Basics of Russian Statehood

Аннотация:

The given discipline "Basics of Russian Statehood" forms integrative view on the challenges of the modern world that Russian State faces The discipline also enables students to perceive themselves and others from the perspective of accepted norms and values; develops the sense of citizenship and patriotism.

Цель:

The aim of the discipline "Basics of Russian Statehood" is the formation of knowledge, skills and competences, as well as set of values, rules and norms connected with the understanding of belonging to the Russian society. It is also connected with the development of students' patriotism and citizenship, the formation of moral and cultural base of an integral personality, that understands the peculiarities of the historical path of the Russian State, the uniqueness of its political structure, the conjugation of the respect towards both individual success and the development of the country on the whole.

Задачи:

-to represent the history of Russia in its continuous civilizational dimension, to reflect its most prominent peculiarities, principles and benchmarks;
-to disclose the value-oriented aspects of patriotism and citizenship, which is inseparable from critical thinking, free personality development, and the ability of independent judgement in the actual political and cultural context;
-to study fundamental achievements, inventions and discoveries, connected with the development of Russia and the Russian civilization; to represent them in an actual perspective, that brings up the feeling of togetherness with one's own country and its people.
- to represent key points, ethical and world-view doctrinae that have formed inside the Russina civilization, that reflect its multinational, multi-religious and community-driven character.
-to study the peculiarities of contemporary political system of the Russian society, the nature and specificity of its current transformation, the value contribution to traditional institutional decisions as well as very special multi-variability of the relations between the Russian federal state and the society.
-to find out possible domestic and foreign challenges to the Russian civilization and its statehood at the monment; to point out key scripts fot its nearest development.
-to identify fundamental value principles (constants) of the Russian civilization (the unity of diversity, sovreignity, power and trust, concordance and co-operation, love and reaponsibility, creativity and development) and corresponding values of Russian civilizational developmant (sustanability, mission, responsibility and justice).

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.

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.

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)

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, познакомятся 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 (иностранный язык (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 cliche 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 of Russia

The discipline "History of Russia" 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.
The input control is carried out in the form of a test

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.

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.

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.

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.

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.

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 feautures 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.

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 offical 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 knowlege 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.

Development and Validation of Analytical Procedures

The objective of validation of an analytical procedure is to demonstrate that it is suitable for its intended purpose. Both the method and its intended use should be clearly defined. This means the method must be fully developed and optimized before initiating method validation.

Цель:

The main objective of this course is to familiarize students with the fundamentals of developing and validating an analytical method using the example of developing a spectrophotometric method for determining the active ingredient in a pharmaceutical product.

Задачи:

1. Familiarize students with the main stages of developing analytical methodologies.
2. Study methods for validating key parameters of an analytical procedure like specificity, accuracy, linear range.
3. Demonstrate the stages involved in the development and validation of an analytical procedure using specific examples.

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, Stochiometry and some other which form the scientific understanding of substances and their properties. The behavour of the compounds in aqueous solutions and pronciples 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 studiing 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.).

Immunology

Аннотация:

The discipline "Immunology" is designed for students studying biological disciplines. The course program includes the study of the structural and functional organization of the immune system and the main mechanisms of functioning of innate and adaptive immunity. Special attention is attracted to the study of the immune response against bacterial and viral infections, and at oncological, autoimmune and allergic diseases. As a result of the course, students acquire knowledge about the basic principles of the functioning of the immune system, the vaccination, basic methods of immunodiagnostics. Students get acquainted with the basic principles of the immunotropic drug actions, with the production and application of monoclonal antibodies for diagnostic and therapeutic purposes.

Цель:

The purpose is to study of student of the structural organization and principles of functioning of the human immune system, the main methods of immunotherapy and immunodiagnostics.

Задачи:

1. Formation of students' knowledge about the structural and functional organization of the human immune system
2. Formation of students' knowledge about the systems of innate and adaptive immunity in the human body
3. Knowledge formation about the methods and mechanisms of protecting the human body from genetically foreign agents of various natures and changed self cells of own organism
4. Knowledge formation about the means and methods of immunodiagnostics, immunotherapy, prevention of infectious and non-infectious diseases; vaccination
5. Knowledge formation about the mechanisms of immunotropic drug action, application of monoclonal antibodies for diagnostic and therapeutic purposes

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.

Introduction to the Specialty

Аннотация:

The content of the discipline includes issues of social significance and socio-humanistic orientation of the activity of a pharmaceutical specialist, a brief history of the development and formation of the profession from empirical healing and quackery through religious and cult content to a field of knowledge that combines modern achievements of natural sciences, features of professional activity of a specialist in various fields of the pharmaceutical industry (pharmacy organizations, industrial production of medicines, scientific research, regulatory authorities, etc.), prospects for further development of pharmaceutical science and practice and its possible reformatting, taking into account the introduction of digital technologies and tools.

The content of the discipline includes issues of social significance and socio-humanistic orientation of the activity of a pharmaceutical specialist, a brief history of the development and formation of the profession from empirical healing and quackery through religious and cult content to a field of knowledge that combines modern achievements of natural sciences, features of professional activity of a specialist in various fields of the pharmaceutical industry (pharmacy organizations, industrial production of medicines, scientific research, regulatory authorities, etc.), prospects for further development of pharmaceutical science and practice and its possible reformatting, taking into account the introduction of digital technologies and tools.

Цель:

The study of the main content of the professional activity of pharmaceutical specialists through familiarity with professional standards, the study of the labor functions of specialists and labor actions within the framework of the function, the expansion of ideas about the possibilities of using the acquired knowledge, skills and skills in new professions formed at the junction of pharmacy and other disciplines, the study of the terminological apparatus within the acquired specialty, the consolidation of skills and skills of using available information sources in order to search for special information.

Задачи:

The discipline is designed to form the initial skill of working with regulatory documentation, public speaking and conducting discussions on a specific issue, the skill of presenting the results of one's own analysis of information sources on a given topic in the form of a thematic presentation.

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.

Microbiology and Virology

The course aims to provide knowledge on the role and properties of microorganisms, their distribution and impact on human health, applications in biotechnology and environmental protection. Special topics include microbial genomics and bioinformatics, molecular aspects of cell-cell and cell-environment interactions, antibiotic resistance and synthesis of bioactive compounds.
On successful completion of this course, the student will be able to:
1) describe the main stages of microbiology development and its correlation with other biological disciplines;
2) identify appropriate techniques for assessing the structural and functional diversity of microorganisms, to study their physiology and biochemistry;
3) define the roles of microbes as commensals and pathogens and mechanisms by which they interact with the host and environment;
4) consider currently topical and newly emerging aspects of microbial genetics and biotechnology;
5) define structural and functional organization of viral particles, main principles of protective immunity, vaccines and antiviral treatment;
6) work in laboratory with pure cultures of bacteria.

Цель:

The course aims to provide knowledge on the role and properties of microorganisms, their distribution and impact on human health, applications in biotechnology and environmental protection. Special topics include microbial genomics and bioinformatics, molecular aspects of cell-cell and cell-environment interactions, antibiotic resistance and synthesis of bioactive compounds.

Задачи:

To provide knowledge on the role and properties of microorganisms, their distribution and impact on human health;
to acquaint with the main stages of microbiology development and its correlation with other biological disciplines;
to identify appropriate techniques for assessing the structural and functional diversity of microorganisms;
to acquaint with the modern trends in microbial genetics, genomics and bioinformatics;
to inform about the applications of microorganisms in biotechnology and environmental protection;
to teach laboratory skills of working with pure cultures of bacteria.

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 includs 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 prinsiples 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 natture and thermodynamics of adsorption phenomena on different phase bondaries.

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.

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.

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

Chemical reactions around us

Аннотация:

Дисциплина "химические реакции вокруг нас" знакомит обучающихся с химическими реакциями протекающими в окружающем мире и быту, свойствами и применением веществ и материалов. Темы курса расширяют знания обучающихся в области химии, реализуют возможность межпредметных связей с биологией, экологией; полученные знания позволяют учащимся видеть роль химических знаний в развитии материальной культуры человечества.

The discipline "Chemical reactions around us" introduces students to chemical reactions occurring in the world around us and everyday life, properties and applications of substances and materials. The topics of the course expand the knowledge of students in the field of chemistry, realize the possibility of interdisciplinary connections with biology, ecology; The acquired knowledge allows students to see the role of chemical knowledge in the development of the material culture of mankind.

Цель:

Formation of students' scientific concepts about chemical reactions in the environment and everyday life of humans, formation of interdisciplinary connections between chemistry, biology, physics, and astronomy.

Задачи:

Mastering the discipline will allow:
1. To consolidate knowledge about the physical and chemical laws governing the course of chemical reactions in nature, living organisms and production processes.
2. Get knowledge about the role of chemical reactions in natural processes, ensuring the vital activity of living organisms, industrial and everyday life of a person.
3. To master the calculation methods necessary for solving practical problems related to both daily human activities and production activities.

Molecular basis of life

Аннотация:

Дисциплина направлена на формирование у студентов теоретических представлений о качественном отличии живого от неживого на молекулярном уровне и умения применять их в анализе важнейших биологических процессов.
С учетом современных достижений науки рассматриваются принципы молекулярной организации живого (изначальная простота, молекулярная экономия и молекулярная целесообразность, функциональность и специальное назначение биомолекул). Особое внимание уделяется пониманию главных свойств живого (саморегуляция, самовоспроизведение, возможность извлекать и преобразовывать энергию).

The discipline is aimed at developing students' theoretical ideas about the qualitative difference between living and non-living things at the molecular level and the ability to apply them in the analysis of the most important biological processes.
Taking into account the modern achievements of science, the principles of the molecular organization of living things (initial simplicity, molecular economy and molecular expediency, functionality and special purpose of biomolecules) are considered.
Particular attention is paid to understanding the main properties of living things (self-regulation, self-reproduction, the ability to extract and transform energy).

Цель:

The main goal is explaining to students the general principles underlying the processes of life. The totality of these principles can be called the "molecular logic of the living things." The discipline is aimed at developing an understanding of the molecular foundations of life, i.e. essence of the living things

Задачи:

1. Consider the issues of the molecular basis and mechanisms of vital activity of prokaryotic and eukaryotic cells.
2. Pay special attention to the problems of bioenergetics, enzymatic catalysis and regulation of metabolism.
3. Give ideas about the main ways and stages of the implementation of genetic information and the system of protein biosynthesis.

Chemistry in everyday life

Аннотация:

Важным профессиональным качеством специалиста является умение применять полученные знания, умения и навыки на практике, а также видеть в повседневной жизни объекты, поведение которых можно предсказать, используя эти компетенции. Данный курс посвящён рассмотрению химических явлений, встречающихся в повседневной жизни, связанных как с природными объектами и живыми организмами, так и с объектами, созданными человеческими руками.
Особое внимание уделяется проблеме хемофобии и методам борьбы с ней в широких слоях общества неспециалистов.

The ability to apply the professional knowledges and skills to the everyday life objects is the important property of specialist. This course considers the chemical phenomena dealing either with natural products and alive organisms or artifical objects.
The special attention is paid to the questions of chemiphobia and how to avoid it in the societies of non-specialists.

Цель:

Целью является изучение химических основ процессов в повседневной жизни.

The main target of this course is the studying the chemical bacisc of some processes in everyday lile.

Задачи:

1. The studing of chemical content of the everyday objects.
2. The studying of physico-chemical and biochemical basics of everyday processes,
3. The consideretion of the reasons of chemophobia and finding the strategy of its reducing.

1. Изучение химического состава объектов, встречающихся в повседневной жизни.
2. Изучение физико-химических и биохимических основ процессов, протекающих в объектах, встречающихся в повседневной жизни.
3. Разбор причин хемофобии и определение стратегии снижения её уровня как у специалиста, так и у обывателя.

Food analysis

Аннотация:

Среди условий внешней среды, действующих на человека, питанию принадлежит наибольшая роль. Питание является основным фактором в обеспечении нормального роста и развития человека. Для питания нужны качественные пищевые продукты.
В дисциплине рассматривается химия пищевых продуктов (нутриентов и загрязняющих веществ), основные этапы анализа (отбор представительной пробы, подготовка пробы, отделение мешающих компонентов), разнообразие матриц и широкий ассортимент исследуемых пищевых продуктов и определяемых компонентов, а также разнообразные методы анализа (классические и современные инструментальные), позволяющие контролировать качество и безопасность пищевых продуктов.

Among the environmental conditions affecting a person, nutrition plays the largest role. Nutrition is a major factor in ensuring normal human growth and development. Nutrition requires quality food.
The discipline deals with food chemistry (nutrients and contaminants), the main stages of analysis (collection of a representative sample, sample preparation, separation of interfering components), a variety of matrices and a wide range of food products and analyzed components, as well as a variety of analysis methods (classical and modern instrumental), allowing to control the quality and safety of food products.

Цель:

The purpose of studying the discipline is the theoretical and practical development of various methods of analysis, analysis schemes, selection and preparation of samples of real food products.

Задачи:

The task of the discipline is based on the theoretical knowledge gained and practical mastery of various methods of analysis, as well as methods for calculating the results of the experiment, students could correctly choose the methods of analysis of food products in accordance with the problem posed to them, develop an analysis scheme, practically conduct it and interpret the results. As a result of mastering the academic discipline, the student must
KNOW:
- methods of sampling food products;
- methods of sample preparation;
- modern instrumental methods of analysis.
BE ABLE TO:
- carry out all stages of the analysis of various food products;
- process the results of the analysis based on the received analytical signals;
- use normative documentation on methods of analysis.
OWN:
- laboratory skills, methods of sampling and sample preparation
- food analysis skills

Требования к уровню освоения содержания:

Before the beginning of the study of the discipline, the student must
KNOW:
- properties of chemical compounds;
- chemical, physico-chemical and biological methods of analysis;
stages of analysis.
BE ABLE TO:
- present analytical signals of various analysis methods;
- to cost graphic dependences of analytical signals;
- be able to carry out analytical determination by chemical and physico-chemical methods.
OWN:
- Skills for safe work in the laboratory

Human genetics

Human genetics is an integral part of general genetics, one of the fundamental biological sciences. Despite the fact that the genetic material and the patterns of its functioning and variability in all types of living organisms remain fundamentally similar, the methods of studying the human genome, its organization and implementation, and the mechanisms of the occurrence of pathology are unique. One of the sections of human genetics is medical genetics, which considers a range of problems related to the role of heredity in human pathology, methods for diagnosing and preventing hereditary pathology, and also provides for familiarity with the original method of analyzing candidate genes for hereditary diseases in the world's genetic databases.
Students will learn the basic laws of genetics and the features of human genome. They will learn the patterns of inheritance of many human traits and some genetic disorders. During practices we will explain genetic problems and work with human genetics databases, describe variations of karyotype and study family trees.

Цель:

Studying the basic patterns of heredity and human variability, gaining knowledge about hereditary diseases, including mental illness and mastering the methods of genetic analysis.

Задачи:

1. Acquaintance with Homo sapiens as a specific object of genetic research and with the methods of human genetics.
2. Gaining insight into the human genome.
3. The study of the genetics of sex and sex-linked traits.
4. Systematization of knowledge about human hereditary diseases.
5. Acquaintance with medical genetic counseling.
6. Study of some mental characteristics of a person.
7. Formation of students' critical approach to eugenic ideas.

Pharmaceutical Informatics

Аннотация:

ASHP provides a simple definition of pharmacy informaticists: “Pharmacy informaticists interface information technology and medication use to improve safety, efficiency and patient care.” The work of pharmacy informaticists helps to prevent errors, maintain and improve patient safety, and coordinate care. There are many duties of pharmacy infromaticist, among them: entering data on patients and their medications into computer systems; tracking inventories of medications; tracking how medications are being prescribed and used; maintaining and improving the health information systems used by pharmacies; analyzing the data input by other pharmacy informatics workers; training other healthcare professionals to use the health information systems. In this course you will study some general approaches and some special methods of pharmacy informatics.

Цель:

Formation the ability to find, analyse and inteprete pharmaceutic data with computer tools

Задачи:

1. understanding of aim and objectives of pharmacy informatics;
2. usage of general and special computer tools to find and analyse pharmaceutic data;
3. ability to choose the method of data analysis and to interprete the results.

Phytotherapy

Аннотация:

The content of the discipline covers a range of problems associated with the study of pharmacopoeial medicinal plants, including medicinal plants of the region; The issues of collection, storage and rational use of resources of medicinal plants. The study of theoretical material is complemented by the knowledge gained in the course of laboratory work.

Цель:

Formation of systemic knowledge, skills and abilities on the rational use of medicinal plant raw materials in medicine and pharmacy.

Задачи:

The objectives of the discipline are:
• to teach students the methodology of choosing medicinal plants for herbal medicine based on a clinical and pharmacological approach: dependence of the choice of a medicinal plant on the characteristics of the organism of a particular patient, age, nature of the accompanying pathology, allergological anamnesis, medicinal therapy received by them, pregnancy and lactation and other factors;
• to teach students to compose medical fees from medicinal plants, officially approved for use in medical practice in various pathological conditions, taking into account the peculiarities of the interaction of the components of the collection between themselves and pharmaceuticals.

Cosmetic medicines with the basics of medical cosmetics

Аннотация:

The content of the discipline includes the classification of skin diseases and cosmetic defects, the features of the structure of the skin as an organ and its main functions in relation to the body as a whole, the content of the basic concepts of the use of cosmetics for skin care from the point of view of preserving its appearance, and from the position of maintaining and preserving its health. Within the framework of the discipline, the issues of the use of cosmetics as part of the complex therapy of certain pathological conditions, the diversity and validity of the component composition of cosmetic compositions and the prospects for the development of cosmetology and the production of cosmetics are discussed.

Цель:

Deepening of theoretical knowledge about the features of the anatomy of the skin and its main functions. To study the features of the development of pathological processes in the skin and the possibilities of reasonable use of drug therapy and cosmetics. The study of the chemical composition of cosmetic compositions depending on their practical purpose and in the context of their impact on skin health. Development of the ability to critically assess the possibility of using a cosmetic product from the position of its ingredient composition.

Задачи:

The discipline is designed to form the skills of practical use of the basic concepts of dermatology and cosmetology in terms of the use of cosmetics in the treatment of certain skin diseases, in the framework of information and educational work with consumers of cosmetic products, including those sold through pharmacy organizations.

Veterinary Pharmacology

The discipline "Veterinary pharmacology" studies the properties of pharmacological substances and mechanisms of their action at the cellular, organ and systemic levels, substantiation of indications and contraindications for their use for the treatment and prevention of diseases, as well as for the regulation of physiological functions, increase of productivity and management of the behavior of farm animals, commercial and wild animals.
The course includes the formulation (medical and pharmaceutical), General and private pharmacology.
In the system of training pharmacist veterinary pharmacology is the basic science for the study of clinical disciplines - internal non-communicable diseases, surgery, obstetrics and gynecology, infectious and invasive diseases.

Цель:

The purpose of the development of the discipline is the formation of students ' knowledge about drugs used in veterinary medicine, the principles of their production, their properties and mechanism of action, methods of diagnosis, prevention and treatment of diseases developing as a result of toxic effects of drugs.

Задачи:

The main objectives of this course are the following:
1. To study the device of the veterinary pharmacy, its work, structure and rules of preparation and prescribing, production of basic dosage forms.
2. According to the General pharmacology to study the General laws of the effect of drugs on animals, especially the pharmacokinetics of different groups of drugs, the dependence of the pharmacological effect of the properties of the substance, ways and means of administration, type, age, state of the body and other conditions.
3. In private pharmacology, to study the classification of substances into groups based on the system principle and for each group to study the General characteristics, mechanisms of action and pharmacodynamics, indications and contraindications for use, possible cases of poisoning and first aid measures in this case. According to the characteristics of individual drugs to know their Latin name, pharmacokinetics, mechanisms of action and pharmacodynamics, indications and contraindications, dose, form and route of administration.

Biotechnology

Аннотация:

The purpose of the course "Biotechnology" is to give an idea of the purpose of modern biotechnology, and its future. The lectures address issues related to the basics of biotechnological processes, the possibility of improving them through the use of highly active producers, the principles of immobilization of cells and enzymes, and the use of cell and genetic engineering methods. It was emphasized that biotechnology creates the scientific basis of industry that solves such significant problems as human health, the economical use of material resources, energy supply and environmental protection.

Цель:

The purpose of this course is to outline the horizons of biotechnology:
- consider the areas of its application, the tasks that it is able to solve, the prospects of using non-traditional biotechnological processes, such as the preparation of biological objects with desired properties, the problems of raw materials as a growth substrate, the cultivation of organisms, the isolation, purification and modification of products, as well as the immobilization of cells and enzymes ;
- pay attention to modern methods of obtaining microorganism strains for industry, illustrate the principles, possibilities and development trends of modern selection of microorganisms;
- discuss the applications of biotechnology to crop production, animal husbandry, energy, medicine, the food industry, mining of environmental protection.

Задачи:

The objective of mastering the discipline is to study the basic theoretical principles of biotechnology, which includes familiarity with industrial microbiology, genetic and cellular engineering, engineering enzymology and related fields of knowledge; the formation of concepts about the most important biotechnological processes and methods for managing them on a laboratory and industrial scale; the study of the stages of various biotechnological processes. The program provides for the acquisition of knowledge about the devices used in biotechnology, about the methods of isolation and purification of biotechnology products, an understanding of the features and advantages of biotechnological processes compared to chemical industries.

Statistics in pharmacy

Аннотация:

The discipline "Statistics in Pharmacy" is designed to study the basic methods and principles of statistical data analysis in pharmacy. Within the course, students learn the basic concepts and definitions in statistics, methods of data collection, processing, and interpretation of statistical data in pharmacy. In addition, students become familiar with descriptive statistics, inferential statistics, and correlation analysis.

Students also study the application of statistical methods in pharmaceutical practice, including the evaluation of the effectiveness of drugs, analysis of clinical trial data, evaluation of side effects of drugs, and more. Studying the discipline "Statistics in Pharmacy" allows students to develop skills in working with large amounts of data, the ability to use statistical methods for data analysis and making informed decisions in pharmaceutical practice.

The course "Statistics in Pharmacy" is an important component of pharmacist education and prepares students for work in various areas of the pharmaceutical industry, including scientific research, clinical trials, pharmacoeconomics, and more.

Цель:

Teaching students to develop, collect, systematize, and use statistical methods in scientific research in pharmacy and draw statistical conclusions about the research object.

Задачи:

1. To form knowledge about the subject, methods, and objectives of statistics; general principles of statistical science; principles of organizing government statistics; modern trends in the development of statistical accounting; basic methods of collecting, processing, analyzing, and presenting information; main forms and types of existing statistical reporting; technique of calculating statistical indicators characterizing socioeconomic phenomena.
2. To teach the ability to organize and conduct statistical observation; collect and record statistical information; perform primary processing and control of observation materials; calculate statistical indicators and formulate main conclusions; carry out comprehensive analysis of studied socioeconomic phenomena and processes, including using computer technology; use the results of statistical research.
3. To develop skills in using methods of collecting and summarizing primary statistical data; statistical methods of analyzing indicators; methods of analyzing the influence of factors on results; methods of interpreting and using the results of statistical research.

Требования к уровню освоения содержания:

To successfully master the discipline "Statistics in Pharmacy", it is necessary to have preliminary knowledge in the field of mathematics and basic statistical theory.

Analysis of organic compounds

Аннотация:

This course is based on the existing theoretical knowledge and practical skills of students in the field of organic and analytical chemistry and involves their generalization, systematization, deepening and acquisition of practical skills in the identification and quantitative methods for determining organic substances of various classes. Knowledge of the basics of the functional analysis of organic compounds will allow students to competently approach the solution of problems related to the synthesis, isolation, purification, analysis and identification of organic compounds in the course of their graduation work.

Цель:

Generalize and systematize students' knowledge of the structure and reactivity of the main classes of organic compounds; give an idea of the chemical, physical and physico-chemical methods of functional analysis; work out the most common chemical tests for the most important functional groups, methods for obtaining derivatives for identification and some quantitative methods for determining organic compounds of various classes.

Задачи:

To systematize and deepen knowledge about qualitative reactions of various classes of organic compounds and methods of their quantitative determination.
Acquire the skills of planning actions to determine the structure of an unknown chemical compound.
To learn how to perform the key stages of the elemental and functional analysis of an unknown organic compound and interpret the results of the chemical and physico-chemical analysis of the samples obtained, to draw reasoned conclusions about the structure of the investigated organic compound based on these results.
Learn to formalize the received data and conclusions in the form of a scientific report.

Normative documentation in pharmacy

Аннотация:

The discipline forms the professional knowledge and skills of a specialist working in the pharmaceutical field, taking into account modern regulatory legislative and regulatory legal acts. During the course of studying the discipline, the student will master information about the rights of citizens to receive medical care in accordance with the Constitution of the Russian Federation, will study the fundamental legislative and regulatory legal acts in the field of circulation of medicines, will be able to apply in practice the provisions of legislation on consumer protection of pharmaceutical goods and services.

Цель:

The study and deepening of knowledge about regulatory documents related to pharmaceutical activities in order to gain the skill of independently solving issues in the field of providing high-quality pharmaceutical care to the population.

Задачи:

- formation of ideas about the conceptual apparatus of legislative and regulatory legal documents in the pharmaceutical field;
- deepening of knowledge on the provisions of legislative and regulatory legal acts regulating the processes of circulation of medicines on the Russian market;
- study of the functions, rights and obligations of the pharmaceutical control and supervision bodies set out in the administrative regulations of the activities of these bodies;
- acquisition of knowledge in the field of sales rules and consumer protection;
- study of the functions, rights and obligations of control and supervision bodies in the consumer market, set out in the administrative regulations of the activities of these bodies.
- acquisition of knowledge in the field of legislative and regulatory legal regulation of pharmaceutical organizations as trade organizations and healthcare institutions.

Medical and pharmaceutical commodity science

Аннотация:

.The discipline gives an idea of the main groups of medical products used for the treatment and rehabilitation of patients.

Цель:

The purpose of creating the teaching materials is to provide high-quality methodological equipment in the special discipline "Medical and pharmaceutical commodity science", that is, to increase the efficiency of theoretical and practical classes due to a clearer organization of these classes by the teacher, the creation of target settings for each topic, systematization of the course material, the relationship of course topics, full material and methodological support of educational processes.

Задачи:

The objectives of studying the discipline are:
- study of the basics of commodity science, development prospects, establishing patterns of formation of consumer properties and quality of medical and pharmaceutical goods;
- study of the factors that form and maintain the quality of medical and pharmaceutical products;
- determination of rational ways to preserve goods during transportation, storage, operation, in the light of solving the main tasks of providing the population with medicines of various pharmacotherapeutic groups, homeopathic, parapharmaceutical, medical-cosmetic and veterinary medicines, biologically active additives and natural products, equipment, tools, devices, suture materials, medical needles, dressings, patient care items and other goods sold through the pharmacy network;
- study of normative and technical documentation, orders and instructions of the Ministry of Health of the Russian Federation, the Ministry of Health and the SR of the Russian Federation, laws, statistical materials, reference books used in the practice of the pharmacist.

Quality control in chemical laboratory

Quality control - observation of the analytical process and its assessment through statistical data processing obtained in a systematic analysis of control materials. Achieving quality in the laboratory requires the use of a large number of different means (description of the methods, a schedule for conducting instrument service, quality assurance, quality control).
When studying the discipline, the concepts of “proper laboratory practice” (GLP), analysis technique validation and quality assurance of analysis results, the basic concepts necessary to create a quality control system based on the use of statistical. Regulatory documents providing quality are presented.

Цель:

The aim of studying the discipline is the development of theoretical and applied aspects of quality assurance of analysis results, analysis technique validation, determining metrological characteristics, conducting intra-laboratory and inter-laboratory control.

Задачи:

As a result of the development of discipline, the student needs to
KNOW:
- the concept and principles of good laboratory practice;
- regulatory documents that provide quality control in the chemical laboratory;
- stages of analysis technique validation;
- metrological characteristics determined by analysis technique validation;
- the concepts and essence of intra-laboratory and inter-laboratory control.

BE ABLE TO:
- carry out individual stages of analysis technique validation;
- process the results of the analysis on the obtained analytical signals;
- use regulatory documentation in a chemical laboratory.

Требования к уровню освоения содержания:

Prior to studying the discipline, the student should
KNOW:
- properties of chemical compounds;
- methods of chemical analysis;
- criteria for accuracy and precision.

BE ABLE TO:
- present analytical signals of various analysis methods;
- cost graphic dependences of analytical signals;
- work with numerical material.