

Applied physical culture

Аннотация:

For students of all areas of training and specialties, the discipline "Applied Physical Culture" 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 "Applied Physical Culture" 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 "The application-oriented physical culture" 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 "Application-oriented physical culture" is directed:

- on implementation of the principle of variability, complete 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 professionally-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.

Basics of project activity

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.

Communication in a professional and academic environment

Аннотация:

The content of the discipline examines the features of professional communication, the most common genres of oral and written professional discourse, discusses and explores various ways of writing, developing the skills and abilities of writing academic and non-academic texts (essays, reviews, texts in an electronic environment, etc.). This allows students to master individual, group written and oral forms of work with texts of different genres, through which they master the skills of "critical reading".

The course focuses on the study of the features of professional communication, the most common genres of oral and written professional discourse. The training course is aimed at discussion and research of various ways of writing, development of skills and abilities of writing academic and non-academic texts (essays, reviews, texts in the electronic environment, etc.).

Each class includes a wide range of individual, group written and oral tasks performed in the classroom. During the course, students work with texts of different genres, through which they master the skills of "critical reading". Special attention is paid to group discussion and mutual review of oral and written works of students, which contributes to the development of critical reflection skills as a condition of professional activity.

Цель:

The study of the discipline is aimed at the formation of students' ideas and experience in the use of professional communication.

Задачи:

The result of mastering the discipline is the development of skills related to the system of knowledge about the specifics of academic and non-academic texts as a means of professional communication, the types of oral and written professionally-oriented text, the use of technologies for creating and interpreting academic and non-academic texts.

Culturology

Аннотация:

The content of the discipline deals with the main cultural phenomena and processes, the main terms and paradigms of science, the ability to build a connection between cultural studies, on the one hand, and philosophy, sociology, history, on the other hand, phenomena (values, norms, attractors, cultural samples or patterns, cultural archetypes), which, changing, are present in a person's life, forming his cultural field. This allows students to master the main categories and ideas of cultural studies as a scientific field of knowledge.

Цель:

The study of the discipline is aimed at forming students' scientific ideas about the most important aspects, concepts, methods of cultural studies, contributing to the understanding of global and local processes of world culture.

Задачи:

The result of mastering the discipline is the development of skills related to the formation and development of culture, the peculiarities of its study, with the analysis of cultural forms, processes and practices in the course of solving professional problems.

Foreign Language (English)

Аннотация:

Курс состоит из учебных блоков, каждый из которых посвящен различным направлениям темы «Фармация». Обучаемые научатся говорить об основных понятиях, связанных с фармацией, рассказывать о работе фармацевтической лаборатории, познакомиться с основными видами и формами выпуска лекарственных средств, научатся рассказывать о работе аптеки. Студенты изучат фразы-клише, необходимые для фармацевта. Для пополнения словарного запаса будут использоваться информационные компьютерные и мобильные технологии, позволяющие в интерактивной игровой форме усвоить большой объем слов по теме «Фармация» (минимум 380 слов).

Развитие компетенции использования английского языка как инструмента общения происходит в формате Case-Study, позволяющем делать акцент на понимание оригинального английского языка и его применение.

Расширение международных связей, вхождение нашего государства в мировое сообщество сделало иностранный язык реально востребованным государством, обществом и личностью. Международный обмен в сфере фармации приобрел очень широкие масштабы. Основной целью обучения иностранным языкам, а, следовательно, и предложенного курса, является формирование коммуникативных умений, связанных с продажей и употреблением лекарственных средств, а также с их производством.

Актуальность данной программы обусловлена ее практической значимостью. Обучающиеся могут применить полученные знания и практический опыт в реальной жизни. Данная программа отвечает требованиям к обязательному минимуму по английскому языку, предлагает дополнительный материал, который позволяет лучше усвоить материал программы I курса (иностранному языку (английский)) и подготовиться к работе в фармацевтических учреждениях. Содержание курса способствует приобретению навыков понимания содержания текстов разных жанров, ведения диалога практического характера в стандартных ситуациях общения, восприятия на слух основного содержания несложных аутентичных текстов и выделения для себя отдельной значимой информации, навыков работы с текстами. Курс разговорного английского языка "Английский язык для фармацевтов" позволяет овладеть необходимым лексическим минимумом английского языка и получить ряд интересных сведений о лекарственных средствах, а также учит ориентироваться в типичных ситуациях, связанных с употреблением и приобретением лекарственных средств и способствуют расширению лингвострановедческой компетенции.

The course consists of training blocks, each of which is devoted to various areas of the topic "Pharmacy". Students will learn to talk about the basic concepts related to pharmacy, talk about the work of the pharmaceutical laboratory, get acquainted with the main types and forms of release of medicines, learn to talk about the work of the pharmacy. Students will learn cliché phrases needed by a pharmacist. To replenish the vocabulary, information computer and mobile technologies will be used, which will allow you to learn a large volume of words on the topic "Pharmacy" in an interactive game form (at least 380 words).

The development of competence in using English as a communication tool takes place in the Case-Study format, which allows emphasizing the understanding of the original English language and its application.

The expansion of international relations, the entry of our state into the world community has made a foreign language a truly sought-after state, society and personality. International exchange in the field of pharmacy has become very widespread. The main purpose of teaching foreign languages, and, consequently, of the proposed course, is the formation of communicative skills related to the sale and use of medicines, as well as their production.

Students can apply their knowledge and practical experience in real life. This program meets the requirements for a mandatory minimum of English, offers additional material that allows you to better understand the material of the I course program (foreign language (English)) and prepare for work in pharmaceutical institutions. The course content contributes to the acquisition of skills to understand the contents of texts of various genres, to conduct a practical dialogue in standard communication situations, to listen to the main content of simple authentic texts by listening to and to highlight for yourself certain important information, and text skills. The spoken English course "English for Pharmacists" allows you to master the necessary lexical minimum of the English language and obtain a number of interesting information about medicines, and also teaches you to navigate in typical situations associated with the use and purchase of medicines and help to expand linguistic and regional competence.

Цель:

Help students to master basic vocabulary in the field of pharmacy in English, expand vocabulary, master pharmaceutical terminology, develop oral skills of dialogical and monological character of professional pharmaceutical orientation.

Задачи:

- 1) Activate lexical units by subject area English for Pharmacists
2. Promote business communication on Pharmacy, intelligently and argumentatively build oral and written speech in Russian and English.
3. Improve reading and speaking skills,
4. Improve the translation skills of basic, specialized and academic texts from English into Russian and from Russian into English.

5. Teach to construct a reasoned monological statement using the studied lexical and grammatical material.

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.

Law

In this course foreign students will learn the basics of Russian law. Specifically they will study topics such as basics of Russian law and state, basics of civil law of Russia as one of the most important and basic branches of law, basics of labor law of Russia, basics of work with information (some parts of information law of Russia) and basics of legal liability according to the Russian law.

In the end of the course students should be able to understand what law is, how it functions, what is Russia as a state, what are the basics of Russian law. Students will learn the basic legal relationships that they enter into every day while they are in Russia, and also they will learn about legal employment opportunities. Students will understand specific features of their legal status as foreigners in Russia and specific features of legal status of student in Russia. Also they will learn about law enforcement agencies of Russia and especially those to which they may apply.

Цель:

Obtaining knowledge in the field of Russian law and legislation for solving issues in various fields of cultural, professional and scientific activities.

Задачи:

To promote learning about the fundamentals of law in general, but mainly about the fundamentals of Russian law and the state; to form understanding of the sectoral system of Russian law; to promote obtaining of basic knowledge in the field of civil law of the Russian Federation, labor law of the Russian Federation, in particular, the employment of foreign citizens in the Russian Federation, as well as to promote the development of basic knowledge in the field of working with information. To form the ability to carry out an elementary analysis of the norms of Russian law and identify an action as an offense, as well as determine the type of legal liability for an offense.

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.

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 culture

Аннотация:

For students of all directions of preparation and specialties the Physical culture module is implemented within discipline "Physical culture" 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.

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 knowledge 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 autecology, demecology and synecology, understanding of the biosphere.
7. To form an idea of biodiversity and to formulate the main problems of its preservation.

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 "Математика" предназначена для освоения базовых понятий линейной алгебры и математического анализа.

The discipline "Mathematics" is intended for mastering the basic concepts of linear algebra and mathematical analysis.

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.

Physics

Аннотация:

Дисциплина представляет собой курс общей физики на английском языке для студентов химического факультета, специализирующихся в области фармации. Включает в себя все разделы физики, необходимые в дальнейшем для освоения узкопрофильных предметов, связанных с химией, биологией и фармацевтикой.

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

Цель:

The course of "Physics" is included into the natural-science cycle of disciplines which is compulsory for study. The discipline is directed on the formation of general cultural and professional competencies of the graduating student. 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. The educational program provides the following types of monitoring: input control in the form of written test, intermediate examination in the form of protection of laboratory works. Certification of the content mastering is carried out in the form of an exam. The total labor intensiveness of the discipline is equal to 4 credits (144 academic hours). The course program includes laboratory, practical and lecture classes, as well as independent work of students.

Задачи:

The tasks of the course are

- to expound the basic principles and laws of physics and show it's mathematical expression,
- to familiarize students with the main physical phenomena, basic methods of it's theoretical description,
- to give knowledge on the methods of experimental research, processing and analysis of experimental results,
- to familiarize with the work of basic physical devices,
- to teach students to the simplest methods of data processing with the help of computer,
- to form the skills of experimental work,
- to acquaint with the basic principles of automation of physical experiment,

We teach students to the comprehensive application of the studied physical laws in practice. At the end of teaching the students have to be able to apply the methods of mathematical analysis and modeling, theoretical and experimental research in their professional activity.

Analytical chemistry

The general educational course "Analytical Chemistry" is designed for second year students. The subject of the discipline is mastering the theory and practice of methods of qualitative and quantitative chemical analysis.

The course is based on the knowledge and skills in the following disciplines: General and Inorganic chemistry, Physics and Math Statistics. It requires the ability of student to perform mathematical calculations, knowing of the basics of chemical thermodynamics and kinetics, the chemistry of solutions, the acid-base and redox properties of substances, to make up the equations of ion exchange and redox reactions, to solve problems on calculations the reaction equation and solutions, master the basics of working in a chemical laboratory, including occupational safety when working in a chemical laboratory.

Цель:

The goal of the discipline is to give students knowledge of basic concepts of analytical chemistry, acquaintance with methods of qualitative and quantitative analyzes, as well as modern physical-chemical methods.

Задачи:

The main tasks of the course are:

- To teach students physical-chemical principles of basic analytical processes.
- To teach students selecting an appropriate analytical method suitable for real sample.
- To teach students treatment and estimation of analytical experiment data.
- To give students basic skills of analytical technics, widely using in any modern laboratory.

Biochemistry

The discipline provides students with fundamental knowledge and modern ideas about the structure and properties of biomolecules, about the basic biochemical processes underlying the functioning of living systems.

Цель:

Acquisition of knowledge about the structure and properties of chemical compounds that make up living organisms, about the basic laws of biochemical processes and mechanisms of regulation of metabolism. Formation of understanding of molecular principles of transmission of hereditary information. Training in practical methods and skills of working in a biochemical laboratory with biological objects.

Задачи:

1. consider the theoretical foundations, as well as the problems, successes and achievements of modern biochemistry;
2. to study the molecular, as well as structural and functional features and physico-chemical properties of various classes of chemical compounds necessary for the functioning of living systems;
3. to introduce students to various methods of qualitative and quantitative analysis used in biological chemistry.
4. contribute to the formation. natural science worldview for understanding and analyzing phenomena and processes occurring in wildlife.

Требования к уровню освоения содержания:

Students must have organic, inorganic chemistry, chemistry of high molecular compounds, fundamentals of colloidal and physical chemistry. Also, students must have the skills to work in a chemical laboratory

Bioethics

Аннотация:

Bioethics is one of new sections of ethical thought which is in touch with biological and medical sciences. The aim of bioethics is moral analysis of wide spectrum of problems created by modern biomedical progress and its technologies. Bioethics learns to search and find biomedical risks and threats which are dangerous for such fundamental values and rights as life, good, freedom, health, justice, equality, safety and so on. Bioethics also tries to improve relationships between humanity and other forms of the Life, increase human conscientiousness in his influence on biosphere as a whole.

Цель:

- to form a comprehensive relation to the Life on the basis of moral norms, demands and principles, other mechanisms which provide using new results of world science and technics in the aim for the good of human and nature
- to show the place of bioethics as discipline and social institute in process of protection of human life and health from possible biomedical and pharmacological aggression, solving fundamental ethical problems which appear during rapid progress of new biomedical technologies

Задачи:

1. To understand historical and theoretical background of bioethics as science
2. To analyze fundamental moral problems, which are in the field of this science
3. To embrace different bioethical conceptual positions, their arguments for and against
4. To get acquainted with several official documents which try to regulate relations in the field of bioethic, show their role in providing human rights for life, health and well-being
5. To develop ability for independent solving bioethical dilemmas which can appear in future professional activity

Botany

Аннотация:

The content of the discipline covers a range of problems related to the study of macro- and microstructures, ontogenesis, diversity, origin and classification of fungi, algae and higher plants, their participation and role in ecosystems and human activity. The study of theoretical material is complemented by the knowledge gained in the course of laboratory work.

Цель:

Formation of system of knowledge about fungi, algae and higher plants, their structure, classification, origin and role in Earth's ecosystems.

Задачи:

- the formation of knowledge about the plant as a whole organism, its macro- and microstructure, changes in the course of ontogenesis and phylogenesis;
- gaining knowledge about the diversity, functioning, origin of fungi, algae and higher plants, their participation and role in ecosystems and human activities;
- analysis and discussion of different views on the position of plants and fungi in modern systems of the organic world.

Chemistry of biogenic elements

Аннотация:

All living organisms, their tissues and organs contain different quantities of all known chemical elements. The role of chemical elements in the organism is many-sided. 96% of the human body is made up of four p-block elements – organogens: carbon, oxygen, hydrogen, and nitrogen. There is a great content of sodium, potassium, calcium, phosphorus, sulfur, etc. in the human organism. Microelements represented by d-block elements are in the composition of enzymes, hormones, vitamins and other biologically active substances which participate in reproduction, growth, and metabolism processes. Studying of properties of chemical elements, their role in vital activity is necessary for a future physician for better understanding the normal and pathological processes taking place in the human organism.

The main task of teaching the course is to study the chemistry of elements, their most important compounds used in science, technology and everyday life. Particular attention is paid to the periodic law of Mendeleev - the base for learning and teaching of modern inorganic chemistry and all the natural sciences, the basic laws of chemical processes, chemistry of aqueous solutions and redox reactions.

Цель:

The main objective of the proposed course is the formation of creative chemical thinking of students, which will be used to solve chemical problems associated with the specialty and will be transferred to professional activities. The student should have an idea about the structure and properties of the basic compounds of each element of the periodic system.

Задачи:

1. Understand the main chemical classes of inorganic compounds, genetic interrelation substances
2. Understand the processes in which chemical compounds can take part (exchangeable, redox, complexation processes)
3. To know the processes occurring with substances in solutions
4. Have an idea of the internal structure of matter, the stereochemistry of molecules
5. Have an idea about the more complex chemical systems, environmental interactions
6. Be able to identify substances (open ions)
7. To acquire the skill of experimental work
8. Have an idea about electrochemical processes
9. Have an idea about the patterns of chemical processes

Требования к уровню освоения содержания:

For successful mastering of it, students need to have knowledge of the general chemistry course. The general chemistry course is based on knowledge of chemistry, physics, and mathematics, the volume of which is determined by the program of secondary school.

Clinical Pharmacology

Аннотация:

The content of the discipline is due to cardinal changes in the concepts of the use of certain groups of medicines in clinical practice and the increasing role of specialists in the system of pharmaceutical care to the population. The content of the discipline includes the issues of reasonable clinical use of various groups of drugs in the treatment of diseases based on the principles of evidence-based medicine and within the framework of the concept of rational use of medicines formulated by WHO.

Цель:

Study and substantiation of the principles of inclusion of drugs of various pharmacological groups in pharmacotherapeutic schemes and algorithms for the treatment of pathologies. Expanding the understanding of the clinical use of medicines depending on therapeutic tasks. Formation of skills of independent substantiation of drug therapy in specific pathological conditions, based on the evidence base and an adequate assessment of the risk-benefit ratio.

Задачи:

The discipline is designed to form skills in the use and interpretation of research materials on the clinical use of medicines in various diseases, skills in assessing the degree of reliability and level of evidence of information obtained during research on the use of drugs in the clinic, skills in the practical use of evidence-based medicine in terms of the use of drugs for conducting information and consulting activities in the professional community and within the framework of informing the population about the rational use of medicines.

Drug Development and Research

Аннотация:

Drug Development and Research is a discipline that studies various aspects related to the search for new pharmacologically active substances, the subsequent study of their medicinal properties, preclinical studies, the development of technologies for the production of pharmaceutical substances, the development of formulations and technologies for the production of drugs.

Цель:

The purpose of mastering the discipline "Drug Development and Research" is the formation of students' additional knowledge and competencies that contribute to the implementation of professional activities in the field of organizational and regulatory support of applied research in the development of new drugs and improvement of commercially produced drugs

Задачи:

The objectives of the discipline "Drug Development and Research" are:

- establishment of uniform requirements for knowledge and skills of specialists engaged in pharmaceutical development, research and registration of medicines;
- formation of a holistic view of the scope and content of work on drug research (work on pharmaceutical development, conduct and monitoring of preclinical studies of drugs, conduct and monitoring of clinical trials of drugs), as well as work on state registration and post-registration monitoring of drugs, including the implementation of management of these types of work;
- formation of professional competence of pharmaceutical specialists in pharmaceutical development, research and registration of medicines;
- formation of skills to work with regulatory documents regulating the sphere of development, research and registration of medicines in the Russian Federation at the present stage;
- formation of an idea about the potential role and importance of a pharmaceutical specialist in the organization and conduct of work on pharmaceutical development, research and registration of medicines;
- formation of General skills and abilities for effective organization of the process of pharmaceutical development, research and registration of medicines in modern conditions of regulation of activity and functioning of enterprises-manufacturers of medicines in the Russian Federation.

Fundamentals of computer modeling and design of medicinal products

Аннотация:

This discipline is based on the fundamental sections of medical chemistry-drug design-including theoretical problems of the relationship between the chemical structure of a drug and its biological target, methods for the synthesis of chemicals with potential physiological activity and their identification, methods of computer molecular modeling and QSAR as the basis for predicting structures with a given activity.

Цель:

Formation of students' knowledge, skills and abilities, allowing them to conduct a targeted search for molecular structures of new pharmacologically active compounds with predictable types of biological activity.

Задачи:

The objectives of the discipline "Fundamentals of computer modeling and design of medicines" are:

- to reveal the role of computer molecular modeling and drug design for the search for new biologically active substances, its significance for modern medical chemistry and pharmacology;
- * to consider the main types and areas of application of instrumental software tools used in computer molecular modeling and drug design;
- * teach students the basic techniques and methods of computer molecular modeling and design in order to find new drugs.

General Chemistry

Аннотация:

The course of General Chemistry is the basis of all other branches of Chemistry Science. The special attention is paid to the following topics: Atomic Structure, Chemical Bonding, Periodicity, Data and Measurements, Stoichiometry and some other which form the scientific understanding of substances and their properties. The behaviour of the compounds in aqueous solutions and principles of RedOx processes are considered in this course also.

Succesfull mastering of this course helps students to develop their knowledges in Unorganic Chemistry, Organic Chemistry, Analytical Chemistry, Physical Chemistry and other fields.

Цель:

The main target of this course os the formation of basic knowledges about the structure of substances and prinsiples of their transformations.

Задачи:

1. Improving and sistematisation of basic knowledges is chemistry
2. Formation of scientific way of understanding of main chemical processes
3. Preparation of students for the future studiiing of more narrow branches fo chemistry

General hygiene

Аннотация:

Discipline forms a systematic understanding of issues related to hygienic requirements for food, water, air, working conditions and recreation rights.

Цель:

To form in the future pharmacist knowledge of the basics of hygiene and the ability to give a hygienic assessment of the working conditions and mode of operation of pharmacies in the manufacture, storage and sale of medicines, to develop sanitary and hygienic and anti-epidemic measures. Mastering by students the most important basics of hygiene, mastering the methods of assessing environmental factors and the principles of the correct organization of sanitary and hygienic, anti-epidemic regime in the manufacture and dispensing of drugs in pharmacies and at pharmaceutical industry enterprises.

Задачи:

Formation of a specialty of pharmacy in students of preventive orientation of thinking. Preventive work is an integral part of the pharmacist's activities, and includes: mastering the methods of hygienic assessment of the main environmental factors, working conditions in pharmacies, and the mode and nature of the work of pharmacists; detection of violations of sanitary and hygienic and anti-epidemic regime of manufacture, storage and sale of medicines; developing students' ability to carry out the necessary measures to ensure optimal conditions for the professional activities of staff; implementation of measures for the formation of a motivated attitude of the adult population and adolescents to preserve and strengthen their health and the health of others, to implement recommendations aimed at increasing physical activity, to distribute patients into groups for physical culture and sports, taking into account their health status, to attract attached contingent to active physical culture and sports; carrying out preventive and anti-epidemiological measures aimed at preventing the occurrence of infectious diseases; carrying out activities for the hygienic education and prevention of diseases among adults and adolescents, the creation in medical organizations of favorable conditions for the stay of patients and the work of medical personnel; implementation of dispensary observation of the adult population and adolescents, taking into account age, gender and initial health status, conducting activities aimed at improving the effectiveness of clinical examination among decreed contingents and chronic patients; the collection and medical-statistical analysis of information on the health indicators of the population of different age and sex groups, characterizing their health status.

History of Pharmacy and Medicine

Аннотация:

The discipline "History of Pharmacy and Medicine" ensures the formation of students' general cultural competencies about the patterns and evolution of knowledge about medical drugs, methods of using them in treating patients and for preventive purposes, evolving forms and organizing the activities of doctors and pharmacists in close connection with the development of medicine, medicine and medical activities of the peoples of the world throughout the history of mankind.

Цель:

Formation of special medical knowledge of students, expanding their medical horizons and the level of understanding of the basic laws of the world-historical process of the formation and development of medicine and pharmacy from ancient times to the present.

Задачи:

The objectives of the discipline are:

- to teach students to objectively analyze historical phenomena, achievements and prospects for the development of pharmacy as a science, pharmacy and pharmacy, pharmaceutical industries;
- show the general patterns of the world-historical process of the formation and development of pharmacology, medicine and medicine in various countries of the world from ancient times to our time;
- to reveal the achievements of outstanding civilizations and each era in the field of pharmacology and medicine in the context of the progressive development of mankind;
- show the interaction of national and international factors in the formation of pharmaceutical science and practice in different regions of the globe;
- to acquaint students with the life of outstanding scientists and doctors of the world who determined the fate of pharmaceutical science and medical practice;
- to reveal the ethical principles of pharmaceutical and medical activity, to show the philosophical foundations and historical conditions of their formation;
- to bring up high moral qualities in students: love for their profession, loyalty to duty, feelings of humanism and patriotism;
- to expand the general scientific and cultural horizons of students.

Human Anatomy and physiology

Аннотация:

Anatomy is the science about the shape and structure of an organism in relation to its functions, development, and under the influence of the environment. Physiology is the science about processes of a living organism, its organs, tissues and cells, their relationship to the change of various conditions and conditions of the body.

The subject of human anatomy involves the form and structure, origin, and development of the human body. Anatomy is one of the fundamental disciplines in the system of medical and biological education, closely related to such disciplines as human anthropology and physiology, as well as comparative anatomy, evolutionary theory, and genetics.

Цель:

The aim of the discipline is to develop a clear understanding of the functioning of organs and organ systems in close connection with the structure of organs and systems at the main stages of their development.

Задачи:

1. Levels of Structural Organization of the Human Body.
2. Building of knowledge about the basic laws and mechanisms of functioning of various body systems.
3. Formation of ideas about the human body as a single functional system and that it's aimed to preserve itself in spite of changing environmental conditions.
4. Developing skills for working with reference, educational, scientific books and articles about human anatomy and physiology.
5. The information about the human anatomy and physiology is the basis for understanding of other disciplines (pathology, pharmacology, etc.).

Industrial Medicine Technology

Аннотация:

The discipline provides a systematic view of the production and characteristics of the main dosage forms of drugs: solid, liquid and soft.

Industrial technology of drugs is the science of the theoretical foundations and production processes of processing of drugs into drugs by giving them a certain form on the basis of established physical, chemical, mechanical and other laws.

Industrial technology deals with large-scale production, which is produced by mechanized pharmaceutical enterprises, factories and factories.

Sections in the program are allocated as individual, but the study of individual sections is provided in accordance with the logical sequence of studying the topics of the discipline as the demand of a process in the technology of specific dosage forms. Industrial technology is the main subject, which ultimately forms a specialist with higher education pharmacist in the specialty "Pharmacy".

Цель:

Formation of systemic knowledge, skills and abilities in the development, manufacture, production, quality assessment, storage conditions, packaging, labeling of medicines.

Задачи:

The objectives of the development of the discipline "Industrial Medicine Technology" are:

- Formation of system knowledge about existing (traditional) methods of production of dosage forms;
- Study of theoretical bases of compositions and methods of production (modification) of traditional dosage forms;
- Study of methods of manufacturing dosage forms based on the development of the theory and use of achievements of related Sciences;
- Developing an understanding of drug delivery systems to organs and tissues that would be able to provide optimal pharmacological effect, directed transport, controlled release, minimal side effects and ease of use;
- Formation at students of practical knowledge on production and standardization of medicines in industrial conditions, skills of drawing up the main sections of standard documentation on ready medicines.

Latin language

Аннотация:

.Целью дисциплины латинский язык является научение переводу и составлению текстов фармацевтического содержания. В первой части УМК изложена информация по фонетике и морфологии латинского языка. Во второй части изложена информация по синтаксису латинского языка и по фармацевтической терминологии.

.The aim of the discipline Latin is to teach the translation and drafting of texts of pharmaceutical content.

The first part of the UMK contains information on phonetics and morphology of the Latin language. The second part provides information on the syntax of the Latin language and pharmaceutical terminology.

Цель:

1. learn Latin terminology;
2. to master the basic skills of reading and translating Latin texts with pharmaceutical theme.

Задачи:

1. get an idea of the grammatical structure of the Latin language;
2. know by heart the words that make up the lexical minimum (500 units) and 25 catch phrases;
3. learn to read and translate Latin pharmaceutical texts of medium complexity correctly and fluently with a dictionary;
4. to be able to apply the acquired knowledge in professional activities.

Management and Economics of Pharmacy

Аннотация:

Management and economics of pharmacy is a mandatory and leading link in the system of special disciplines of the pharmaceutical profile, providing professional training of the future pharmacist. Pharmacy management and Economics is a scientific discipline that studies the organization, management and economics of pharmaceutical business, during which students will be able to gain skills in working with regulatory legal documents in the pharmaceutical field, learn how to organize the work of wholesale and retail pharmaceutical enterprises from the standpoint of pharmaceutical management and marketing, will be able to conduct economic and financial analysis of the results of activities, and also to be guided in accounting issues of indicators of financial and economic activity of pharmaceutical organizations. The acquisition of a set of these knowledge, skills and possessions increases the value of a graduate of this field of study in the eyes of employers.

Цель:

To form students' necessary professional competencies for solving organizational, managerial and economic problems in the conditions of market circulation of medicines on the basis of current legislation, modern information technologies, as well as education of personal qualities of a future specialist

Задачи:

In order to achieve this goal, the student must acquire knowledge and skills in managing the work of pharmaceutical organizations and institutions, including:

- licensing of pharmaceutical activities;
- work on the sale of medicines and other pharmacy products;
- trade and procurement activities in order to ensure the profitability of enterprises, taking into account the development of market relations;
- application of the current legislation regulating the issues of state regulation of relations arising in the field of circulation of medicines;
- operational accounting of the movement of pharmacy assortment goods;
- the main elements of marketing in the implementation of financial and economic activities;
- new information technologies for solving professional tasks;
- principles of managerial decision-making on personnel management, organization of pharmaceutical workers' work, professional development of employees, control over admission to work with narcotic and psychotropic substances and other issues of pharmaceutical activity.

Medicinal chemistry

Medicinal chemistry is discipline at the intersection of chemistry, especially synthetic organic chemistry, and pharmacology and various other biological specialties, where they are involved with design, chemical synthesis and development for market of pharmaceutical agents, or bio-active molecules (drugs). Medicinal chemistry in its most common practice—focusing on small organic molecules—encompasses synthetic organic chemistry and aspects of natural products and computational chemistry in close combination with chemical biology, enzymology and structural biology, together aiming at the discovery and development of new therapeutic agents.

At the biological interface, medicinal chemistry combines to form a set of highly interdisciplinary sciences, setting its organic, physical, and computational emphases alongside biological areas such as biochemistry, molecular biology, pharmacognosy and pharmacology, toxicology and veterinary and human medicine; these, with project management, statistics, and pharmaceutical business practices, systematically oversee altering identified chemical agents such that after pharmaceutical formulation, they are safe and efficacious, and therefore suitable for use in treatment of disease.

Цель:

The purpose of the discipline "Medical Chemistry" are the formation of students' systemic knowledge about the structure and chemical transformations of low- and high-molecular organic compounds that take part in the life processes of the human body at the molecular level, as well as mastering the fundamental foundations of medicinal chemistry necessary for studying other academic disciplines and the acquisition of professional medical skills.

Задачи:

Teaching of the discipline "Medicinal Chemistry" puts its main task to acquaint students with modern ideas about the mechanisms of action of chemicals (natural and synthetic origin) on a living organism, to teach students to understand the modern methods of establishing the mechanisms of action of substances on the body and to understand the main directions in the creation and search for physiologically active substances.

The objectives of the course include:

presentation of the material on the basics of specific interaction of physiologically active substances with the systems of a living organism;

teaching students to understand that physiologically active substances are able to have on the body as a positive-therapeutic and negative-oppressive, toxic effects, which should form the student's thoughtful and careful approach to the creation of new compounds in the literature, aimed at practical application - treatment of diseases;

teaching students the methods of directed creation of new drugs and prediction (establishment) of possible mechanisms of their action; development of students' abilities to apply the knowledge gained in the performance of laboratory and research works.

The main purpose of the discipline is to form students' holistic understanding of the process of creating drugs, from the moment of the idea of the synthesis of substances of a certain structure, screening and improvement of the structure, up to the stage of clinical trials and organization of production.

Organic Chemistry

Аннотация:

The discipline "Organic Chemistry" covers the fundamental principles and methods of organic chemistry. During the course, students study the structure, properties, and synthesis methods of organic compounds. Special attention is paid to the most important classes of organic compounds, such as hydrocarbons, amino acids, carbonyl compounds, as well as biomolecules such as proteins, lipids, and nucleic acids. The course also includes the study of reaction mechanisms and methods for analyzing organic compounds.

Organic chemistry creates a theoretical and practical foundation for the work of a specialist in such extremely important technological sectors as basic organic synthesis, fine organic synthesis, petrochemistry, polymers, the pharmaceutical industry, medicine, agriculture, etc.

Цель:

The goal of the course is knowing by students a science of organic chemistry, the object of study of which are carbon compounds with organogenic elements, their structure, properties and methods of synthesis.

Задачи:

give students a basic understanding of the production and properties of the most important classes of organic compounds.

Pathology

Аннотация:

The study of the discipline provides the formation of a systematic view on the issues of health, illness, morbidity, death; the nature of common typical pathological processes and the manifestation of major diseases by various functional human systems.

As a result of studying the discipline, students form a holistic view of the mechanism of development and clinical manifestations of pathological processes, which is necessary for the subsequent study of the discipline "Pharmacology".

Mastering the discipline will allow students in the future to freely navigate the issues of the mechanism of action and effects of drugs, indications for their use.

Цель:

Obtaining in-depth knowledge in the field of general nosology, general and private pathology, necessary in the professional activity of a pharmacist when handling medicines and conducting pharmaceutical counseling of patients.

Задачи:

To form an idea about the etiology and pathogenesis of diseases, the principles of their classification; the concepts of health, illness, morbid condition, death, methods of resuscitation and types of treatment.

Contribute to the development of knowledge about reactivity and resistance; stress, shock and coma; inflammation, pain and fever; allergies and tumors.

Acquisition of knowledge about the mechanism, clinical course and outcomes of major diseases of the nervous system, cardiovascular system, respiratory system, urinary system, digestive system, blood clotting and hematopoiesis, metabolism.

Pharmaceutical chemistry

Аннотация:

As a result of mastering the discipline "Pharmaceutical Chemistry", students will get an idea about the methods of synthesizing drugs, methods for controlling the quality of drugs, learn how to carry out reactions of the authenticity of drugs, perform a quantitative analysis of pharmaceutical substances and drugs.

Цель:

To reveal the methodology for the creation, assessment of the quality, standardization and safety of medicines based on the general laws of the chemical and biological sciences, their particular manifestations and the history of the use of medicines in accordance with the applied nature of pharmaceutical chemistry, to fulfill the professional tasks of a pharmacist.

Задачи:

Objectives of the lecture course: presentation of the key issues of the program, the study of the most important pharmaceutical products, their receipt and storage.

Laboratory tasks:

- ensure the consolidation of theoretical material;
- to teach modern chemical and physico-chemical methods for the quantitative determination of drugs;
- teach to practically determine the presence of impurities in medicinal substances and drugs, to practically determine their presence and to establish their content within the standards in accordance with the requirements of the Global Fund;
- To teach to use the materials of the State Pharmacopoeia (GF), pharmacopeias of other states, regulatory documents (ND), pharmacopeia articles of enterprises (FSP)
- consider ways to implement the general principles of pharmaceutical chemistry in the creation of new drugs, in assessing the quality of drugs.
- to form the skills necessary for the activities of the pharmacist in the field of organization and quality control of medicines in accordance with the development prospects and in connection with the achievements of constantly developing fundamental physicochemical and biomedicalTo teach to use the materials of the State Pharmacopoeia (GF), pharmacopeias of other states, regulatory documents (ND), pharmacopeia articles of enterprises (FSP)
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- consider ways to implement the general principles of pharmaceutical chemistry in the creation of new drugs, in assessing the quality of drugs.
- to form the skills necessary for the activities of the pharmacist in the field of organization and quality control of medicines in accordance with the development prospects and in connection with the achievements of constantly developing fundamental physicochemical and biomedical sciences.

Pharmaceutical technology

Аннотация:

Pharmaceutical technology is the course that is intended for formation of knowledge of technological processes used in the manufacture of medicines, the choice of rational composition and technology of dosage forms, their manufacture and quality control in accordance with the requirements of regulatory documentation.

Цель:

The purpose of pharmaceutical technology course is the formation of systemic knowledge and skills of students in the manufacture and quality control of medicines.

Задачи:

1. Study of the theoretical foundations of various processes of conversion of active pharmaceutical ingredients and excipients into dosage forms.
2. Formation the ability to choose the composition and rational technology of dosage forms based on the requirements of current regulatory documents.
3. Formation of practical skills of manufacturing and quality control of medicines in pharmacy organizations.
4. Formation of skills of work and use of normative documentation, reference, and scientific resources for solving professional tasks.

Pharmacognosy

Аннотация:

Дисциплина дает системное представление о современном состоянии природных лекарственных ресурсов, что необходимо для выбора необходимых фармако-терапевтических групп препаратов.

Discipline gives a systematic picture of the current state of natural medicinal resources, which is necessary to select the necessary pharmaco-therapeutic groups of drugs.

Цель:

To form in students the sum of knowledge, skills and practical skills in pharmacognosy, taking into account the recommendations for the procurement, standardization, quality control, storage and processing of medicinal herbal raw materials, as well as the ways of using raw materials and the use of herbal medicinal products in pharmaceutical practice.

Задачи:

1. To teach students pharmacognostic analysis of medicinal plant materials;
2. Teach resource analysis of medicinal plants;
3. Teach standardization of medicinal raw materials;
4. Teach the correct mode of drying and storage of plant materials to ensure its good quality.

Pharmacology

Аннотация:

Discipline is a necessary part of the training of a pharmaceutical specialist. The content of the discipline includes the section "General Pharmacology", where questions of the structure, molecular mechanisms of action of drugs, patterns of their absorption, distribution and elimination in the human body are discussed. The section "Private pharmacology" includes questions of classification of medicines depending on the mechanism of action, their main pharmacological effects and justification of the possibilities of their use in various pathological conditions. As a result of studying the discipline, the student will learn to independently distribute medicines according to chemical, pharmacological and pharmacotherapeutic groups, freely navigate the modern nomenclature of medicines, argue for the possibility of replacing medicines with similar pharmacological activity.

Цель:

The study of the basic fundamentals of pharmacology: the basics of the interaction of drugs with targets in a living system, the laws of pharmacokinetics and pharmacodynamics, the features of these processes for different groups of drugs and depending on the individual characteristics of the body, the possibilities and mechanisms of drug interaction with simultaneous administration. The study of the mechanisms of action of drugs at the cellular level and the development of the skill of self-determination of the group affiliation of drugs based on their pharmacodynamic characteristics. The study of ways of introducing medicines into the body, the formation of the skill of self-justification of the benefits of using medicines in certain dosage forms.

Задачи:

The discipline is designed to form the skill of working with prescriptions as medical documents justifying the choice of a drug and the methods of its introduction into the patient's body, to develop the skill of identifying the relationship between the mechanism of action of the drug and its main side effects during its use, to form an idea of the interdependence of the main indications for the use of a particular drug and absolute contraindications or restrictions to its use. The discipline promotes the development of ideas about the possibilities of using a drug of the same pharmacological group in various nosologies.

Physical and colloid chemistry

Аннотация:

.Данный курс включает в себя основы разделов физической химии и химии дисперсных систем, понимание которых важно для студентов, обучающихся по направлению "Фармация", такие как химическая термодинамика, химическая кинетика, электрохимия, химия дисперсных систем и физико-химия явлений адсорбции.

Annotation This course includes the main topics dealing with the Physical Chemistry and Chemistry of Disperse Systems, such as Chemical Thermodynamics and Kinetics, Electrochemistry, Classification of Disperse Systems and Adsorption Phenomena. These topics give understanding of the physical basics and reasons of chemical processes important for studying Pharmacy.

Цель:

The consideration of the key questions of Physical Chemistry, which can lead to the understanding the reasons of different physico-chemical phenomena is the main target of this course.

Задачи:

1. To give for the students the understanding how and why the processes can go on spontaneously from the thermodynamical point of view.
 2. To give for the students the understanding of the rate of the reaction and the factors affect it.
 3. To consider the nature and principles of electrochemical processes and also the factors influence the rate the probability of these processes.
 4. To give the understanding about the nature of the solutions, there differences from the pure substances, solvents and solutes.
 5. To give for the students the understanding of the nature and thermodynamics of adsorption phenomena on different phase boundaries.
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1. Сформировать понимание возможности протекания того или иного процесса с термодинамической точки зрения.
 2. Сформировать понятие о скорости химической реакции и способах влияния на этот параметр.
 3. Рассмотреть природу и принципы протекания электрохимических процессов, а также параметров, от которых зависит их скорость и вероятность протекания.
 4. Сформировать представление о природе растворов и их отличии от чистых веществ: растворителя и растворённого вещества.
 5. Дать представление о природе и термодинамике адсорбционных явлений на разных типах границ раздела фаз.

Physico-chemical methods of analysis of medicinal forms

Аннотация:

In this course, the basics of physico-chemical methods of drug analysis are studied by IR-spectros and UV-spectrophotometry, potentiometric titration, chromatography.

The course gives the basics of instrumental methods used in the analysis of medicinal forms. Spectroscopical, electrochemical and chromatographical techniques, and standardizing methods described.

Цель:

Familiarization with the basic physico-chemical methods of studying organic compounds that are part of dosage forms, the possibilities of their use for solving problems of identification, purity characteristics and analysis of dosage forms

Задачи:

To acquaint future pharmacists with modern physical and chemical methods of studying organic compounds, their theoretical foundations, possibilities and areas of practical application.

Psychotropic substances, prevention of dependence and examination

Аннотация:

Knowledge of the discipline makes it possible to assess the social significance of drug addiction and toxic addiction. Mastery of these methods allows to carry out forensic chemical and forensic-pharmaceutical examination.

Цель:

Formation of students' knowledge, abilities and skills necessary for the production of expert examinations, including research on narcotic drugs, psychotropic substances and medications, for carrying out anti-drug activities.

Задачи:

The objectives of the Psychotropic Substances, Addiction Prevention and Expertise discipline are to ensure that students learn the theoretical knowledge and practical skills on the following aspects:

- Basic theoretical provisions of addiction psychology, theoretical foundations of prevention, psychotherapy and rehabilitation of addiction to drugs, alcohol and other psychoactive substances.
- Modern theories of etiology and pathogenesis of addiction to alcohol and drugs as well as conceptual models of prevention.
- Characteristics of symptoms and syndromes of addiction to psychoactive substances.
- Acquaintance with the clinical picture and clinical and psychological dynamics of its formation in the abuse of alcohol, stimulants, hashish and hallucinogens.
- Basic methods for determining the use of psychoactive substances.

Toxicological chemistry

Аннотация:

The discipline "Toxicological chemistry" forms and develops among graduates in the specialty "Pharmacy" competencies aimed at the formation of the fundamental preparation of a pharmacist for subsequent specialization in the field of forensic chemistry, clinical toxicology, narcology, criminalistics, clinical pharmacy, ecology and sanitary chemistry.

Цель:

Formation of students' systemic knowledge in the field of toxicological chemistry, mastering the methodology of chemical-toxicological and forensic chemical analysis.

Задачи:

As a result of mastering the discipline, the student must:

Know:

- moral and ethical standards, rules and principles of professional behavior;
- classification of narcotic drugs, psychotropic and other toxic substances and their physico-chemical characteristics;
- basic laws of distribution and conversion of toxic substances in the human body (toxicokinetics, toxicodynamics), general characteristics of the toxic effect;
- general rules for conducting a forensic chemical examination and chemical toxicological analysis for diagnostic purposes;
- the main directions of the development of chemical-toxicological analysis and the activities of chemical-toxicological laboratories, poison treatment centers, forensic examination bureaus, drug treatment clinics;
- principles for ensuring the quality of analytical diagnostics and forensics, types of expert errors.

Be able to:

- build and maintain working relations with all members of the team;
 - conduct chemical-toxicological studies of various objects on toxic substances, applying knowledge of biochemical and analytical toxicology, using physico-chemical and chemical methods of analysis;
 - carry out analytical diagnosis of acute intoxication, taking into account the characteristics of the chemical-toxicological analysis;
 - conduct analytical diagnostics of narcotic drugs, psychotropic and other toxic substances in biological environments of the human body;
 - interpret the results of chemical-toxicological analysis taking into account the processes of biotransformation of toxic substances and the possibilities of analytical research methods;
-  document laboratory and expert research.

Have:

- principles of deontology and medical ethics;
- skills in using chemical, instrumental methods of analysis to identify and determine toxic, narcotic substances and their metabolites;
- skills of using express methods of analysis for the analytical diagnosis of drug addiction, substance abuse, acute poisoning;
- basic principles of documentation of chemical toxicological studies;
- use normative, reference and scientific literature to solve professional problems.