence as a technology for increasing the efficiency of professional activity, the mechanisms of emotional intelligence necessary for solving professional problems.

Задачи:

The main objective is for students to gain experience in applying emotional intelligence in interaction:
1. to give a general description of emotional intelligence as an applied technology in a human capital society;
2. study the structure of emotional intelligence;
3. to consider the scheme of work with emotional information;
4. to study the mechanisms of emotional intelligence for the effective management of professional activities.

Medical geography

Аннотация:
The discipline "Medical Geography" belongs to block B.1 and is an elective discipline. The discipline outlines the theoretical and methodological provisions of modern medical geography: the influence of natural, economic and social conditions of various territories on the health of the population inhabiting them is considered, attention is paid to the principles and methods of compiling medical geographical forecasts for a certain territory, medical geographical maps and atlases.

Цель:
To give a concept of the science that studies the influence of the geographical environment on human health, to show the significance of medical and geographical research; to disclose the dependence of peoples' health condition on the quality of the environment, as well as to acquaint students with medical and geographical environment state in different countries.

Задачи:
1. To study of the influence of natural components and natural-territorial complexes, as well as socio-economic conditions on humans' health;
2. To show the causes of the occurrence and geographical distribution of diseases or pathological conditions; consider the classification of diseases according to environmental conditions;
3. To study the patterns of geography of individual diseases and training practical skills for compiling medical-geographic maps;
4. To study the development of medical and geographical forecasts for inhabited areas subject to future economic development, as well as those territories within which nature is most intensively transformed as a result of human economic activity

Modern algorithms for processing spatial data

Аннотация:

With the current level of information technology development, it becomes critical for a specialist to be able to use modern programming languages to analyze spatial data and to have programming skills to more effectively perform applied and scientific geographic tasks at minimal cost. The study of this course will allow students to effectively process large amounts of data, create their own tools for analyzing spatial and non-spatial data, optimize the processes of building maps and algorithms for geographic analysis. The course gives an idea of the basic concepts of programming, allows you to form programming skills in geographic information systems.

Цель:

The purpose of studying the discipline "modern algorithms for processing spatial data" is to familiarize with the theoretical and practical foundations of programming and their application in solving geospatial problems, as well as familiarity with the most common programming languages, their classification and application features in spatial analysis in GIS. When studying the discipline, it is planned to master the basic structures of the most common programming languages, typical situations of their application in the main geographic information systems for subsequent use in solving geographic and cartographic problems.

Задачи:

The tasks of studying the discipline are to form students' knowledge, practical skills and programming skills in the context of working with spatial data. As a result of mastering the discipline, students should receive:
- knowledge of the basic concepts and definitions used in programming; their specification in the context of spatial data;
- the ability to formulate requirements and tasks for the designed programs and understanding the algorithms for solving these problems in the framework of object-oriented programming, to understand the features of the implementation of tasks with spatial data;
- skills in solving practical problems using the Python 3 programming language, as well as in the environment of GIS systems.

Natural resource management

Аннотация:

The course "Management of Natural Resources" is important for studying within the framework of the direction Ecology and nature management, and will also be of interest to students of related areas: biology, geography, hydrology, meteorology, cartography, geodesy, tourism and service.
The purpose of the course is to study the main resources of the economy (natural, labor, material), i.e. those factors of production that ensure the development of economic structures. Particular emphasis is placed on the study of natural resources. The course examines the environmental and geographical aspects of natural resources, the legal framework for the use of natural resources, the problems and prospects for the use of natural resource potential as a basis for the development of regions. The course also examines the features of the formation of regional labor potential; material and technical resources; possibilities and limits of interchangeability and complementarity of natural, labor resources and artificial capital.

Цель:

The study of the main resources of the economy (natural, labor, material), i.e. those factors of production that ensure the development of economic structures.

Задачи:

1. Получить представление об эколого-экономическом значении природных ресурсов.
2. Освоить методы оценки природно-ресурсного потенциала и экономической оценки ресурсов.
3. Осмыслить эколого-экономическую роль трудовых ресурсов.
4. Рассмотреть эколого-экономическую роль искусственного капитала.

Protected areas and tourism

Аннотация:
The course "Specially Protected Natural Territories and Tourism" is designed for students studying natural sciences. The content of the discipline covers a range of problems related to the relationship between territorial nature protection and the organization of tourism and recreation. Modern concepts of sustainable development, sustainable tourism, ecological tourism are considered. Approaches to the organization of tourism activities within protected natural areas are analyzed. Particular attention is paid to the assessment of the recreational impact on the natural environment, its regulation and monitoring. The development of tourism in protected areas in the main regions of the world, in Russia and in the Perm Territory, is considered. After mastering the discipline, the student will learn to assess the degree of recreational impact on the natural environment, determine the permissible level of recreational load, organize a system of recreational monitoring, and develop measures to restore the environment disturbed by tourism. Receive skills in the development of ecological trails in protected areas.

Цель:
To provide students with the fundamentals of fundamental and applied knowledge in the organisation and control of tourism and recreational activities in protected areas.

Задачи:
1.To master the conceptual and terminological apparatus of the discipline;
2. Know the basic concepts of sustainable development, sustainable tourism, eco-tourism;
3. To consider typical restrictions of nature management in different categories of SPNAs. Approaches to planning and management of tourism activities in protected areas;
4. To be able to assess the degree of recreational impact on the natural environment, to determine the permissible level of recreational pressure, to organize a recreational monitoring system and to develop measures for restoration of the environment disturbed by tourism;
5. Gain skills in designing eco-trails in protected areas;
6. Know the main features and peculiarities of tourism development in SPNAs in the main regions of the world, Russia, and the Perm Krai.

Natural heritage

Аннотация:

The course "Natural Heritage" is designed for students studying in the areas of natural science. The study of the discipline "Natural Heritage" allows students to master the methodology for identifying and studying natural and cultural heritage, delve into the field of heritage geography, study domestic and foreign experience in organizing heritage management. The discipline is aimed at obtaining skills in natural heritage management in accordance with the principles of sustainable development.

Цель:

Improvement the current scientific understanding and management of natural heritage for sustainable regional development

Задачи:

1. Learn the methodology for identifying and studying natural and cultural heritage;
2. Deepening the knowledge in the field of heritage geography;
3. To study national and foreign experience in organising heritage management;
4. Acquisition of modern natural and cultural heritage management methods;
5. Formation of conceptual notions and practical skills of heritage assessment as a factor of regional development.

Resource studies

Аннотация:

The course "Resource Science" is important for studying within the direction of Ecology and Nature Management, and will also be of interest to students of related areas: biology, geography, hydrology, meteorology, cartography, geodesy, tourism and service. The purpose of the course is to study the main resources of the economy (natural, labor, material), i.e. those factors of production that ensure the development of economic structures. Particular emphasis is placed on the study of natural resources. The course examines the environmental and geographical aspects of natural resources, the legal framework for the use of natural resources, the problems and prospects for the use of natural resource potential as a basis for the development of regions. The course also examines the features of the formation of regional labor potential; material and technical resources; possibilities and limits of interchangeability and complementarity of natural, labor resources and artificial capital.

Цель:

The study of the main resources of the economy (natural, labor, material), that is, those factors of production that ensure the development of economic structures.

Задачи:

1. Get an idea of the ecological and economic significance of natural resources.
2. To master the methods of assessing the natural resource potential and economic assessment of resources.
3. To comprehend the ecological and economic role of labor resources.
4. Consider the ecological and economic role of artificial capital.

Ecological policy

Аннотация:

The course "Environmental Policy" is designed for students of the natural sciences. In the discipline of studying the basic foundations of environmental policy, taking into account the implementation of the main participants in sustainable development. The interdisciplinary nature of the study of environmental policy problems is emphasized. The course examines modern ideas about improving environmental safety, places, sources, criteria. Modern tools of environmental policy methods are considered. Legal support and management in the field of nature management and environmental safety are being studied. The environmental policy has been changed as a component of Russia's national security. As a result of mastering the disciplines, students will learn to develop recommendations for the development and implementation of environmental policy.

Цель:

Possession of a set of theoretical knowledge and practical skills in the field of environmental policy, as a set of measures to increase interest in the interests of the individual and society from threats that can lead to changes (degradation) in the natural environment of natural and anthropogenic phenomena.

Задачи:

1. Get an idea of environmental policy and its components;
2. Get an idea of the essence and basic principles of the concept of sustainable development as the basis of environmental policy;
3. Get a systematic understanding of environmental policy as a set of measures that contribute to the protection of the vital interests of the individual and society from threats that may arise as a result of changes (degradation) of the natural environment due to anthropogenic impact, as well as natural impacts;
4. Consider modern instruments of environmental policy;
5. Learn how to develop recommendations for environmental policy;
6. Learn the basic principles of environmental policy;
7. Get an idea of the regulatory framework for environmental policy.

Sustainable development of mankind

Аннотация:

The course "Sustainable development of mankind" covers a wide range of issues focused around environmental and social problems, environmental and economic well-being of the population, sustainable development, taking into account all components: environmental, economic and social. The course is important for studying within the framework of the direction Ecology and nature management, and will also be of interest to students of related areas: biology, geography, hydrology, meteorology, cartography, geodesy, tourism and service. This course examines the history of the emergence of the concept of "sustainable development" and the formation of its modern understanding, the existing concepts of sustainable development, global development models, the foundations of the theory of sustainability, various levels of sustainability, its determinants, the main problems of sustainable development and approaches to their solution on a global, regional and local levels. As part of the course, students will gain an idea of how to organize their professional activities, taking into account the limitations and possibilities of the natural environment. How to make such managerial decisions so that the development of mankind is considered "sustainable", that is, such that the current population of the planet can fulfill their needs in such a way as to leave the same opportunities for future generations. Knowledge and understanding of the concept of sustainable development is an integral part of specialists in any field.

Цель:

The theoretical aspects and practical significance of sustainable development are considered. The principles of sustainable development and methods of their implementation are studied. The regulatory framework for sustainable development is analyzed and examples of the implementation of sustainable development in the world and in Russia are considered.

Задачи:

1. Know environmental aspects of the concept of sustainable development, economic aspects of the concept of sustainable development, social aspects of the concept of sustainable development;
2. Be able to evaluate the contribution of modern developments of domestic and foreign science to the concept of sustainable development;
3. Be able to describe the spatial component of the concept of sustainable development;
4. To get skills research based on the ideas of sustainable development within the framework of academic disciplines and directions.

Geoecology

Аннотация:

The course is aimed at the formation of knowledge of the general patterns of development of the geographical envelope, the analysis of geographical and environmental studies of global problems of mankind and the features of their regional and local manifestations. Within the framework of the discipline, the theoretical and methodological foundations of geoecology will be consistently considered; geoecological features of the functioning, dynamics and evolution of the geographical environment and its components occurring in the course of their natural development and anthropogenic impact, geoecological aspects of the functioning of natural and technogenic geosystems, the main geoecological problems and possible solutions. Key topics of the course: methods of geoecological research, geoecological features of the ecosphere.

Цель:

Deepening knowledge about the methods of environmental monitoring, regulation and reduction of environmental pollution, environmental impact assessments. Obtaining basic knowledge about the theoretical foundations of general ecology, protection of the environment and the natural environment, nature management.

Задачи:

1. Acquire fundamental knowledge about the basic theoretical positions, methods and concepts of geoecology, criteria and techniques for rational nature management and assessment of the state of the environment.
2. To form general ideas about the main geoecological problems of the global, regional and local levels, possible ways and options for their solution.
3. Contribute to the improvement of skills in the application of methods and approaches of geoecology in the analysis of the functioning, dynamics and evolution of the natural environment, analysis of the main geoecological problems.
4. Contribute to the implementation of the geoecological assessment of the state of the environment, the choice of optimal directions and options for solving geoecological problems.

Regional environmental management

Аннотация:

The discipline is aimed at the formation of knowledge of the theoretical foundations of regional nature management. The content of the discipline covers a range of problems related to the main global environmental problems, the specifics of nature management in various regions of the world. In addition, the nature and consequences of modern anthropogenic impact are revealed. Upon completion of the study of the discipline, students will be able to characterize nature management in the regions of the world, they will understand the regional features of nature management.

Цель:

Getting knowledge in the field of regional environmental management processes in retrospect, at the present stage and in the future, solving a global environmental problem.

Задачи:

1. To master the conceptual and terminological apparatus of the course;
2. To determine the factors that form the regional nature management in the territory;
3. To master the laws of the formation of regional systems of nature management;
4. To formulate the global features of modern nature management;
5. To consider the features of nature management in individual regions of Russia and the world;
5. To identify the specifics of the relationship between regional nature management and sustainable development of the territory;
6. To propose directions for solving the global environmental problem and ways to optimize regional environmental management systems.

Environmental security

Аннотация:

The content of the discipline covers a range of problems related to anthropogenic impact of differents industries on components of environment. During the studying of the discipline the negative impact of industry in the air, water resources, soils will be discussed. The issues of management of wastes will be discovered. Sudents will learn about air pollution, water pollution and wastes from different types of industries. Students are trained to analyse international standards and environmental documentation, examine methods and means to reduce negative impact on environment during industrial process. Students will analyse demands for creating environmental management and policy.

Цель:

Formation modern ideas about the possible negative impact on the invironment of various industries, the environmental management in the different plants, their impact on human health and environment, and ways to reduce the negative impact by creating environmental policy and holding environmental industrial control.

Задачи:

1. Formation of knowledge about the types of impact on the components of environment of various industries;
2. To study of possible negative effects on the environment and human health of various types of industry;
3. To study of features of environmental management in the different types of industries;
4. To study and analysis of existing international standards in the field of environmental security;
5. The formation of knowledge about methods and means of reducing the negative impact on the environment;
6. The formation of knoledge abour environmental policy/

Land-use management

Аннотация:
The discipline is aimed at the formation of a complex of knowledge on land use issues as part of a holistic picture of rational nature management. The discipline program includes a large list of issues related to land plots and their protection, issues of ownership and use of land plots, land management and land control, and land categories. Separately, the features of land use in the Perm region are considered. This knowledge is necessary for students to form a holistic view of the role of land use in the structure and functioning of natural systems and the biosphere as a whole and as a basis for substantiating and developing the fundamental principles of nature management, including the sustainable use of land resources. Based on the results of the training, students will learn how to work with documentation of a regulatory nature affecting the area of land use and land protection.

Цель:
Obtaining knowledge about the theoretical and legal foundations of land use and land protection, the formation and protection of land, land categories, types of ownership and the emergence of rights to land, land monitoring.

Задачи:
1. Get knowledge about the basics of regulating land relations and about the use and protection of land resources.
2. To form an idea about the types of land use.
4. Deepen knowledge about the grounds for the emergence and termination of land rights.
5. Get acquainted with the legal regime of the main categories of land.