MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
Federal state autonomous educational institution
of higher education
«Far Eastern Federal University»
(FEFU)
School of biomedicine

APPROVED
Director of the School of
Biomedicine
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Abstracts of working programs of the academic disciplines

SPECIALTY
31.05.01 General Medicine

Form of study: *full time*
Standard term of study
(full time study) *6 years*

Vladivostok
2019

ANNOTATION

The discipline " Philosophy " is purposed for students enrolled in the educational program 31.05.01 "General medicine", and included in the basic part of the curriculum. Discipline is implemented on 1st year, 2nd semester.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the discipline studying is 2credits, 72 hours. The curriculum provides 36 hours of lectures, 18 hours of practical classes and independent self-work of the student (18 hours.). Overall in-class learning activity amounts to 54 hours. Pass-fail exam is in the 2nd semester.

“Philosophy” is based on the content of and the skills formed in the course of such disciplines as «History», «Ethics», «Logic».

The purpose of this course is to give the students an overview of key and basic problems of philosophy and to develop their verbal, analytical and critical skills. This course is a general introduction to Philosophy and Logic. The course will cover topics such as the nature and scope of philosophy, the traditional and special fields of philosophy. We shall look at the different conceptions of the term ‘philosophy'. After this, selected problems in the major branches of philosophy, namely, epistemology, metaphysics, ethics and logic, will be discussed. In epistemology, we shall attempt to define and discuss epistemology as a theory of knowledge and also examine the major theories of truth. In metaphysics, we shall define metaphysics, the two theories of reality, the problem of universals and particulars and the problem of substances and quality. In ethics, we shall define ethics, the scope of ethics and practical moral problems. We shall discuss a number of theories that are required in making correct moral judgments. Finally, we shall attempt a definition of logic in the strict, technical and professional sense and

evaluate arguments and critical thinking which are indispensable to personal development.

Goals and Objectives The goal of the course is to provide the students the opportunity to acquire desirable knowledge about the nature and scope of philosophy and logic. They will gain mastery of the competencies needed to be able to identify and distinguish crooked reasoning from logical and philosophical reasoning. Students will also gain competencies in examining and discussing the metaphysical, epistemological, ethical, and logical issues about reality and life.

On successful completion of this course, students should be able to:

- Identify and examine the principles and issues involved in complex theoretical situations and concrete problems.
- Discuss within wider intellectual perspectives within the context of a humanistic educational experience.
- Explain the nature of reality and the meaning of life
- Describe social structure and development, knowledge and values, and the governing principles of the universe.

On completion of the course following general cultural competences are expected to be formed.

Code and formulation of the competence	**The stages of forming the competence**	
the ability to abstract thinking, analysis, synthesis (GPC -1)	Knows	the principles and issues involved in complex theoretical situations and concrete problems.
	Is able to	Identify and examine the principles and issues involved in complex theoretical situations and concrete problems.
	Possesses	Discuss within wider intellectual perspectives within the context of a humanistic educational experience.
- the ability to use basic philosophical knowledge to form a worldview (GPC -2);	Knows	The main philosophical ideas and principles
	Is able to	Explain the nature of reality and the meaning of life
	Possesses	Identify and examine the principles and issues involved in complex theoretical situations and concrete problems.
the ability to analyze the main stages and the laws of historical development of society to form civic position (GPC -3)	Knows	social structure and development, knowledge and values, and the governing principles of the universe.
	Is able to	Use these knowledges in forming own civil position
	Possesses	Describe social structure and development,

		knowledge and values, and the governing principles of the universe.

To generate the above competencies within the discipline "History" are used the following active learning methods:

- Practical training lessons:

  Lesson-discussion.

ANNOTATION

The discipline "History" is purposed for students enrolled in the educational program 31.05.01 "General medicine", and included in the variable part of the curriculum. Discipline is implemented on 1st year, 2nd semester.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the discipline studying is 2credits, 72 hours. The curriculum provides 36 hours of lectures, 18 hours of practical classes and independent self-work of the student (18 hours.). Overall in-class learning activity amounts to 54 hours. Pass-fail exam is in the 2nd semester.

1. Tatatro-Mongolian yoke;
2. Moscow state in XVI-XVII centuries;
3. Russia and the world in the 17th century;
4. Russia and the world in the 19th century;
5. Russia and the world in the 20th century.

The aim of the course «History» is to form the students ' holistic theoretical and factual representation of the historical development of Russia in the context of world civilization.

The main tasks are:

1. To develop students an appropriate conceptual framework.
2. To get students acquainted with basic concepts of state building of Russia and the world's leading powers.
3. To make students study the complex economic, demographic and social history of Russia.

As a result of the study of the discipline should be formed following general cultural competences.

Code and formulation of the competence	The stages of forming the competence	
the ability to use basic philosophical knowledge to form a worldview (GPC-2);	Knows	The main ideas about the world's and Russian history
	Is able to	Use these knowledge in forming own worldview position
	Possesses	Attainment of analysis the main philosophical and historical ideas in the context of morality
the ability to analyse the main stages and the laws of historical development of society to form civic position (GPC-3).	Knows	The main laws and stages of historical process, historical methods, the main historical researches
	Is able to	Use these knowledge in forming own civil position
	Possesses	Attainment of analysis the main philosophical and historical ideas in the context of state building and the personal attitude to the different political regimes

To generate the above competencies within the discipline "History" are used the following active learning methods:

- Practical training lessons:

1. Lesson-discussion.

ANNOTATION

The discipline "Medical history, bioethics, deontology" is purposed for students enrolled in the educational program 31.05.01 "General medicine", and included in the basic part of the curriculum. Discipline is implemented on 2nd year, 4rd semester.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the discipline studying is 5 credits, 180 hours. The curriculum provides 36 hours of lectures, 54 hours of practical classes and independent self-work of the student (90 hours.). Overall in-class learning activity amounts to 90 hours. Pass-fail exam is in the 4rd semester.

The course program is based on the basic medical knowledge gained students:
ability to abstract thinking, analysis, synthesis (GC-1);
the ability to use basic philosophical knowledge to form a worldview (GC-2);
the ability to analyze the main stages and the laws of historical development of society to form civic position (GC-3)

The goal is to train a medical specialist who has learned deeply humanitarian basis of their profession, knowledge about socio-cultural context of both Russian and international values of medical activity, in which the regulation of human relations is subordinated to the task of preserving human health, as well as formation of moral consciousness of future doctors, introduction to the moral tradition of national medicine through direct transfer of moral experience from teachers to students.

Tasks:

* to teach students the historical and analytical approach in the objective assessment of medical, hygienic knowledge about human health and disease at various stages of human development;

* to study the laws and key issues of medicine in General, its characteristics and distinctive features at different stages of development;

* to study the emergence and development of specific medical, biological, hygienic and clinical areas;

* to study the moral basis (professional and personal) of medical activity;

• to teach how to regulate and resolve bioethics conflicts;

* to study the principles of behavior of medical personnel aimed at maximizing the usefulness of treatment and the elimination of unfavorable omissions in medical activities;

* to master the cultural experience of mankind, to determine the importance of the place of morality in public relations.

As a result of the study of this discipline, students form the following General cultural competence (elements of competence).

Code and the wording of competence	Stages of competence	
the readiness to work in a team, to perceive social, ethnic, religious and cultural differences tolerantly. (GCC - 8)	Knows	the Basic ethical documents of international and domestic professional medical associations and organizations
	Is able to	Competently and independently analyze and evaluate the socio-cultural situation in the world and Russia
	Possesses	Skills of public speech, moral and ethical reasoning in speeches, correct discussion, debate, dialogue and round tables

ANNOTATION

The discipline " Philosophy " is purposed for students enrolled in the educational program 31.05.01 "General medicine", and included in the basic part of the curriculum. Discipline is implemented on 1st year, 1st semester.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the discipline studying is 2 credits, 72 hours. The curriculum provides 18 hours of practical classes and independent self-work of the student (54 hours.). Overall in-class learning activity amounts to 18 hours. Pass-fail exam is in the 1st semester.

The Russian language and the speech culture is a discipline, cognitive value thereof is extremely high: the lessons from thinking, inculcate the sense of love for the mother tongue, through the language human values are learned, a person develops, with the help of language students learn other disciplines. This course is designed for the preparation of the program 31.05.01. Medical Care. This discipline is 2 credits and 72 academic hours. This discipline is directly related to the discipline Foreign language (Russian). The particularities of the course are the students with the basic knowledge of the Russian language.

The goal of the discipline is the formation and development in the students the ability to build oral and written speech as logically correct, convincing and clear; skills of the written reasoning to state their own point of view; skills of public speaking, reasoning skills, conducting discussions and disputes, practical analysis of various kinds of logic reasoning.

The tasks of the discipline are is to give the students the theoretical groundwork of the knowledge in the field of Russian language, to develop

practical knowledge and communicative skills, to improve overall language literacy; to form the proper usage of the language, in accordance with the specific content of the utterance, the objectives of the respondent, and the communication environment; to form skill of appropriate use of functional styles of modern Russian language, an appropriate use of stylistic and linguistic characteristics of the official-business style; to form a practical skill for the motivated use of language features that will ensure the best impact on the audience, in accordance with the established objectives; to form an orderly knowledge about monologue and dialogue relationships and the conditions for their realization in speech, as well as about the methods and ways for the logically solid argumentation.

Students must know:

- how to correctly evaluate the communicative situation;

- consider the most appropriate means to achieve this objective;

- how to create the statement in the desired speech genre in the given situation; - analyze speech and its results;

- know the basics of the communication theory;

- stage of preparing straining public speaking;

- on the meaning of speech culture in the business communication; to understand the importance of national particularities in business communication;

- basic concepts of the theory of business communication, structure of business communication, organization structure, business negotiations, ways to resolve conflict situations in business communication, business etiquette, particularities of the business person's image, the ancient rhetorical Canon.

Students should be able to:

- formulate achievable within this communicative situations the aim of official business communication;

- distinguish between types of communicative acts in the others' speech and compose the speech acts adequate to the intentions in the public communication;

- clearly explain and justify their own views, use different paths and figures of speech in a public statement; be proficient in the technology of non-reflective and emphatic listening.

Students must possess:

- the skills to make a reasoned written statement of their point of view;

- the skills of public speaking, making an argument, debating and disputing, conducting a practical analysis of various types of logic reasoning;

-understand the basics of the dialogue and monologue speech (orally and in writing); - command the technique of speaking;

-know the modern norms of official business etiquette;

-various types of business communication;

-have knowledge of descriptive and expressive language tools appropriately use various kinds of tropes and figures in speech;

-possess knowledge of the methods and means of logically persuading argumentation in the official business communication;

-possess knowledge of the processes for speech planning and monitoring, methods of variational interpretation of reality.

As a result of the study of this discipline the students form the following types of the general cultural competence.

Competence code and formulation	Stages of forming the competence	
- the willingness to communicate in oral and written forms in Russian and foreign languages to solve the problems of professional activity (GPC-2)	Knows	the main rules of the modern Russian language and culture speech for clear speaking and writing in Russian language;
	Is able to	apply the basic principles of composing the monologue texts and dialogues, the typical features of the Russian language as a means for communication and transmission of information;
	Possesses	skills of the use of the Russian language for logically correct and reasoned dialogue in the professional activity
the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)	Knows	methods, tools and techniques for determining the strengths and weaknesses for the further self-development, enhancement of skills and craftsmanship;
	Is able to	critically evaluate the level of professional competence and to choose the methods and means for its improvement;
	Possesses	methods of self-development and means of improving the competence and skills
the readiness to analysis and public presentation of medical information based on evidence-based medicine (PC – 20)	Knows	Ways public representations medical information in Russian
	Is able to	Come forward after report, message, presentation in Russian
	Possesses	Skills of public speaking in Russian language

ANNOTATION

The course "Latin Language" is purposed for students enrolled in the educational program 31.05.01 "General medicine", and included in the basic part of the curriculum. Discipline is implemented on 1st year, 1 and 2nd semesters.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the discipline studying is 4 credits, 144 hours. The curriculum provides 72 hours of practical classes and independent self-work of the student (72 hours.). Overall in-class learning activity amounts to 72 hours. Exams are in the 1 and 2nd semester.

Discipline «Latin» logically and meaningfully related to such disciplines as: «Biochemistry», «Biology», «Foreign Language», «Physiology», «Anatomy», «Pharmacology», «Cultural Studies», «Drug Technology», «Pharmaceutical Chemistry».

The aim of the course is to develop competencies system, contributing to the development of analytical and clinical thinking, based on familiarity with the peculiarities of pronunciation, grammatical structure and vocabulary of the Latin language; to lay the foundations of terminological competence of the expert, capable in the study of the recommended discipline, as well as the practical and scientific activities use the terminology of Greco-Latin origin.

The objectives:

• give an idea of the place and role of the Latin language in the system of scientific knowledge;

• acquire the skills of reading, parsing and translation of Latin texts natural-scientific orientation in the basic amount of grammar, vocabulary and terminology;

• show the role of the Latin language in science and medical-biological cycle, and especially in the professional field;

• create drawing skills lexical and grammatical structures needed to describe the structures, functions, chemical reactions and biological processes in the human body, skills formation patient diagnoses using Latin terminology, prescription and other professional skills;

• expand linguistic horizons;

• meet with the foundation of the Latin aphorisms that became international.

For successful study of discipline «Latin» by students the following preliminary competences must be formed:

• the ability to independently determine the purpose of the activity and prepare action plans; independently carry out, control and correct operation; to use all available resources to achieve the goals and implementation of action plans; choose successful strategies in different situations;

• the ability to effectively communicate and interact in the process of joint activities, take into account the position of the other actors;

• the willingness and ability to self-awareness and cognitive activity, including the ability to navigate in a variety of sources of information, to critically evaluate and interpret information obtained from various sources;

• the knowledge of language features - the ability to clearly, logically and accurately express their point of view, to use the appropriate language tools.

As a result of studying the discipline the students formed following general cultural competence:

Code and the wording of the competence of the BI FEFU	**Stages of competence**	
the willingness to communicate in oral and written forms in Russian and foreign languages to solve the problems of professional activity (GPC-2)	Knows	the content of self-organization and self-education, the nature and the implementation of technologies based on the purpose of improving professional activity
	Is able to	to plan objectives and set priorities; independently acquire information
	Poassesses	by planning methods, organization, self-monitoring and self-evaluation activities
(the readiness to maintain and report medical documents	Knows	the lexical minimum Latin in the amount of 900 educational lexical units and elements of grammar

(GPC – 6)		of the Latin language; the elements of grammar: a system of declensions of nouns and adjectives, matching adjectives with nouns, verb forms, required by the program, management of prepositions, numerals, pronouns, necessary for the understanding and education of pharmaceutical terms, and prescriptions; specifics of terms and terminological systems; principles of international education in Latin nomenclatures (biological, pharmacological, biochemical, medical); ways and means of word formation of trivial names of medicines and clinical terms; methods of forming the floor of systematic chemical names in the Latin language; formal requirements for the registration of a prescription in Latin; the basic principles of selection and formation of international nonproprietary names for pharmaceutical substances (MIC)
	Is able to	to read and write the terms in Latin; to identify the objects in accordance with the principles of the relevant nomenclatures in Latin (chemical, botanical, medicinal products); to translate without a dictionary from Latin into English and from English into Latin medical terms and prescriptions of any complexity, as well as simple sentences and aphorisms; to isolate a part of the trivial names of the frequency segments that carry certain health, pharmacotherapy and merchandising standard information about medicines; to isolate a part of pathological and physiological and clinical terms terminoelements explain their meaning and to design clinical terms by terminoelements in accordance with the productive models
	Poassesses	the skills of reading and writing in Latin and Latin medical terms of the prescription; lexical minimum volume of 900 lexical and word-forming units on the level of long-term memory in an active vocabulary; by knowledge of design terms on word-formation models studied

To form the above competencies in the discipline «Latin» apply the following methods of active / interactive learning: lecture-discussion method drawing mind maps, advice, denotatny count, rating method.

ANNOTATION

The discipline "Foreign Language" is purposed for students enrolled in the educational program 31.05.01 "General medicine", and included in the basic part of the curriculum. Discipline is implemented on 1st and 2nd years, 1, 2, 3 and 4th semesters.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the discipline studying is 12 credits, 432 hours. The curriculum provides 288 hours of practical classes and independent self-work of the student (144 hours.). Overall in-class learning activity amounts to 288 hours. Pass-fail exam is in the 4th semester.

The goal of the discipline is mastering of language knowledge (phonetic, lexical, grammatical and spelling), formation and improvement of language skills and oral skills, as well as deepening and broadening the cultural knowledge. When implementing the practical goal of training - formation of the future expert's ability and willingness to intercultural communication - occurs a gradual and progressive strengthening of vocational orientation of the training in accordance with the actually necessary the adequate foreign language skills for the future professional activity of a specialist in the area of medicine.

The tasks of discipline are - to give the students the theoretical bases of knowledge of Russian language in all its aspects, to develop practical skills and those of the communicative nature, to improve the overall language literacy; to form the skill of the proper language usage in accordance with the specific content of the discourse, the objectives of the speaker (writer), the situation and the communication environment.

The student must know:

- fundamentals of communications theory;
- genres of scientific speech;
- about the importance of speech culture in communication;
- the importance of national particularities in communication;
- **foreign language (Russian) to the extent necessary for professional communication and the possibility to obtain information in a foreign language.**

The student must be able to:

- understand information when reading texts of educational, reference, non-fiction/cultural nature in accordance with the specific purpose (introductory reading, studying, preview, search);
- transfer in foreign language the messages in the form of monological statements (within the determined subjects) and share information in the process of dialogical communication (in accordance with the goals, objectives and conditions of verbal interaction, as well as in relation to the content of the read/listened to text), while carrying out the certain communicative intentions within speech etiquette;
- comprehend information with direct and indirect (listening to audiorecordings, telephone conversation, etc.) communication with native speakers within the determined areas and themes of communication;
- transfer in foreign language and correctly arrange the information in accordance with the objectives and tasks of communication, and taking into account the receiver (recording information received while reading in the form of working notes, a plan; writing of a business letter, resume seeking employment, application, request; filling in forms, questionnaires; writing of a personal letter and postcard, etc.);
- use translation as a means of memorizing linguistic (lexical-grammatical) material from a foreign language to the mother tongue and from the mother

tongue to the foreign language; ability to use translation as a means of understanding the audio- and printed texts.

The student must possess:

- the norms of modern foreign language and culture;
- the basics of dialogical and monological speech (orally and in writing);
- technique of speech activity;
- knowledge of descriptive-expressive language tools and proper usage in speech of the various kinds of tropes and figures;
- knowledge about processes of speech planning and monitoring, methods of variational interpretation of reality,
- technology of nonreflecsive and emphatic listening;
- knowledge about processes of speech planning and monitoring, methods of variational interpretation of reality,
- **foreign language to the extent necessary to receive information from foreign sources.**

As a result of the study of this discipline the students form the following types of the general cultural and general professional competence.

Competence code and formulation	**Stages of forming the competence**	
the readiness to self-development, self-realization, self-education, to use of creativity (GCC -5)	Knows	Foreign language at the level necessary to retrieve professional information and terminology;
	Is able to	Freely communicate ideas and understand the interlocutor in the foreign language;
	Possesses	Various speaking skills to communicate in the professional community.
the willingness to communicate in oral and written forms in Russian and foreign languages to solve the problems of professional activity (GPC-2)	Knows	communication basics, principles and methods of organizing communication in Russian and a foreign language
	Is able to	create and edit texts of the scientific and professional orientation; summarize and annotate information; create communication materials; organize the negotiating process, including with the use of modern means of

		communication in Russian and a foreign language
	Possesses	skills of business and public communications, basic grammatical structures of the scientific and spoken language
the readiness to analysis and public presentation of medical information based on evidence-based medicine (PC – 20)	Knows	Methods of public presentation of medical information in Russian
	Is able to	To make a report, report, presentation in Russian
	Possesses	Skills of public speaking in Russian

Resume

The discipline "Jurisprudence" is designed for the students enrolled in the direction of education 31.05.01 "General Medicine" and is included in the basic part of Block 1 "Disciplines (modules)" of the curriculum (B1.B.7).

The total complexity of the discipline is 108 hours (3 credits). The curriculum provides lectures (18 hours), independent self-work of the student (54 hours). Discipline is implemented on the 2nd year. Form of intermediate certification - credit.

The discipline "Jurisprudence" is closely interconnected with such disciplines as "History", "Philosophy", "Economics".

The content of the discipline covers a range of issues that allow to form a comprehensive view of the main legal phenomena, civil rights and obligations, the legislation of the Russian Federation and its violation.

Goal of the discipline - formation in the students studying the non-core subjects of the course, legal culture and sense of justice, the ability to navigate in life and professional situations from the standpoint of law and legal studies.

Course Study Objectives:

1) to form sustainable knowledge in the field of law;

2) to develop the level of legal awareness and legal culture of students;

3) to develop ability to perceive and analyze legal acts, including applying this knowledge in their professional activities;

4) to form and strengthen the skills of practical application of law.

For successful study of the discipline "Jurisprudence", students should have the following preliminary competences acquired as a result of training in high school:

- ability for self-improvement and self-development, to increase the general cultural level;
- possession of the culture of thinking, ability to synthesize, analyze, process information.

Code and formulation of competence	Stages of competence formation	
GPC -3 - ability to use the basics of economic and legal knowledge in professional activities	Knows	conceptual apparatus of the main branches of Russian law; provisions of the current Russian legislation governing individual parties to legal relations; the importance of studying and applying the acquired legal knowledge in professional activities on the territory of the Russian Federation.
	Able to	correctly interpret the legal regulatory acts of the Russian Federation and apply them in their professional activities carried out in the territory of the Russian Federation
	Masters	practical skills of analyzing various legal phenomena, legal facts, as well as the application of legal norms in order to execute professional activities on the territory of the Russian Federation

The following active learning methods are used to form the abovementioned competencies within the discipline of "Jurisprudence": problem lecture, lecture-conversation, lecture-discussion.

RESUME

The discipline "Health and Safety" is purposed for students enrolled in the educational program 31.05.01"General medicine".

Discipline is implemented on 2nd year as a basic discipline.

Development of the working program of the discipline was made in accordance to the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" and the curriculum of training students.

The total complexity of the discipline is 72 hours, 2 credits.

The curriculum provides 8 hours of lectures, 10 hours of practical training and independent work of the student (54 hours.).

Development of students ' conscious understanding of the relationship of human health with the environment, factors and living conditions, emergencies, work is a necessary prerequisite for their active participation in the conduct of evidence-based and effective therapeutic measures, disease prevention, promotion of healthy lifestyles.

The study of life safety is of particular importance in the formation of medical activity, in solving the list of problems for the prevention of diseases listed in the Federal state educational standard, in the development of clinical thinking of students.

A special feature in the construction and content of the course is the use of active learning methods, software and hardware, Fund methodical, evaluation and electronic means of discipline.

Discipline " life safety "logically and meaningfully associated with courses such as" Philosophy"," Biology"," human Anatomy","Fundamentals of nursing."

The course program is based on the basic knowledge gained by students:

- ability to abstract thinking, analysis, synthesis (GCC1);
- ability and willingness to implement ethical and deontological principles in professional activity (GPC4);
- the capacity for the assessment of morphological and physiological states and

pathological processes in the human body for solving professional tasks (GPC-9);

- the willingness to ensure care for sick people and primary pre-hospital care (GPC 10);

- the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease, which are not life-threatening and do not require emergency medical assistance (PC 10);

- the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation; (PC – 11)

- the willingness to do a medical assistance in emergency situations, as well as in medical evacuation (PC – 13)

Course objective:

Formation of students ' knowledge aimed at safe and comfortable human interaction with the natural, man-made and biological-social environment, reducing mortality and health problems from adverse factors of natural, man-made and biological-social nature in war and emergency situations.

Tasks:

1. Gain an understanding of the risks caused by the impact of various types of emergencies;

2. Acquisition of theoretical knowledge about the nature and development of emergencies, catastrophes, accidents, as well as structural components of the

Russian system of prevention and elimination of consequences of emergency situations (RSChS);

3. The acquisition of knowledge of the system of health care in emergency situations and the ability to organize the provision of medical assistance to the population in emergency situations.

4. Formation of readiness to participate in the activities of protection of the population and medical personnel in emergency situations; - the ability and readiness to organize health care for the population in the aftermath of emergencies;-the ability to justify decisions from a security point of view;

5. Formation of motivation and ability of independent decision-making specialist in the organization of health care in the aftermath of an emergency.

As a result of studying this discipline the following General professional and professional competences are formed:

Code and formulation of competence	**Stages of competence formation**	
the readiness to use techniques of first aid and techniques of protection in emergency situations (GCC - 7)	Knows	principles of the first aid, methods of protection in emergency situations
	Able to	able to use the first aid techniques and apply methods of protection in an emergency
	Masters	masters the first aid skills and the use of protection in emergency situations
the willingness to ensure care for sick people and primary pre-hospital care (GPC – 10)	Knows	issues of the first aid in a case of emergency
	Able to	provide the first aid in a case of emergency
	Masters	the technique of the first aid in emergency conditions
the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation; (PC – 11)	Knows	procedures for the provision of medical care to patients with dental diseases
	Able to	use medical devices provided by the procedures for the provision of medical care to patients with dental diseases
	Masters	skills of application of the medical products provided by procedures of rendering medical care to patients with dental diseases
the willingness to do a medical	Knows	Basic principles of organization of

assistance in emergency situations, as well as in medical evacuation (PC – 13)		medical care in emergency situations, including medical evacuation
	Able to	To organize medical care in emergency situations, to determine the order of evacuation of victims in emergency situations
	Masters	skills of the organization of medical care in emergency situations, the ability to determine the order of evacuation of victims in emergencies
- the ability to organize medical aid in case of emergencies, including medical evacuations (PC – 19)	Knows	Basic principles of organization of medical care in emergency situations, including medical evacuation
	Able to	To organize medical care in emergency situations, to determine the order of evacuation of victims in emergency situations
	Masters	skills of the organization of medical care in emergency situations, the ability to determine the order of evacuation of victims in emergencies

The following methods of active/interactive learning are used for the formation of the above competencies within the discipline "life Safety":

1. It is envisaged to conduct practical classes using computer training programs.

2. For the organization of independent work, it is offered to prepare essays and reports for presentation in the student group and at the student conference; as well as preparation for practical classes, work with additional literature, preparation of abstracts, lesson-conference.

The share of practical training conducted in interactive forms is 10% of classroom time; independent extracurricular work - 42% of the whole time.

ANNOTATION

The discipline "physical education", is intended for students enrolled in the educational program of higher education 31.05.01 "general medicine", is included in the basic part of the curriculum, is implemented on the 1st year in 1 semester. The total complexity of the discipline is 72 hours, 2 credits. Of these, lectures (2 hours), practical classes (68 hours), independent work (2 hours)

The program of the course is based on the basic knowledge acquired by students in the framework of the secondary education school.

The academic discipline "physical culture and sport" is consistently associated with the following disciplines "safety".

The main content of the discipline "physical culture and sport" is the general theoretical aspects of physical culture, the practical development of funds (exercises) from the basic types of motor activity (athletics, sports (volleyball)) for the formation of physical culture of the individual.

The purpose of studying the discipline is to form the physical culture of the individual and the ability to use the various means of physical culture and sports to preserve and promote health, psychophysical training and self-preparation for future professional activities.

Objectives:

1. The formation of knowledge and skills in the implementation of the basic types of motor activity (athletics, sports (volleyball)), aesthetic and spiritual development of students.

2. The development of physical abilities by means of basic types of motor activity to promote health and maintain physical and mental performance.

3. Education of socially significant qualities and the formation of needs for a healthy lifestyle for effective professional self-realization.

To successfully study the discipline "Physical Culture and Sport", students should have the following preliminary competencies:

• the ability to use the basic forms and types of physical activity for the organization of a healthy lifestyle, active recreation and leisure;

• possession of general methods of strengthening and maintaining health,

maintaining health, preventing disease prevention.

Because of studying this discipline, students form the following general cultural competence:

The code and the wording of competence	Stages of formation of competence	
- the ability to use the methods and means of physical culture to ensure full social and professional activities (GCC – 6)	Knows	General theoretical aspects of physical culture, the value of physical education in personal and professional development.
	Able to	Use the means and methods of physical culture to preserve and promote health, increase efficiency.
	Possesses	Traditional forms and types of physical activity for the maintenance and development of physical abilities and the formation of motivation for physical activity.

ABSTRACT

The discipline "Medical informatics, mathematics" is intended for students enrolled in the educational program " General Medicine ", it is included in the basic part of the curriculum.

Discipline is realized on the 2nd course, it is the basic discipline.

In developing the work program of the academic discipline, the Federal State Educational Standard of Higher Education, specialty 31.05.01 " General Medicine ", curriculum for training specialists in the profile of the medical case.

The total complexity of the discipline is 144 hours, 4 credit units.

The course program is based on the basic medical knowledge obtained by students:

- the ability and willingness to analyze the results of his own activity to prevent professional errors (CPC-5);

- the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (CPC – 7);

- the willingness to participate in the evaluation of the quality of medical care using basic health statistics (PC – 18).

Purpose of the course: the formation of competencies in theoretical knowledge, skills and habits of collecting, processing and analyzing statistical data obtained at different stages of scientific research necessary for the subsequent professional activities of specialists.

Tasks:

• to form a knowledge system on the statistical processing of biomedical research data;

• show the possibility of using multidimensional statistical methods for processing information and analyzing experimental data;

• familiarize with the methods of systematization of experimental material in the interpretation of scientific facts;

• use specialized software designed for statistical data analysis.

To solve these problems, a course of thematic lectures, practical classes and laboratory work is planned.

As a result of studying this discipline, students develop the following general cultural, general professional competencies:

Code and formulation of competence.	**Stages of formation of competence**	
the ability to abstract thinking, analysis, synthesis (CC-1)	**Know**	Fundamentals of abstract thinking, logical and reasoned analysis;
	Can	Conduct a logical and reasoned analysis, discussions and polemics, edit texts, carry out educational and pedagogical activities, publicly speak;
	Master	Methods and techniques of logical and reasoned analysis, public speech, discussion and controversy, editing of texts of professional content, the implementation of educational and pedagogical activities
the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (CPC – 1)	**Know**	Mathematical methods for solving intellectual problems and their application in medicine;
	Can	Thematic network, bibliographic resources, databases, information retrieval systems
	Master	Modern methodological principles and methodological methods in solving standard problems of professional activity Basic information transformation technologies - text, table editors, Internet search; Terminology related to modern information and telecommunication technologies in relation to solving problems of medicine and health
the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (CPC – 7)	**Know**	Theoretical bases of computer science, collection, storage, search, processing, transformation, information dissemination in medical and biological systems,
	Can	Conduct text and graphic processing of medical data using standard operating system tools and common office applications, as well as application and special software;
	Master	The basic methods of statistical processing of clinical and experimental data using standard application and special software

ABSTRACT

The discipline "Chemistry, Medical Chemistry" is intended for students enrolled in the educational program of higher education on 31.05.01 "General Medicine", is included in the basic part of the curriculum, is implemented on the 1st year in the 1st and 2nd semester. The total complexity of the discipline is 216 hours, 6 credits.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “General Medicine” (specialty level) has been used.

The course program is based on the basic knowledge gained by students:

the ability to abstract thinking, analysis, synthesis (CC-1)

The content of the discipline covers a range of issues related to the study of the laws of thermodynamics and bioenergy, colligative properties of solutions, ionic equilibria, electrochemistry, chemical kinetics and catalysis, organic chemistry, analytical chemistry and physical and chemical methods of analysis. Mastering the discipline "Chemistry" is necessary for the subsequent study of such disciplines as "Pharmacology", "Medical Biotechnology" and "Biochemistry".

Purpose of studying the discipline is to master the future specialists in the basics of chemical and physicochemical knowledge, which are necessary for the study of processes occurring in a living organism, when they become qualitatively new physiological phenomena.

Objectives of the discipline:

- Master the skills of conducting scientific research to establish the relationship between the physicochemical properties of substances and their pharmacological activity. To study the basic laws of chemical kinetics and thermodynamics in order to determine the possibility of the occurrence and direction of bioenergy processes;
- Be able to apply the laws of chemical kinetics to increase the speed of the main and blocking side processes;
- To be able to apply physical and chemical methods for analytical and environmental purposes.
- Learn how to use the methods of inorganic, physical, analytical and organic chemistry to solve specific problems of biology and medicine.

As a result of studying this discipline, the students form the following professional competencies (elements of competencies).

Code and formulation of competence	Competence formulation phase	
the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (CPC – 7)	Knowing	the basic computer databases about the structure and properties of organic compounds, including chemical and 3D computer graphics program
	Be able	using the rules of construction of chemical formulas, graphs, tables, using appropriate computer programs, including for the creation of computer presentations.
	Be master (skill)	by computer programs to build chemical and stereochemical formulas of organic compounds and other illustrative material.
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (CPC – 9) .	Knowing	physical and chemical basis of pathological processes in Human body; structure, significance and role of basic biogenic elements and they compounds in living systems; chemical methods of estimation of morph-functional and physiological states of living systems
	Be able	apply chemical concepts, laws and principals for estimation of morph-functional and physiological states, and of pathological processes in Human body
	Be master (skill)	by methods of estimation of morph-functional and physiological states of Human body including physical and chemical analysis methods

To form the above competencies will be applying the following methods of interactive learning: active reading, problem lectures, debriefing.

Annotation

The discipline " Biochemistry "is designed for students enrolled in the educational program of higher education 31.05.01" General Medicine", is included in the basic part of the curriculum, implemented in the 2nd year in the 3rd and 4th semesters. The total complexity of the discipline is 216 hours, 6 credits, 36 hours of lectures, practical classes-72 hours, laboratory classes-36 hours, independent work of students-72 hours, including 27 hours to prepare for the exam.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 " General Medicine " (level of training specialty).

Modern biochemistry is an extensive field of knowledge, including a number of sections. The most important of them are Bioorganic chemistry, dynamic biochemistry, molecular biology, functional biochemistry. Formed as an independent industry and medical biochemistry, including all of the above sections, and not only in the part that is relevant to human health and disease. Medical biochemistry studies the molecular basis of human physiological functions, molecular mechanisms of pathogenesis of diseases (molecular pathology), the biochemical basis of the prevention and treatment of disease, biochemical diagnostics of diseases and monitoring the effectiveness of treatment. Biological chemistry together with such medical and biological disciplines as biology and General genetics, normal human anatomy, histology, normal physiology forms students ' knowledge about the structure and functioning of a healthy body, and together with pathophysiology, pathological anatomy and pharmacology-knowledge about the essence of common pathological processes and the most common diseases, the mechanisms of action of drugs.

Knowledge of biochemistry is fundamental in the education of the doctor, serve as the basis for the study of subsequent theoretical disciplines and the formation of clinical thinking of the doctor in the medical departments.

The discipline "Biochemistry" is logically and meaningfully connected with such courses as General and inorganic chemistry, physiology, histology, biology.

The course program is based on the basic medical knowledge gained by students:

ability to abstract thinking, analysis, synthesis (CC-1);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC-1);

the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC-7);

Goals and objectives of the discipline:

The goal is to provide the students with knowledge about the chemical essence of the phenomena of life, to learn to apply when studying of the subsequent disciplines and professional activities the knowledge on the chemical composition and biochemical processes in the human body, as about the characteristics of norms and the signs of disease.

Tasks:

- formation of knowledge about the molecular organization and molecular mechanisms of functioning of the living.

- formation of the ability to apply knowledge about the chemical composition and biochemical processes as characteristics of the norm or signs of the disease in the study of subsequent disciplines and in practical work.

- formation of initial practical skills in biochemical diagnostic Informatics and Analytics, knowledge of the principles of basic clinical and biochemical analyses, mastery of rapid methods of biochemical analysis, the ability to choose adequate research methods and interpret the results.

For the successful study of the discipline "Biochemistry" students should be formed the following preliminary competence:

- have the ability and willingness to analyze the patterns of functioning of individual organs and systems, to use the knowledge of anatomical and physiological bases, the basic methods of clinical and immunological examination

and evaluation of the functional state of the organism of an adult and a teenager for the timely diagnosis of diseases and pathological processes;

- have the ability and willingness to form a systematic approach to the analysis of medical information, based on the comprehensive principles of evidence-based medicine, based on the search for solutions using theoretical knowledge and practical skills to improve professional performance.

As a result of studying this discipline the following General cultural/ General professional/ professional competences are formed: as a result of studying this discipline the following General professional competences are formed:

Code and concept of competence	**Steps of competence evolution**	
the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7)	Knows	main metabolic pathways of amino acids and proteins, carbohydrates, lipids, nucleotides and nucleic acids and the main disorder of their metabolism in the human body.
	Is able	evaluate the relevance's of various biochemical parameters for blood and urine analysis under certain pathological conditions (diabetes mellitus, pathology of the liver, kidneys, heart)
	Is skilled	skills for solving biochemical and professional problems.
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	Knows	principles of biochemical analysis and clinical biochemical laboratory diagnostic of diseases
	Is able	uses measuring equipment while performing biochemical studies
	Is skilled	skills of making a preliminary diagnosis based on the results of patients laboratory study

The following active methods are used to form the above competences within the discipline "Biochemistry": practical exercises in the form discussions and brainstorming.

ANNOTATION

The discipline "Biology" is intended for students of the 1st course of the specialty "General Medicine" in accordance with the requirements of the Federal State Educational Standard of Higher Education in this specialty. The discipline "Biology" is included in the basic part of the curriculum

The total complexity of the discipline is 6 credits, 216 hours. The curriculum provides lectures (36 hours), practical classes (36 hours), laboratory classes (18 hours), independent work (126 hours). Discipline is implemented on the 1 course in 1 and 2 semesters.

"Biology" is a fundamental natural science discipline for students of the specialty "General Medicine". It serves as a bridge between school biological preparation and the upcoming development of the whole complex of modern biomedical sciences.

Mastering this discipline is necessary as the preceding one for the disciplines of the natural science and professional cycles of the Federal State Educational Standard of the specialty “General Medicine”. Being the theoretical basis of medicine in general, biology is of particular importance for the mastery of such disciplines as anatomy, histology and cytology, physiology, biological chemistry, biophysics, genetics, immunology, fundamentals of ecology and nature conservation. For students of this specialty, biology is especially important as the fundamental basis of medicine in general.

The purpose of the development of the discipline "Biology" is to acquaint the student with the basic provisions, laws, concepts of modern biology, identify the actual problems and prospects of biological science. Biology is designed to instill in students a natural-science view of medical problems and tasks, teach them to understand the human body as a physico-chemical system, and the causes of diseases and pathologies as specific material factors, internal or due to the external environment.

Objectives of the discipline:

• obtaining knowledge about the manifestations of the fundamental properties of living at the main evolutionary-defined levels of the organization;
• study of the chemical composition of the cell, the structure and functions of proteins, carbohydrates, lipids, nucleic acids;
• understanding of the basics of cell theory;
• prove the physico-chemical nature of life, manifested in the process of metabolism;
• know the essence of genetic information and the mechanism of its implementation (protein biosynthesis) Central dogma of molecular biology; mechanisms of regulation of gene activity;
• consider the laws and mechanisms of cell reproduction (mitosis and meiosis) and organisms based on the replication of genetic information (DNA);
• to study the forms and mechanisms of reproduction of organisms, periodization of ontogenesis, peculiarities of human ontogenesis;
• to consider the laws of genetics and their importance for medicine, the main laws of heredity and variability, hereditary diseases of a person;
• know the current topical hypotheses of the origin of life, the basic laws and principles of biological evolution;
• understand the basics of anthropogenesis and the anthropogenic evolution of the biosphere, strategic objectives for the conservation of biodiversity and nature conservation
• consider the basic laws of the functioning of the biosphere and ecosystems;
• understanding of parasitism as a form of biotic relationships; the characteristic of the main parasitic representatives of unicellular, flat and roundworms, arthropods; knowledge of preventive measures for parasitic diseases.

The content of the discipline covers a range of the most fundamental questions of general biology: manifestations of the fundamental properties of a living person at the main evolutionarily determined levels of the organization; chemical composition, structure and functioning of the cell as an elementary living system; structure and implementation scheme of

genetic information; forms and mechanisms of reproduction of organisms; periodization and ontogeny mechanisms; laws of genetics and their importance for medicine; anthropogenesis and the theory of evolution; basic laws of the biosphere and ecology; parasitism as a form of biotic bonds, the main parasites of man.

To successfully study the “Biology” discipline, students should have the following preliminary competences established within the framework of general (school) education:

1. To know the material of the discipline "Biology" at the level of the school course.

3. To be able to formulate your thoughts logically and competently using special terms, the ability to build holistic, coherent and logical statements with competent use of biological terms and argumentation of their judgments, to be able to work with literature and keep a synopsis, highlighting the main idea from the information flow.

2. To possess common basic methods of studying the world around us, such as observation, experience, analysis; understand the essence of cause-effect relationships.

As a result of studying this discipline, students form the following professional competencies (elements of competencies):

Code and the wording of the competence of the AT FEFU	**Stages of competence formation**	
- the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (CPC – 7)	Know	of the nature of genetic information and mechanisms of its realization and replicating, mechanisms of gene activity regulation, ontogenesis periodization, main ecological laws, principles of biosphere functioning, nature of parasitism as a form of biotic relationships.
	Can	to effectively apply natural-scientific approach in modern medical activities; ability to use biological modeling at the basic level

	Master	of general methodology of natural-scientific and biomedical research; understanding of main principles of observation, experiment. analytic/comparative approach.
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (CPC – 9)	Know	fundamental principles and mechanisms of diseases in a human organism form the general biological point of view
	Can	to use knowledge of molecular and biological organization of living systems for assessment of functional state of an organism, including diagnostics of pathological processes
	Master	of analysis of biological systems functioning on the ontogenetic (cellular and organismic) level

To form the aforesaid competences in the frames of the "Biology" discipline, the following methods of active/interactive education are used:

Lection classes:

1. Lecture-visualisation
2. Lecture-conversation

Practical classes:

1. Seminar-debate
2. Detailed conversation
3. Seminar-press-conference

ANNOTATION

The work program of the discipline "Human Anatomy" was developed for 1st and 2nd year students in 1st, 2nd and 3rd semesters in the direction of 05/31/01 - General Medicine, a form of training. Discipline is included in the Basic disciplines block, the capacity is 432 hours, 12 credit units (252 hours of classroom work, 180 hours of IWS, including 108 hours for preparing for the exam).

The work program was compiled in accordance with the requirements of the federal state educational standard of higher education (level of training specialty), approved by order of the Ministry of Education and Science of the Russian Federation of 09.02.2016 No. 95.

The discipline "Human Anatomy" is the basis for the study of subjects - Pathological anatomy, all clinical disciplines related to the diagnosis and treatment of patients. all clinical subjects involved in diagnosis and treatment of patients.

The purpose of Anatomy is: formation of students' knowledge about the structure of the human body, its organs and systems based on contemporary methods of research; Ability to use the knowledge gained in the subsequent study of other basic and clinical subjects, as well as in the future professional activity of the doctor.

Course objectives are:

1. To form students' understanding of the purpuse, objectives and methods of human anatomy, their importance in the practice of a doctor.
2. To study the relationship of human organs considering age, gender and individual characteristics of the human body;
3. To study the interdependence of structure and form of organs with their functions;
4. To figure out regularities of body constitution and its constituent parts.

For successful study, of course "Human Anatomy" in students following preliminary competences must be formed:

To be able for logical and correct articulating their thoughts using specific terms;

To be able to construct a holistic, coherent and logical statements competently using of anatomical terms;

To work for creation of projects, portfolios, presentations;

To engage in research under the guidance of a professor,

To work with additional literature.

To master the simplest methods of studying of the surrounding world; To be able to see and understand the world, to guide in it (to ask themselves and others question "why?", "why for?", "what's the matter?").

Because of studying the discipline the students form following general professional and special professional competences:

Code and formulation of competence.	**Stages of formation of competence**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (CPC – 9)	**Know**	- methods of of anatomic researches and anatomical terms (Russian and Latin); -general patterns the human body structure, the structural and functional relationships of body parts -traditional and modern methods of anatomical studies; - anatomical and topographical relations of organs and body parts in the adult, children and adolescents; - main details of the structure and topography of organs, their systems, their basic functions at different ages; - possible options for the structure, main anomalies and malformations of organs and their systems.
	Can	- to seek out and show on anatomic preparations bodies and parts, structural details; - orientate to the topography and the details of the structure of bodies for anatomical preparations - correctly to call organs and their parts on

		the Russian and Latin - find and show on radiographs organs and the basic details of their structure; - find and out feelers on the body of a living person the basic bone and muscle benchmarks applied projection of the major neurovascular bundles of the human body areas
	Master	- medical and anatomical conceptual apparatus

To form the competencies in the academic course "Human Anatomy" following the methods of active / interactive learning are used:

1. There is provided carrying out a practical training with use of the computer training programs, works with moulages and phantoms, with analysis of clinical cases.
2. For the organization of independent work preparation of papers and reports for a presentation in class and at a student's conference is offered; as well as preparation for a laboratory and practical classes, work with additional literature, lesson- conference.

The practical training given in interactive forms takes 10% of classroom time; and independent out-of-class work – 42% of time.

ANNOTATION

The discipline "Histology, Cytology, Embryology" is implemented in the basic part of the curriculum of training a specialist for students in the direction (specialty) 31.05.01 Medicine.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education, approved by the Ministry of Education and Science of the Russian Federation of February 9, 2016 No. 95, for the specialty 31.05.01 Medical business (specialty level) and the curriculum for the medical specialty approved by FEFU Academic Council.

The complexity of the discipline is 252 hours (7 credits), 144 hours - classroom work, of which, 36 hours - lectures, 108 hours - practical exercises, 108 hours - independent work of students and 27 hours control over the independent work of students.

The discipline "Histology, Cytology, Embryology" is a discipline related to the B1 block of the basic part of the educational program in the structure of the general education program of higher education in the specialty 31.05.01 Medicine; studied in the second and third semesters. This discipline is an obligatory and important link in the system of biomedical sciences, providing fundamental theoretical knowledge, on the basis of which the training of the future doctor is based. To master the discipline, students use the knowledge, skills and activities mastered in the study of the preceding disciplines: "Biology", "Latin". Knowledge of the discipline "Histology, cytology, embryology" serve as a theoretical and practical basis for mastering a number of basic disciplines: normal physiology, pathological anatomy, pathological physiology, clinical and laboratory diagnostics, immunology, ophthalmology, forensic medicine, obstetrics and gynecology, etc.

Course purpose:

Formation of students' fundamental knowledge, skills and practical skills in cytology, general and private histology and human embryology, necessary for the successful development of other medical, biological and clinical disciplines and the

acquisition of professional competencies that contribute to the formation of a specialist.

Tasks:

• study of the basic laws of development and vital activity of the human body based on the structural organization of cells, tissues and organs; anatomical and physiological, age-sex and individual characteristics of the structure and development of the human body;

• training in the most important methods of studying morphological structures, allowing to identify organs and determine their tissue elements at the microscopic and ultramicroscopic levels; recognize changes in the structure of cells, tissues and organs in connection with various biological and protective-adaptive reactions of the body;

• teaching students the most important methods of histological research in order to provide a basis for studying clinical disciplines;

• formation of skills of analytical work with information (educational, scientific, regulatory and reference books and other sources), with information technology, diagnostic methods of research.

To successfully study the discipline "Histology, Cytology, Embryology", the following preliminary competences should be formed for students:

- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (CPC – 1)

Code and skill description	**Stages of skill development**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (CPC – 9)	**Know**	The basic laws of development and vital activity of the organism are based on the structural organization of cells, tissues and organs; histo-functional characteristics of tissue elements; methods of their research; structure, topography and development of cells, tissues, organs and body systems in conjunction with their function in the norm; age characteristics of cells, tissues, organs and body systems.
	Able	To give a histophysiological assessment

		various cellular, tissue and organ structures, analyze pathological processes in the human body
	Master	The ability to compare morphological changes in health and disease

In order to form these skills during "Histology, Cytology and Embryology" course, the following methods of learning will be used:

Lectures:

1. Lecture with visual aids
2. Lecture-discussion

Practical training

ANNOTATION

The work program of the discipline (ROL) “Normal Physiology” was developed for students in the direction of 30.05.01 “Medicine” in accordance with the requirements of the Federal State Educational Standard of Higher Education in this area, approved by order of the Ministry of Education and Science of the Russian Federation of February 9, 2016 approving the layout of the work program of the academic discipline for educational programs of higher education - undergraduate programs, specialties, magistracies of FEFU ”(approved on 12.05.2015 No. 12-13-824). The discipline is basic and is implemented in the 2nd year in the 3rd and 4th semesters The total complexity of the discipline is 7 credit units, 252 hours.

Discipline relies on knowledge of humanities and social disciplines, including philosophy, bioethics, psychology and pedagogy, the history of medicine; disciplines of mathematical and natural - scientific direction: physics and mathematics, medical informatics, chemistry, anatomy, histology, cytology, etc. It is prior to the study of disciplines: internal diseases, disaster medicine, pathophysiology, pharmacology, etc.

The goal is to form students' systemic knowledge about the vital activity of the whole organism and its individual parts, about the basic laws of functioning and the mechanisms of their regulation when interacting with each other and with environmental factors, about the physiological bases of clinical and physiological research methods used in functional diagnostics and in studying human integrative activity.

Tasks:

• Formation of students' skills in analyzing the functions of the whole organism from the position of integral physiology, analytical methodology and basic medicine

• Formation of a systematic approach for students in understanding the physiological mechanisms underlying the interaction with environmental factors and the implementation of adaptive strategies of the human body to maintain normal functioning from the standpoint of the concept of functional systems

• Study by students of the methods and principles of studying the state of the body's regulatory and homeostatic systems in laboratory practice and their applicability in clinical practice

• Study by students of the role of higher nervous activity in the regulation of the physiological functions of a person and the targeted management of the body's normal abilities and pathology

• Acquaintance of students with the basic principles of modeling physiological processes and creating computer models for the study and purposeful management of body functions

• Formation of the foundations of clinical thinking based on the analysis of the nature and structure of inter organ and inter system interactions from the position of integrative physiology.

As a result of studying this discipline, students form the following professional competencies:

Competence code and formulation	**Stages of competence formation**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (CPC – 9)	Knows	• * patterns of functioning of individual organs and systems under normal conditions • * changes in the body in the process of growth and aging, age physiological characteristics of the body
	Can	• use the basic methods of assessing the functional state of the human body • * explain the nature of physiological changes in adaptive activities to changing environmental conditions
	Master	• * medical and physiological conceptual apparatus • * skills of evaluation of physiological

		parameters of functional systems and human organs

The following methods of active/ interactive learning are used to form the above competences within the discipline "Normal Physiology":

Lectures:

* Lecture-visualization

* Lecture-conversation

* Lecture-press conference

Practical class:

- Discussion
- Detailed conversation
- Press conference

ANNOTATION

The discipline "Pathological Anatomy" is intended for students of the 3 course, enrolled in the direction of 31.05.01. "General Medicine" is an obligatory discipline of the basic part of the mathematical and natural science cycle. The complexity of the discipline 7 credits., 252 hours. The study of the discipline is based on knowledge acquired as a result of the development of the following disciplines of the EP: "Biology", "Anatomy", "Physiology", "Histology, embryology, cytology", "Latin language"

The course program is based on the basic knowledge gained by students: the ability to abstract thinking, analysis, synthesis (GC-1);
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC-9);

The study of the discipline is based on knowledge acquired as a result of mastering the following disciplines: "Biology", "Anatomy", "Histology, embryology, cytology".

The obtained knowledge and skills are necessary for the development of the following disciplines: General Surgery, Forensic Medicine, Neurology, Medical Genetics, Neurosurgery, Obstetrics and Gynecology, Otorhinolaryngology.

The purpose of mastering the discipline "Pathological Anatomy" is: the study of the structural bases of diseases and pathological processes, their etiology and pathogen, pathomorphological manifestations, complications, outcomes and causes of death for using the knowledge gained in clinical departments and in the work of a doctor.

Tasks:

- the study of cell pathology and general pathological processes, which together determine the morphological manifestations of a particular disease;

• - etiology, pathogenesis and morphology of diseases at different stages of their development (morphogenesis), structural bases of recovery, complications, outcomes and long-term effects of diseases;

• - morphology and mechanisms of adaptation and compensation of the organism in response to the effects of pathogenic factors and changing environmental conditions;

• - Changes in diseases arising in connection with changing environmental conditions and treatment (pathomorphosis), and as a result of therapeutic, surgical and diagnostic manipulations (pathology of therapy).

• - pathoanatomical service, its tasks in the health care system.

To successfully study the discipline "Pathological Anatomy" the following preliminary competences should be formed in students:

• readiness to use in practice the methods of the humanities, natural sciences, and biomedical sciences in educational activities;

• the ability and willingness to identify the natural scientific nature of problems, analyze the results of natural science, biomedical, improve their professional knowledge and skills;

• ability and readiness to analyze information using a systematic approach, to the perception of innovation, to use the obtained theoretical, methodological knowledge and skills in fundamental scientific, medical and biological disciplines in academic work.

As a result of studying this discipline, students form the following general cultural / professional competencies (elements of competencies):

Competence code and formulation	**Stages of forming the competence**	
- the ability and willingness to analyze the results of his own activity to prevent professional errors (CPC-5)	Knows	Etiology, pathogenesis, diagnosis, treatment and prevention of the most common diseases; The clinical picture, peculiarities of the current and possible complications of the most common diseases occurring in a typical form;
	Is able to	Interpret the results of the survey, put the patient in a preliminary diagnosis, outline the scope of

		additional research
	Possesses	Interpretation of results of laboratory, instrumental methods of diagnostics in patients of different age;
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (CPC – 9)	Knows	Concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of disease, nosology, principles of classification of diseases, basic concepts of general nosology
	Is able to	- Work with microscopes - Explain the nature of the deviations in the course of development, which can lead to the formation of variants of anomalies and vices
	Possesses	Skills of microscopy and analysis of histological preparations and electronic microphotographs;
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	Basic pathological state, symptoms, syndromes diseases, nosological forms in According to ICD.
	Is able to	Identify key pathological state, symptoms, syndromes diseases, nosological forms in According to ICD in patients with the studied pathology.
	Possesses	medico-anatomical conceptual apparatus; the simplest medical instruments (phonendoscope, spear, neurological hammer, scalpel, tweezers, probe, clamp, expander, etc.);

ANNOTATION

Discipline "Pathophysiology" is intended for students enrolled in the educational program 31.05.01. "General Medicine".

Discipline is implemented on the 3rd course in 5.6 semester, is a basic discipline.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education was used in the specialty 31.05.01 “Medicine”, approved by order of the Ministry of Education and Science of the Russian Federation of February 09, 2016 No. 95, the curriculum for preparing students.

The total complexity of the discipline is 252 hours, 7 credit units, of which 36 hours of lectures, 108 hours of practical training, 90 hours of independent work (63 hours of examination).

The purpose of mastering the discipline: the formation of students' ability to effectively solve professional medical tasks based on the pathophysiological analysis of data on pathological processes, conditions, reactions and diseases using knowledge of general patterns and mechanisms of their occurrence, development and completion, as well as to formulate principles (algorithms, strategies) and methods for their detection, treatment and prevention.

Objectives of the discipline:

• study of molecular, cellular, tissue, organ, system and intersystem mechanisms of typical pathological processes;

• Studying the causes, mechanisms of development and outcomes of specific diseases developing in individual organs and systems;

• analysis of the nature of the clinical manifestations of the main pathological processes;

• familiarization with the principles of pathogenetic treatment of diseases of individual organs and systems;

• teach the ability to conduct pathophysiological analysis of data on pathological syndromes, pathological processes, forms of pathology and individual diseases.

As a result of studying this discipline, the following general professional competencies are formed among students:

Competence code and formulation	**Stages of forming the competence**	
the ability and willingness to analyze the results of his own activity to prevent professional errors (CPC-5)	Knows	Basic concepts of general nosology. Causes, mechanisms and basic manifestations of typical violations of organs and physiological systems of the body.
	Is able to	To use educational, scientific, scientific-popular literature, the Internet for professional activity. To solve professional problems of the doctor on the basis of pathophysiological analysis of the specific data on pathological processes, states, reactions and diseases.
	Possesses	Medical-anatomical conceptual apparatus. Principles of demonstrative medicine, based on the search for solutions using theoretical knowledge and practical skills.
the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (CPC – 7)	Knows	Basic concepts of general nosology. The role of causes, conditions, reactivity of the organism in the occurrence, development and completion (outcome) of diseases.
	Is able to	To conduct pathophysiological analysis of clinical-laboratory, experimental, other data and to formulate on their basis the conclusion on the most probable reasons and mechanisms of development of pathological processes (illnesses),
	Possesses	The main methods of assessing the functional state of the human body, the skills of analyzing and interpreting the results of modern diagnostic technologies.
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (CPC – 9)	Knows	Causes and mechanisms of typical pathological processes of states and reactions, their manifestations and importance for the organism in the development of various diseases. Etiology, pathogenesis, manifestations and outcomes of the most frequent forms of pathology of organs and physiological systems, principles of their etiological and pathogenetic therapy
	Is able to	To use principles and methods of revealing pathological processes (illnesses), treatment,

		prevention of them. To integrate the results of the most common diagnostic methods.
	Possesses	Skills of analyzing the regularities of functioning of separate organs and systems in norm and pathology. Skills of pathophysiological analysis of clinical syndromes, to substantiate pathogenetic methods (principles) of diagnostics, treatment, debilitation and prophylaxis of diseases.

Annotation

The discipline " Biochemistry "is designed for students enrolled in the educational program of higher education 31.05.01" General Medicine", is included in the basic part of the curriculum, implemented in the 2nd year in the 3rd and 4th semesters. The total complexity of the discipline is 252 hours, 7 credits, 36 hours of lectures, practical classes-72 hours, laboratory classes-36 hours, independent work of students-72 hours, including 36 hours to prepare for the exam.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 " General Medicine " (level of training specialty).

Modern biochemistry is an extensive field of knowledge, including a number of sections. The most important of them are Bioorganic chemistry, dynamic biochemistry, molecular biology, functional biochemistry. Formed as an independent industry and medical biochemistry, including all of the above sections, and not only in the part that is relevant to human health and disease. Medical biochemistry studies the molecular basis of human physiological functions, molecular mechanisms of pathogenesis of diseases (molecular pathology), the biochemical basis of the prevention and treatment of disease, biochemical diagnostics of diseases and monitoring the effectiveness of treatment. Biological chemistry together with such medical and biological disciplines as biology and General genetics, normal human anatomy, histology, normal physiology forms students ' knowledge about the structure and functioning of a healthy body, and together with pathophysiology, pathological anatomy and pharmacology-knowledge about the essence of common pathological processes and the most common diseases, the mechanisms of action of drugs.

Knowledge of biochemistry is fundamental in the education of the doctor, serve as the basis for the study of subsequent theoretical disciplines and the formation of clinical thinking of the doctor in the medical departments.

The discipline "Biochemistry" is logically and meaningfully connected with such courses as General and inorganic chemistry, physiology, histology, biology.

The course program is based on the basic medical knowledge gained by students:

ability to abstract thinking, analysis, synthesis (GC-1);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC-1);

the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC-7);

Goals and objectives of the discipline:

The goal is to provide the students with knowledge about the chemical essence of the phenomena of life, to learn to apply when studying of the subsequent disciplines and professional activities the knowledge on the chemical composition and biochemical processes in the human body, as about the characteristics of norms and the signs of disease.

Tasks:

- formation of knowledge about the molecular organization and molecular mechanisms of functioning of the living.

- formation of the ability to apply knowledge about the chemical composition and biochemical processes as characteristics of the norm or signs of the disease in the study of subsequent disciplines and in practical work.

- formation of initial practical skills in biochemical diagnostic Informatics and Analytics, knowledge of the principles of basic clinical and biochemical analyses, mastery of rapid methods of biochemical analysis, the ability to choose adequate research methods and interpret the results.

For the successful study of the discipline "Biochemistry" students should be formed the following preliminary competence:

- have the ability and willingness to analyze the patterns of functioning of individual organs and systems, to use the knowledge of anatomical and physiological bases, the basic methods of clinical and immunological examination and evaluation of the functional state of the organism of an adult and a teenager for the timely diagnosis of diseases and pathological processes;

- have the ability and willingness to form a systematic approach to the analysis of medical information, based on the comprehensive principles of evidence-based medicine, based on the search for solutions using theoretical knowledge and practical skills to improve professional performance.

As a result of studying this discipline the following General cultural/ General professional/ professional competences are formed: as a result of studying this discipline the following General professional competences are formed:

Code and concept of competence	**Steps of competence evolution**	
the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7)	Knows	main metabolic pathways of amino acids and proteins, carbohydrates, lipids, nucleotides and nucleic acids and the main disorder of their metabolism in the human body.
	Is able	evaluate the relevance's of various biochemical parameters for blood and urine analysis under certain pathological conditions (diabetes mellitus, pathology of the liver, kidneys, heart)
	Is skilled	skills for solving biochemical and professional problems.
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	Knows	principles of biochemical analysis and clinical biochemical laboratory diagnostic of diseases
	Is able	uses measuring equipment while performing biochemical studies
	Is skilled	skills of making a preliminary diagnosis based on the results of patients laboratory study

The following active methods are used to form the above competences within the discipline "Biochemistry": practical exercises in the form discussions and brainstorming.

Annotation

The discipline "Immunology Courses" is intended for students enrolled in the educational program "General Medicine", is included in the basic part of the curriculum. Discipline is implemented in the 2 course, 3th semester, is a basic discipline.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education (level of training of highly qualified personnel) in the specialty 31.05.01 was used. "General Medicine" (the level of training of highly qualified personnel), the curriculum for preparing students for the General Education and Training Program "General Medicine". The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic medical knowledge gained by experts:

- the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation, natural disasters and other emergency situations (PC – 3)
- the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)

The purpose of the course: mastering the knowledge of the general laws of development, structure and function of the body's immune system in normal conditions and in diseases caused by impaired immune mechanisms, as well as the basic principles of diagnosis, treatment of immune-mediated human diseases.

Tasks:

1. Acquisition by students of knowledge about the basic structural and functional features of the immune system.
2. Acquisition by students of knowledge about the causes of development, immunopathogenesis and clinical manifestations of the main immunodeficiency, allergic and other diseases of the immune system.

3. Training students in the most important methods of assessing the immune status using modern molecular genetic, immunological and cellular technologies; allowing to detect defects in the immune system.

4. Formation of ideas about the leading role of immunogenetic factors in the development and functioning of the immune system, the development of immunopathologies.

5. Formation of approaches to the formulation of the immune diagnosis and the development of tactics for the treatment and prevention of diseases of the immune system.

To solve these problems, a course of thematic lectures, laboratory and practical classes is planned.

As a result of studying this discipline, students form the following professional competencies.

Code and formulation of competence	**Stage of competence**	
the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation, natural disasters and other emergency situations (PC – 3)	Know	capable and ready to carry out anti-epidemic measures, organization of protection of the population in the centers of especially dangerous infections, with a deterioration of the radiation situation, natural disasters and other emergency situations
	Know how	capable and ready to carry out anti-epidemic measures, organization of protection of the population in the centers of especially dangerous infections, with a deterioration of the radiation situation, natural disasters and other emergency situations
	Master	ability and readiness to conduct anti-epidemic measures, organization of protection of the population in the centers of especially dangerous infections, with a deterioration of the radiation situation, natural disasters and other emergency situations
the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)	Know	and ready for educational activities to eliminate risk factors and develop healthy lifestyle habits;
	Know how	and ready for educational activities to eliminate risk factors and develop healthy lifestyle habits;
	Master	willingness to educate on the elimination of risk factors and the formation of skills for a healthy lifestyle;

Annotation to the work program of the discipline
«Microbiology, virology»

The discipline "Microbiology, Virology" is intended for students enrolled in the educational program 05/31/01 - General Medicine is included in the basic part of the curriculum. Discipline is implemented in 2-3 courses in 4-5 semesters.

In developing of the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 General Medicine, the curriculum for training specialists in the specialty 31.05.01 General Medicine, were used.

The total complexity of the discipline is 7 test units, 252 hours. The curriculum provides lectures (36 hours), laboratory classes (36 hours), practical classes (72 hours), independent work of students (108 hours).

Students form a conscious understanding of the relationship between microorganisms and human health, the importance of the environment and the micro world in the development of diseases, which is a necessary prerequisite for studying such disciplines as therapy, surgery, infectious diseases. Students take an active part in carrying out scientifically grounded and effective therapeutic measures, preventing diseases, and promoting a healthy lifestyle.

A special feature in the construction and content of the course is the use of active learning methods, software and hardware, a fund of methodological, evaluation and electronic means of discipline maintenance.

The content of the discipline covers contemporary issues of general microbiology, clinical microbiology, sanitary microbiology. The general part of microbiology is presented by the history of the subject, general courses of bacteriology, virology, concept of inflectional process, including chemotherapy, the ecology of microorganisms. The private course of microbiology includes the study of individual nosological forms of infectious diseases: etiology, pathogenesis, epidemiology, clinical presentation, and prevention (course of bacteriology, virology, mycology, protozoology).

The discipline “Microbiology, virology” is logically and meaningfully connected with such courses as general and inorganic chemistry, organic chemistry, analytical chemistry, biology, botany, physiology with the basics of anatomy, pathology.

The purpose of studying the discipline of microbiology, virology is the formation of medical thinking among students, based, inter alia, on the knowledge of the biological properties of microorganisms and their role in the development of diseases and the formation of immunity; the use of modern methods of diagnosing infectious diseases, biological preparations for the specific prophylaxis and treatment of infectious human diseases.

Tasks of microbiology, virology as a profile educational discipline:

1. Obtaining of theoretical knowledge in the field of systematics and nomenclature of microorganisms, their morphology, physiology, identification, role in nature, in infectious and non-infectious human pathology.

2. Obtaining knowledge on the mechanisms of interaction of microbes with the human body, the pathogenesis of infectious diseases; methods of microbiological diagnostics, principles of etiotropic treatment and specific prophylaxis of diseases, use of basic antibacterial, antiviral and biological preparations.

3. Formation of a systematic approach to the analysis of scientific medical information, including the identification of aerobic and anaerobic microorganisms from the studied material, based on micro preparations of biological objects and knowledge of the biological properties of pathogens.

As a result of studying this discipline, students form the following general cultural and professional competencies (elements of competencies).

- ability and readiness to conduct anti-epidemic measures, organization of protection of the population in the centers of especially dangerous infections, with deterioration of the radiation situation, natural disasters and other emergency situations (PC-3);

- willingness to educate on the elimination of risk factors and the formation of skills for a healthy lifestyle (PC-16).

Code of competence	Stages of competence formation	
PC-3 - ability and readiness for anti-epidemic measures, organization of protection of the population in the centers of especially dangerous infections, with deterioration of the radiation situation, natural disasters and other emergency situations.	Knows	Types of anti-epidemic measures, techniques and methods of protecting the population in the outbreaks of especially dangerous infections with a deterioration of the radiation situation and other emergency situations.
	Knows how	to assess the degree of danger in the development of anti-epidemic measures, techniques and methods of protecting the population in the outbreaks of especially dangerous infections with a deterioration of the radiation situation and other emergency situations to solve professional problems.
	Has the skill	Organizational skills in the areas of particularly dangerous infections, with deterioration of the radiation situation, natural disasters and other emergency situations.
PC-16 - willingness to educate on eliminating risk factors and developing healthy lifestyle habits.	Knows	Factors of virulence of the microorganism, their role in the development of the pathological process.
	Knows how	To determine the source of infection, the type of microorganism, its degree of danger, ways of transmission and the conditions for the occurrence of the infection process.
	Has the skill	To ensure safety and protection against pathogenic and conditionally pathogenic microorganisms.

ANNOTATION

Academic discipline "General surgery " is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the basic part of the curriculum, implemented in the 3th year in the 5,6 semesters. The total complexity of the discipline is 324 hours, 9 credits. Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

- Ability to abstract thinking, analysis, synthesis (GCC-1);
- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC-1).

The purpose of the academic discipline:

Formation of students' knowledge on the prevention, diagnosis, differential diagnosis of major surgical diseases and their most frequent complications, skills to make a plan of conservative and surgical treatment, to develop a set of measures for the rehabilitation of the patient, assessing his ability to work, dispensary features.

Tasks:

1. study of the basic principles of diagnostic and therapeutic activity in surgery.
2. mastering the basics of clinical examination of surgical patients and the skills of self-supervision of patients
3. familiarity with semiotics of the main types of surgical diseases
4. mastering the methods of providing first aid for surgical diseases, injuries.
5. to study the principles of diagnosis and differential diagnosis of surgical diseases in their typical and atypical manifestations, as well as in complicated forms of pathology
6. master the skills of interpreting the results of special research methods

7. be able to choose the method of treatment and prophylaxis, as well as the preparation of a rehabilitation plan for the main surgical diseases
8. master the skills of medical records

As a result of studying this discipline, students form the following universal, general professional and professional competencies:

Code and the wording of competence	**Stages of competence**	
GPC-11 the readiness to use medical devices, provided by medical assistance procedures	Knows	Rules of asepsis in the implementation of medical activities, the stages of treatment of surgical patients.
	Is able to	Put on and change sterile gloves, sterile gown independently and with the help of the operating sister. Perform preoperative processing and processing of the surgical field.
	Possesses	The technique of processing the hands of the surgeon and the surgical field with disinfectant solutions before surgery
PC-5 the readiness to collect and to analyze patient complaints, data of its history , the results of laboratory, instrumental postmortem and other examinations in order to recognize the incidence or the absence of diseases	Knows	the etiology, diagnosis, treatment and prevention of infectious diseases; the clinical signs, features of the course and possible complications of infectious diseases occurring in typical form; modern methods of clinical instrumental diagnosis of patients infection profile; features of the collection of pathological materials; precautions; special clothing; basic principles of diagnosis, treatment and rehabilitation of infectious diseases, indications for hospitalization with infectious diseases; principles of follow-up observation, rehabilitation of infectious patients; implementation of specific and nonspecific prevention of infectious diseases.
	Is able to	participate in the organization and provision of medical - preventive and sanitary anti-epidemic, prophylactic and rehabilitation assistance to the population with infectious diseases; interpret the results of the survey, make a preliminary diagnosis, outline the scope of additional studies to clarify the diagnosis; formulate a clinical diagnosis; develop a treatment plan taking into account the course of the disease, select and appoint drug therapy, use methods of non-drug treatment, to conduct rehabilitation measures.
	Possesses	the interpretation of the results of laboratory, instrumental methods of diagnosis with infectious disease; algorithm for making a preliminary diagnosis with the subsequent direction to additional examination and to specialist doctors; an algorithm for making a comprehensive clinical diagnosis of patients; the algorithm for the implementation of the main medical diagnostic and therapeutic measures to provide first medical aid in emergency and life-threatening conditions for infectious diseases.
PC-8 the ability to determining the	Knows	Fundamentals of management of patients who need infusion-transfusion therapy

tactics of patient surveillance with different nosological entities.	Is able to	Draw up a program of infusion-transfusion therapy in various pathological conditions. Determine the indications for infusion-transfusion therapy.
	Possesses	Skills of establishing the diagnosis, prescribing and carrying out the necessary infusion-transfusion therapy in various pathological conditions;
PC-10 the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease , which are not life-threatening and do not require emergency medical assistance	Knows	Means of infusion therapy and their mechanism of action for the treatment of sudden acute illness conditions, exacerbations of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
	Is able to	To apply means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care.
	Possesses	Skills of applying means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
PC-11 the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation;	Knows	Fundamentals of emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Is able to	To provide emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Possesses	Skills of providing emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy

The following methods of active / interactive training are used to form the above competences within the discipline "General surgery":

1. Provides for practical training using computer-based training programs.

2. For the organization of independent work, the preparation of abstracts and reports is proposed for performance in the group and at the student conference; and also, preparation for practical exercises, work with additional literature, preparation of essays, occupation conference.

The share of practical classes conducted in interactive forms is 10% of the classroom time; self-extracurricular work - 33% of the time.

ANNOTATION

The discipline "Topographic Anatomy and Operative Surgery" is intended for students enrolled in the educational program 31.05.01 "General Medicine". Discipline is implemented in 3-4 courses in the 6th and 7th semesters, is a basic discipline. The total complexity of the discipline is 252 hours, 7 credits.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “General Medicine” and the student training curriculum were used.

The course program is based on the basic knowledge gained by students:

- the ability to abstract thinking, analysis, synthesis (GCC -1)
- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1)

Course purpose:

Formation of students’ knowledge of topographic anatomy and operative surgery, the division of the human body into areas, the study of the main neurovascular bundles of each area, identifying the main symptoms of organ damage, the study of surgical instruments and its use in performing basic surgical procedures.

Tasks:

1. Study of the role of topographic anatomy and operative surgery in medicine, the development of topographic anatomy abroad and in Russia, the relationship with clinical anatomy

2. Study of standard operating equipment, instruments, and modern methods of surgical interventions. Modern methods of anesthesia.

3. The study of the layered structure of areas of the human body, methods of connection and separation of tissues, operative access, operative procedure. Modern surgical instruments.

4. The study of topographic anatomy of the upper and lower extremities, head, neck, chest, abdomen, retroperitoneal space and pelvis. The study of the main surgical interventions in each of the listed areas, special surgical instruments used in these interventions.

Because of studying this discipline, students form the following general professional and professional competencies:

Code and the wording of competence	**Stages of competence**	
the ability and willingness to analyze the results of his own activity to prevent professional errors (GPC-5)	Knows	Fundamentals of systematization and analysis of data in accordance with the knowledge obtained in the subject of topographic anatomy and operative surgery
	Is able to	Analyze the results of their own activities to prevent professional errors based on the knowledge gained on the subject
	Possesses	Methods of analysis of the results of their own activities to prevent professional errors based on the knowledge gained in the subject
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	Knows	Fundamentals of the structure and functioning of organs and systems of the human body to solve professional problems
	Is able to	To determine the localization of the organs of the human body and the most important anatomical structures for solving professional problems
	Possesses	Methods of examining the patient, determining the localization of organs of the human body, methods of studying the basic physiological functions for solving professional problems
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Basics of management of patients with various nosological forms
	Is able to	Use educational and scientific literature to address the issues of determining the tactics of managing patients with various nosological forms
	Possesses	The ability to determine the tactics of managing patients with various nosological forms on the basis of scientific and educational medical literature

The following methods of active / interactive training are used to form the above competencies within the discipline "Topographic anatomy and operative surgery":

1. Provides for practical training using computer-based training programs.

2. Practicing practical skills on models

3. For the organization of independent work, the preparation of essays and reports for the presentation in the group and at the student conference is proposed; and also preparation for practical exercises, work with additional literature, preparation of essays, occupation conference.

The share of practical classes conducted in interactive forms is 10% of the classroom time; self-extracurricular work - 33% of the time.

ANNOTATION.

Academic discipline " Faculty surgery, Urology" is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the variable part of the curriculum discipline of choice, implemented in the 4th year in the 7th and 8th semesters. The total complexity of the discipline is 252 hours, 7 credits.

Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training is Specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

Willingness to use the techniques of first aid, methods of protection in emergency situations (GCC-7);

Willingness to use basic physicochemical, mathematical and other natural science concepts, and methods in solving professional problems (GPC-7);

The ability to assess morphological. Functional and physiological states and pathological processes in the human body to solve professional problems (GPC-9);

The purpose of the academic discipline " Faculty surgery, Urology" is: the formation of students' basic knowledge and skills that allow diagnosis, treatment and emergency care for the main surgical diseases in patients of different age groups; develop clinical thinking, form professionally significant personal qualities.

Objectives of the academic discipline**:**

- teaching students the principles of organization and functioning of the surgical and urological department;
- formation of knowledge about etiology, pathogenesis, clinical manifestations, treatment and prevention of surgical and urological diseases;
- formation of knowledge about principles of diagnosis of surgical and urological diseases that cause life-threatening complications and comorbidities;

- teaching students to formulate correctly a preliminary diagnosis and refer a patient for examination;

- teaching students to diagnose acute pathology in surgical and urological patients;

- the formation of skills to provide first aid to patients with injuries and trauma in peacetime

As a result of studying this discipline, students form the following professional competencies.

Stages of competence formation	**Code of competence**	
willingness to collect and analyze patient complaints, his medical history, examination results, laboratory, instrumental, pathological and other studies in order to recognize the condition or establish the presence or absence of the disease; (PC-5)	Knows	General principles of clinical examination of surgical and urological patients. Clinical manifestations and features of the main surgical and urological syndromes. Diagnostic capabilities of laboratory and instrumental methods of examination of surgical and urological patients.
	Is able to	To conduct an interview and examination of the patient using laboratory, instrumental, histological, morphological, cytological and other methods of research. to evaluate the patient's condition in order to make a decision about the need for medical care;
	Possesses	Skill in conducting examination of a surgical and urological patient and filling in medical records, interpreting the results of laboratory, instrumental diagnostic methods, making a preliminary diagnosis
the ability to determine in a patient the main pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International Statistical Classification of Diseases and Health Problems, X revision (PC-6);	Knows	The main symptoms and syndromes, the main nosological forms of surgical and urological diseases, the International Statistical Classification of Diseases and Problems Related to Health (X Revision), an algorithm for determining the nosological forms in accordance with this classification.
	Is able to	Formulate a clinical diagnosis; make a preliminary diagnosis - to synthesize information about the patient in order to determine the pathology and the causes of it; use the International Statistical Classification of Diseases and Health Issues (X Revision) to classify the identified symptoms and syndromes, the main nosological forms of surgical and urological diseases
	Possesses	Skill of forming a clinical diagnosis; making a preliminary diagnosis - the synthesis of patient information in order to determine the pathology

		and the causes of it; use of the International Statistical Classification of Diseases and Related Health Issues (X revision) for the classification of identified symptoms and syndromes, the main nosological forms of surgical and urological diseases
ability to determine tactics of management of patients with different nosological forms (PC-8);	Knows	Laws of the pathological process in surgical and urological diseases, injuries, blood loss, clinical picture, features of the course and possible complications of the most common surgical and urological diseases occurring in typical form
	Is able to	Identify the main symptoms and syndromes common to surgical and urological diseases, make a conclusion about the nature of the pathological process and draw up a plan for the examination and treatment of the identified surgical pathology
	Possesses	Methods for identifying the main symptoms and syndromes of surgical diseases, skills of working with reference books, educational literature and other medical information sources
willingness to provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care (PC-10)	Knows	The main stages of the treatment of patients with the most common types of surgical and urological diseases, the basis of the medical staff activity at all stages of the treatment of surgical patients.
	Is able to	Identify the clinical signs of surgical and urological diseases that require emergency medical care, complete the entire study of wound infection, select a method for treating wounds according to the wound process phase, select the tools for performing PSD, assist with pathological processes and soft tissue injuries, fractures and dislocations , provide first aid for surgical diseases that do not require emergency medical care.
	Possesses	The main medical diagnostic and therapeutic measures to provide first medical aid in emergency and life-threatening conditions

1. The following methods of active / interactive learning are used to form the competencies within the discipline "Faculty Surgery, Urology":
2. It is planned to conduct practical training using computer training programs, working with models and phantoms with the analysis of clinical cases.
3. For the organization of independent work, the preparation of abstracts and reports for the presentation in the group and at the student conference is

proposed; and also preparation for practical exercises, work with additional literature, preparation of essays.

4. Active and interactive forms of training (IT-methods):
    a. analysis of real clinical situations (case-study);
    b. solution of clinical situational problems (case study);
    c. use of interactive atlases on surgical diseases.
    d. analysis of real clinical situations;

The proportion of clinical practical classes conducted in interactive forms, is 10% of the classroom time; individual extracurricular work - 10% of the time.

ANNOTATION

Academic discipline " Hospital Surgery, Pediatric Surgery" is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the variable part of the curriculum discipline of choice, implemented in the 5,6th year in the 9th, A, B semesters. The total complexity of the discipline is 360 hours, 10 credits. Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

Ability to abstract thinking, analysis, synthesis (GPC-1);

Readiness to solve standard tasks of professional activity using information, bibliographic resources, biomedical terminology, information and communication technologies and taking into account the basic requirements of information security (GPC-1).

The purpose of the academic discipline:

Formation of students' knowledge on the prevention, diagnosis, differential diagnosis of major surgical diseases and their most frequent complications, skills to make a plan of conservative and surgical treatment, to develop a set of measures for the rehabilitation of the patient, assessing his ability to work, dispensary features.

Tasks:

1. study of the basic principles of diagnostic and therapeutic activity in surgery.
2. mastering the basics of clinical examination of surgical patients and the skills of self-supervision of patients
3. familiarity with semiotics of the main types of surgical diseases
4. mastering the methods of providing first aid for surgical diseases, injuries.
5. to study the principles of diagnosis and differential diagnosis of surgical diseases in their typical and atypical manifestations, as well as in complicated forms of pathology

6. master the skills of interpreting the results of special research methods
7. be able to choose the method of treatment and prophylaxis, as well as the preparation of a rehabilitation plan for the main surgical diseases
8. master the skills of medical records

As a result of studying this discipline, students form the following universal, general professional and professional competencies:

Code of competence	**Stages of competence formation**	
(GPC – 8) the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	Blood components and products, blood substitutes and other means of infusion-transfusion therapy, indications, contraindications to their use, methods of administration, criteria of effectiveness, possible complications, methods of prevention and treatment of complications of ITT
	Is able to	To apply means of infusion-transfusion therapy to correct circulatory disorders, acid-base balance and water-salt metabolism.
	Possesses	Methods of infusion-transfusion therapy for the correction of circulatory disorders, acid-base balance and water-salt metabolism.
(PC – 6) the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review.	Knows	physiological signs of major pathological conditions, symptoms, syndromes, diseases, clinical entities, in accordance with the International Statistical Classification of Diseases and Related Health X review
	Is able to	to verify and determine the normal basic pathological conditions of the human body, as well as to diagnose the symptoms and syndromes of diseases, clinical entities, in accordance with the International Statistical Classification of Diseases and Related Health X review
	Possesses	basic skills of diagnosing pathological conditions, symptoms, syndromes, diseases, clinical entities
(PC – 8) the ability to determining the tactics of patient surveillance with different nosological entities.	Knows	Fundamentals of management of patients who need infusion-transfusion therapy
	Is able to	Draw up a program of infusion-transfusion therapy in various pathological conditions. Determine the indications for infusion-transfusion therapy.
	Possesses	Skills of establishing the diagnosis, prescribing and carrying out the necessary infusion-transfusion therapy in various pathological conditions;
(PC – 9) the willingness to treat patients with different nosological entities in	Knows	the principles of the organization of surgical care in the country, the organization of work in the outpatient setting and the conditions of the day hospital
	Is able to	provide the necessary assistance to outpatient and day

the outpatient settings and a day hospitals		hospital conditions
	Possesses	Skill allowing to diagnose and provide outpatient care for various surgical diseases.

The following methods of active / interactive training are used to form the above competences within the discipline "Hospital Surgery, Pediatric Surgery":

1. Provides for practical training using computer-based training programs.

2. For the organization of independent work, the preparation of abstracts and reports is proposed for performance in the group and at the student conference; and also, preparation for practical exercises, work with additional literature, preparation of essays, occupation conference.

The share of practical classes conducted in interactive forms is 10% of the classroom time; self-extracurricular work - 33% of the time.

ANNOTATION

The discipline "Basics Nursing" is intended for students enrolled in the educational program of 31.05.01 "General Medicine", is an obligatory discipline of the basic part of the curriculum. It is realized on 1 course in 1 semester.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education (level of training of highly qualified personnel) in the specialty 31.05.01 “General Medicine” (level of training of highly qualified personnel), the curriculum of preparing students for the General Medicine profile were used.

The total complexity of the discipline is 288 hours, 8 credit units (lectures - 36 hours, practical exercises - 72 hours, independent work of students - 180 hours, exam - 27 hours).

The course program is based on the basic knowledge acquired by students in the framework of the program of secondary education.

The purpose of the course: obtaining professional basic knowledge and skills necessary to perform nursing manipulations.

Tasks:

- Identification of problems related to the health of a patient of different ages.
- Planning and implementation of planned and emergency nursing activities using all modern methods.
- Organization and implementation of nursing care.
- Conduct quality control and effectiveness of nursing activities.
- Compliance with the principles of ethics and deontology.

In accordance with the requirements of the Federal State Educational Standards of Higher Education in specialty 31.05.01 “General Medicine” to the content and level of training of the graduate, after studying the discipline the student must possess the following competencies:

- the ability and willingness to implement ethical and deontological principles in professional activities (GPC 4);

- the willingness to ensure care for sick people and primary pre-hospital care (GPC 10);

- the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease , which are not life-threatening and do not require emergency medical assistance (PC 10);

- the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation; (PC 11);

- the willingness to do a medical assistance in emergency situations, as well as in medical evacuation (PC 13);

Code and specification of the competence	**Stages of competence generation**	
the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)	Know	Behavioral norms during inspection of the patient, ethics and deontology during an interview with the patient and his relatives
	Be able	To observe the rules of conduction when working with the team. To maintain confidentiality when meeting with medical background of the patient, the results of additional methods of examination
	Possess	Rules of etiquette to keep medical secrecy
the willingness to ensure care for sick people and primary pre-hospital care (GPC – 10)	Know	Principles of organization of patient care and the provision of pre-hospital primary health care
	Be able	To organize a health care for patients
	Possess	Skills of organization of health care and primary pre-hospital care
the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease , which are not life-threatening and do not require emergency medical assistance (PC – 10)	Know	Basic principles of organization and management in the field of public health care
	Be able	To observe the rules of conduction when working with the team. To maintain confidentiality when meeting with medical background of the patient, the results of additional methods of examination
	Possess	Rules of ethics and deontology to keep medical secrecy
the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation; (PC – 11)	Know	вопросы оценки качества оказания медицинской помощи с использованием основных медико-статистических показателей
	Be able	To apply questions assessing the quality of care with basic health statistics
	Possess	skills of assessment the quality of care within using basic health statistics
the willingness to do a medical assistance in emergency	Know	principles of medical care in emergency situations, including medical evacuation

situations, as well as in medical evacuation (PC – 13)	Be able	to organize medical assistance in emergency situations
	Possess	skills of medical care in emergency situations, including medical evacuation

ABSTRACT

The work program of the discipline "Human Anatomy" was developed for 1st and 2nd year students in 1st, 2nd and 3rd semesters in the direction of 05/31/01 - General Medicine, a form of training. Discipline is included in the Basic disciplines block, the capacity is 540 hours, 15 credit units (252 hours of classroom work, 153 hours of IWS, including 135 hours for preparing for the exam).

The work program was compiled in accordance with the requirements of the federal state educational standard of higher education (level of training specialty), approved by order of the Ministry of Education and Science of the Russian Federation of 09.02.2016 No. 95.

The discipline "Human Anatomy" is the basis for the study of subjects - Pathological anatomy, all clinical disciplines related to the diagnosis and treatment of patients. all clinical subjects involved in diagnosis and treatment of patients.

The purpose of Anatomy is: formation of students' knowledge about the structure of the human body, its organs and systems based on contemporary methods of research; Ability to use the knowledge gained in the subsequent study of other basic and clinical subjects, as well as in the future professional activity of the doctor.

Course objectives are:

1. To form students' understanding of the purpuse, objectives and methods of human anatomy, their importance in the practice of a doctor.
2. To study the relationship of human organs considering age, gender and individual characteristics of the human body;
3. To study the interdependence of structure and form of organs with their functions;
4. To figure out regularities of body constitution and its constituent parts.

For successful study, of course "Human Anatomy" in students following preliminary competences must be formed:

To be able for logical and correct articulating their thoughts using specific terms;

To be able to construct a holistic, coherent and logical statements competently using of anatomical terms;

To work for creation of projects, portfolios, presentations;

To engage in research under the guidance of a professor,

To work with additional literature.

To master the simplest methods of studying of the surrounding world; To be able to see and understand the world, to guide in it (to ask themselves and others question "why?", "why for?", "what's the matter?").

Because of studying the discipline the students form following general professional and special professional competences:

Code and formulation of competence.	**Stages of formation of competence**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	**Know**	- methods of of anatomic researches and anatomical terms (Russian and Latin); -general patterns the human body structure, the structural and functional relationships of body parts -traditional and modern methods of anatomical studies; - anatomical and topographical relations of organs and body parts in the adult, children and adolescents; - main details of the structure and topography of organs, their systems, their basic functions at different ages; - possible options for the structure, main anomalies and malformations of organs and their systems.
	Can	- to seek out and show on anatomic preparations bodies and parts, structural details; - orientate to the topography and the details of the structure of bodies for anatomical preparations

		- correctly to call organs and their parts on the Russian and Latin - find and show on radiographs organs and the basic details of their structure; - find and out feelers on the body of a living person the basic bone and muscle benchmarks applied projection of the major neurovascular bundles of the human body areas
	Master	- medical and anatomical conceptual apparatus

To form the competencies in the academic course "Human Anatomy" following the methods of active / interactive learning are used:

1. There is provided carrying out a practical training with use of the computer training programs, works with moulages and phantoms, with analysis of clinical cases.
2. For the organization of independent work preparation of papers and reports for a presentation in class and at a student's conference is offered; as well as preparation for a laboratory and practical classes, work with additional literature, lesson- conference.

The practical training given in interactive forms takes 10% of classroom time; and independent out-of-class work – 42% of time.

ANNOTATION

The discipline "Histology, Cytology, Embryology" is implemented in the basic part of the curriculum of training a specialist for students in the direction (specialty) 31.05.01 Medicine.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education, approved by the Ministry of Education and Science of the Russian Federation of February 9, 2016 No. 95, for the specialty 31.05.01 Medical business (specialty level) and the curriculum for the medical specialty approved by FEFU Academic Council.

The complexity of the discipline is 288 hours (8 credits), 162 hours - classroom work, of which, 54 hours - lectures, 108 hours - practical exercises, 72 hours - independent work of students and 54 hours control over the independent work of students.

The discipline "Histology, Cytology, Embryology" is a discipline related to the B1 block of the basic part of the educational program in the structure of the general education program of higher education in the specialty 31.05.01 Medicine; studied in the second and third semesters. This discipline is an obligatory and important link in the system of biomedical sciences, providing fundamental theoretical knowledge, on the basis of which the training of the future doctor is based. To master the discipline, students use the knowledge, skills and activities mastered in the study of the preceding disciplines: "Biology", "Latin". Knowledge of the discipline "Histology, cytology, embryology" serve as a theoretical and practical basis for mastering a number of basic disciplines: normal physiology, pathological anatomy, pathological physiology, clinical and laboratory diagnostics, immunology, ophthalmology, forensic medicine, obstetrics and gynecology, etc.

Course purpose:

Formation of students' fundamental knowledge, skills and practical skills in cytology, general and private histology and human embryology, necessary for the successful development of other medical, biological and clinical disciplines and the

acquisition of professional competencies that contribute to the formation of a specialist.

Tasks:

• study of the basic laws of development and vital activity of the human body based on the structural organization of cells, tissues and organs; anatomical and physiological, age-sex and individual characteristics of the structure and development of the human body;

• training in the most important methods of studying morphological structures, allowing to identify organs and determine their tissue elements at the microscopic and ultramicroscopic levels; recognize changes in the structure of cells, tissues and organs in connection with various biological and protective-adaptive reactions of the body;

• teaching students the most important methods of histological research in order to provide a basis for studying clinical disciplines;

• formation of skills of analytical work with information (educational, scientific, regulatory and reference books and other sources), with information technology, diagnostic methods of research.

To successfully study the discipline "Histology, Cytology, Embryology", the following preliminary competences should be formed for students:

- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1)

Code and skill description	**Stages of skill development**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	**Know**	The basic laws of development and vital activity of the organism are based on the structural organization of cells, tissues and organs; histo-functional characteristics of tissue elements; methods of their research; structure, topography and development of cells, tissues, organs and body systems in conjunction with their function in the norm; age characteristics of cells, tissues, organs and body systems.
	Able	To give a histophysiological assessment

		various cellular, tissue and organ structures, analyze pathological processes in the human body
	Master	The ability to compare morphological changes in health and disease

In order to form these skills during "Histology, Cytology and Embryology" course, the following methods of learning will be used:

Lectures:

1. Lecture with visual aids
2. Lecture-discussion

Practical training

RESUME

Discipline "Internal Therapy, Occupational Diseases" is proposed for students enrolled in the educational program 31.05.01 "Medicine" and included in the basic part of the curriculum.

Discipline is implemented on 4, in 7, 8, semesters.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" and curriculum of training in the specialty 31.05.01 "General medicine" issued in 2016

The total complexity of the discipline studying is 9 credits, 324 hours. The curriculum provides 72 hours of lectures, 126 hours of practical training, 126 hours of independent self-work of the student including 27 hours for preparing to exam).

Teaching of this discipline is aimed at the formation of student knowledge, skills and basic skills for further training at the medical university, further studying on 5 and 6 years of such disciplines as "hospital therapy, endocrinology", "Polyclinic therapy", and later - to work as a doctor in the specialty "General medicine".

A special feature in the construction and content of the course is the use of active learning methods, software and hardware, assessment fund, evaluation and electronic tools.

The study of the discipline "Internal therapy, occupational diseases" is based on the basic knowledge gained in the study of fundamental and clinical disciplines: Anatomy, Variant anatomy; Histology and embryology, Cytology; Biochemistry; Normal physiology; Pathological anatomy, clinical pathological anatomy; Pathophysiology, clinical pathophysiology; Pharmacology; Hygiene; Nursing; Propedeutics of internal diseases, radiation diagnostics.

As a result of the studying of these disciplines student should have the following preliminary competencies:

General professional competence (GPC):

• the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)

professional competence (PC):

medical activity:

the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)

- the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review. (PC – 6)

the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)

the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease, which are not life-threatening and do not require emergency medical assistance (PC – 10)

Purpose and objectives of study.

Purpose of study: development of skills of clinical diagnostics and treatment principles in the typical forms of the most common diseases of the internal organs.

Objectives of study:

- formation of knowledge on etiology, pathogenesis, classification, clinical manifestation, complications, prognosis, treatment, prevention of diseases of internal organs;
- formation of knowledge on the principles of differential diagnostics and clinical diagnosis;
- development of ability to collect anamnesis and clinical examination of the patient according to the systems; identify the main clinical criteria of the disease; interpretation of the results of laboratory and instrumental studies; drawing up a plan of examination, medical tactics and appointment of complex treatment;
- formation of skills of substantiation and formation of preliminary and clinical diagnosis;
- development of emergency skills in some emergency situations.

As a result of the development of the program of faculty therapy the student should be formed general cultural, general professional and professional competence.

Code and formulation of competence	Stages of competence formation	
GPC-8 readiness for medical use of drugs and other substances and their combinations in solving professional problems	**To know**	classification and main diseases, characteristics of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications to the use of drugs, side effects; clinical and pharmacological characteristics of the main groups of drugs and rational choice of specific drugs in the treatment of major pathological syndromes and diseases of emergency conditions
	Be able to	- prescribe medicines for certain diseases and pathological processes, based on the characteristics of their pharmacodynamics and pharmacokinetics; - justify the need for clinical and immunological examination of the patient, to analyze the effect of drugs on the totality of their pharmacological properties and the possibility of their use for therapeutic treatment
	To master	appointment of medicines in the treatment of various diseases and pathological processes
PC 5 Readiness for the collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, post-mortem and other studies in order to determine the state or of ascertaining the presence or absence of the disease	**To know**	- clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in the adult population; - modern methods of clinical, laboratory and instrumental diagnosis of diseases of therapeutic profile in the adult population;
	Be able to	palpate in human the main bone reference points, to outline the topographic contours of the organs and major vascular and nerve trunks; - analyze the results of X-ray examination; - interpret the results of the most common methods of functional diagnosis used to detect pathological processes in organs and systems; - collect anamnesis, conduct physical examination of the patient (examination, palpation, auscultation, measurement of blood pressure, determination of pulse characteristics, respiratory rate); send for laboratory and instrumental examination and consultation to specialists
	To master	- methods of General clinical examination; - interpretation of the results of laboratory and instrumental diagnostic methods
PC 6 ability to determine the patient's main pathological conditions, symptoms, syndromes of diseases, nosological forms in accordance with the international classification of diseases and health-related problems, X revision	**To know**	- concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of the disease, the principles of classification of diseases; basic concepts of general nosology.
	Be able to	-to interpret the results of the questioning, - make a preliminary diagnosis, - outline the scope of additional studies to clarify the diagnosis, - formulate a clinical diagnosis; - develop a treatment plan taking into account the course of the disease, - choose and prescribe drug therapy, - use methods of non-drug treatment, - to carry out rehabilitation measures
	To master	- algorithm for preliminary diagnosis and then sending them for further examination by specialists; algorithm deployed setting clinical diagnosis.

PC-8 ability to determine the management tactics of patients with different nosological forms	**To know**	**-**basics of the legislation of the Russian Federation on protection of public health - main normative and technical documents - maintenance of standard accounting and reporting medical records in medical organizations; - methods of treatment and indications for their use, contraindications to their appointment, especially their conduct
	Be able to	- formulate indications for the chosen method of treatment, taking into account the etiotropic and pathogenetic agents, - to justify pharmacotherapy in a particular patient with the main pathological syndromes and emergency conditions, - determine the route of administration, mode and dose of drugs, - evaluate the effectiveness and safety of the treatment
	To master	- proper maintenance of medical records; - the main medical diagnostic and therapeutic measures to provide first aid and medical care in emergency and life-threatening conditions.
PC-10 the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease, which are not life-threatening and do not require emergency medical assistance	**To know**	Basic principles of medical care in case of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the life of the patient and do not require emergency medical care
	Be able to	provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the life of the patient and do not require emergency medical care
	To master	Methods of medical care in case of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the life of the patient and do not require emergency medical care

ANNOTATION

The work program of the discipline (ROL) “Normal Physiology” was developed for students in the direction of 31.05.01 “General Medicine” in accordance with the requirements of the Federal State Educational Standard of Higher Education in this area, approved by order of the Ministry of Education and Science of the Russian Federation of February 9, 2016 approving the layout of the work program of the academic discipline for educational programs of higher education - undergraduate programs, specialties, magistracies of FEFU ”(approved on 12.05.2015 No. 12-13-824). The discipline is basic and is implemented in the 2nd year in the 3rd and 4th semesters. The total complexity of the discipline is 8 credit units, 252 hours.

Discipline relies on knowledge of humanities and social disciplines, including philosophy, bioethics, psychology and pedagogy, the history of medicine; disciplines of mathematical and natural - scientific direction: physics and mathematics, medical informatics, chemistry, anatomy, histology, cytology, etc. It is prior to the study of disciplines: internal diseases, disaster medicine, pathophysiology, pharmacology, etc.

The goal is to form students' systemic knowledge about the vital activity of the whole organism and its individual parts, about the basic laws of functioning and the mechanisms of their regulation when interacting with each other and with environmental factors, about the physiological bases of clinical and physiological research methods used in functional diagnostics and in studying human integrative activity.

Tasks:

• Formation of students' skills in analyzing the functions of the whole organism from the position of integral physiology, analytical methodology and basic medicine

• Formation of a systematic approach for students in understanding the physiological mechanisms underlying the interaction with environmental factors and the implementation of adaptive strategies of the human body to maintain normal functioning from the standpoint of the concept of functional systems

• Study by students of the methods and principles of studying the state of the body's regulatory and homeostatic systems in laboratory practice and their applicability in clinical practice

• Study by students of the role of higher nervous activity in the regulation of the physiological functions of a person and the targeted management of the body's normal abilities and pathology

• Acquaintance of students with the basic principles of modeling physiological processes and creating computer models for the study and purposeful management of body functions

• Formation of the foundations of clinical thinking based on the analysis of the nature and structure of inter organ and inter system interactions from the position of integrative physiology.

As a result of studying this discipline, students form the following professional competencies:

Competence code and formulation	**Stages of competence formation**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	Knows	• * patterns of functioning of individual organs and systems under normal conditions • * changes in the body in the process of growth and aging, age physiological characteristics of the body
	Can	• use the basic methods of assessing the functional state of the human body • * explain the nature of physiological changes in adaptive activities to changing environmental conditions
	Master	• * medical and physiological conceptual apparatus • * skills of evaluation of physiological

		parameters of functional systems and human organs

The following methods of active/ interactive learning are used to form the above competences within the discipline "Normal Physiology":

Lectures:

* Lecture-visualization

* Lecture-conversation

* Lecture-press conference

Practical class:

- Discussion
- Detailed conversation
- Press conference

RESUME

Discipline "Hospital therapy, endocrinology" is purposed for students enrolled in the educational program 31.05.01 "General medicine" and included in the basic part of the curriculum.

The working program of the discipline is developed in accordance with the Federal state educational standard of higher education (2016) specialty medicine, taking into account the recommendations of the approximate (model) curriculum of the discipline.

Discipline refers to the basic part of the block 1 "Discipline (modules)". Discipline is one of the final training and logically linked to all of the above disciplines.

Discipline is realized on 5 and 6 years in 9, A and B semesters.

The total complexity of the discipline studying is 11 credits, 396 hours. The curriculum provides 108 hours of lectures, 162 hours of practical training, 126 hours of independent self-work of the student and 54 hours to prepare for the exam at the end of the Bth semester.

Discipline refers to the basic part of the block 1 "Discipline (modules)". Discipline is one of the final training and is logically connected with previously studied disciplines: Human anatomy, Histology, embryology, cell biology, Biological chemistry, Normal physiology, Pathological physiology, Pathological anatomy, Microbiology, Virology, immunology, Propaedeutics of internal diseases, Faculty therapy, Hygiene the Basics of human ecology, Surgical disease, Obstetrics and gynecology, Oncology, Radiation diagnosis and radiotherapy, Endocrinology, Neurology, Ophthalmology, Otorhinolaryngology, Psychiatry and narcology, Infectious diseases, Dermatology and venerology, Clinical pharmacology, Phthisiology.

The study of the discipline "Inpatient therapy, endocrinology" is based on formation of the following preliminary competence:

General cultural competences:

- ability to abstract thinking, analysis, synthesis (GC-1);

- readiness for self-development, self-realization, self-education, use of creative potential (GC-5);
- readiness to use the first aid techniques, methods of protection in emergency situations (GC-7);
- willingness to work in a team, tolerant of social, ethnic, religious and cultural differences (GC-8).

General professional competence:

- readiness to solve standard tasks in professional activity with the use of information, bibliographic resources, medical and biological terminology, information and communication technologies and taking into account the basic requirements of information security (GPC-1);
- willingness to conduct medical documentation (GPC-6);
- readiness for medical use of drugs and other substances and their combinations in solving professional problems (GPC-8);
- ability to evaluate morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems (GPC-9).

professional competence:

medical activity:

- commitment to collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, post-mortem and other studies in order to determine the state or of ascertaining the presence or absence of the disease (PC-5);
- ability to determine the patient's main pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International statistical classification of diseases and health-related problems, X revision (PC-6);
- ability to determine the tactics of management of patients with different nosological forms (PC-8);

- readiness to participate in the provision of emergency medical care in conditions that require urgent medical intervention (PC-11);

research activities:

- readiness for analysis and public presentation of medical information on the basis of evidence-based medicine (PC-20),
- ability to participate in scientific research (PC-21).

Teaching of this discipline is aimed at the formation of student knowledge, skills and basic skills for further study at the 5th and 6th years of the discipline "Ipatient therapy", and later after accreditation - to work as a physician in the primary health care.

The purpose of teaching the discipline "Inpatient therapy, endocrinology" is to teach the principles and methods of diagnosis and differential diagnostics of major syndromes and diseases of the internal organs, formation of students the necessary amount of knowledge and practical skills, the development of interdisciplinary thinking in order to form professional competencies required in the framework of professional activities of a physician for independent work in primary health care institutions.

Objectives of the discipline:

- formation of student knowledge and skills to conduct a full range of diagnostic and therapeutic measures in accordance with the clinical protocols of patients with various nosological forms of internal diseases;
- development of student skills of survey and clinical examination of patients with internal organs pathology, interpretation of the results of routine and special laboratory and instrumental methods of organs and systems research, morphological tissue research;
- formation of student skills of differential syndrome diagnostics, formulation, justification, formulation and categorization of nosological (according to ICD-10) and clinical diagnostics, drawing up a plan of examination of patients,

determining the tactics of their management in accordance with the current clinical guidelines (protocols);

- formation of student skills and abilities to carry out prevention, treatment and rehabilitation of patients with diseases of internal organs, prescribe and directly carry out treatment of patients with major diseases of internal organs;
- formation of skills of the medical history registration, clinical diagnostics, plan of examination and treatment, determining the ability to work and indications for hospitalization, keeping diaries and epicrisis design when working with therapeutic patients.

As a result of this discipline study, students form the following general cultural and general professional competence (elements of competence):

Code and formulation of competence	**Stages of competence formation**	
GC-1 Ability to abstract thinking, analysis, synthesis	Knows	Etiology, pathogenesis of diseases
	Able to	Determine cause-and-effect relationships
	Masters	The logic of diagnosis
GC-5 Readiness for self-development, self-realization, self-education, use of creative potential	Knows	Determine own level of training, highlight the purpose of training
	Able to	Readiness for self-development, self-realization, self-education, use of creative potential
	Masters	Ability to analyze the results of own activities and gain experience
GC-8 Willingness to work in a team, tolerant of social, ethnic, religious and cultural differences	Knows	Moral and ethical norms and principles of medical behavior, basics of deontology
	Able to	Build and maintain relationships in the team, tolerant to perceive the personal characteristics of the team members

	Masters	Practical application of the principles of deontology and medical ethics
GPC-1 readiness to solve standard tasks in professional activity with the use of information, bibliographic resources, medical and biological terminology, information and communication technologies and taking into account the basic requirements of information security	Knows	Etiology, pathogenesis, diagnosis criteria, modern classification, symptoms, features of the course, possible complications, methods of diagnosis and treatment of diseases
	Able to	Use educational, scientific literature, the internet with an assessment of levels of evidence and criteria of quality of the contents, remote forms of education
	Masters	Methods of general clinical study and interpretation of survey results, modern technologies of information retrieval
GPC-4 Ability and willingness to implement ethical and deontological principles in professional activity	Knows	Moral and ethical principles of doctor's behavior, duties of medical staff
	Able to	To build and maintain relationships with patients on the basis of humanism, in the team-on the basis of
	Masters	Principles and practical application of the basics of medical deontology and ethics
GPC-5 Ability and willingness to analyze the results of their own activities to prevent professional	Knows	Criteria for diagnosis, modern classification, symptoms, features of the course, possible complications, methods of treatment of major therapeutic diseases in accordance with clinical guidelines, approved Russian Ministry of Health
	Able to	To analyze compliance of own activity with available clinical recommendations of medical communities, to evaluate the effectiveness of the examination and treatment, the results of internal and external (insurance) examinations

	Masters	Skills of differential diagnostics, analysis of own professional actions, communication
GPC-6 Willingness to conduct medical documentation	Knows	The main forms of medical documentation in the hospital (medical history, discharging documents)
	Able to	Correctly fill out the basic forms (medical history, discharging documents)
	Masters	Skills of medical documentation formulation
GPC-8 Readiness for medical use of drugs and other substances and their combinations in solving professional problems	Knows	Classification and characteristics of basic drugs, their indications, contraindications, side effects
	Able to	Analyze the effects of drugs on the base of totality of their pharmacological properties and the possibility of their use, including the possibility of combinations
	Masters	Skills in the use of drugs in the treatment of common therapeutic diseases
GPC-9 Ability to evaluate morphofunctional, physiological conditions and pathological processes in the human body to solve professional problems.	Knows	Concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of diseases, structural and functional basis of pathological processes
	Able to	To carry out clinical and additional examination of patients with interpretation of results, with reflection of structural and functional disorders
	Masters	The skills to assess the morphological substrate and the performance of the individual pathogenesis of diseases of internal organs of a patient being examined

GPC-11 Readiness for use of medical devices provided by the procedures of medical care	Knows	Additional medical devices of diagnosis and treatment of therapeutic diseases
	Able to	Use sphygmomanometers, pekkfluorometer, spirometer, pulse oximeter, glucometer, camera recording ECG for the diagnosis, a nebulizer for the treatment
	Masters	Interpretation of the outcomes of research and treatment
PC-1 Ability and readiness to implement a set of measures aimed at the preservation and promotion of health, including the formation of a healthy lifestyle, prevention of the occurrence and (or) spread of diseases, their early diagnosis, identification of the causes of their occurrence and development, as well as aimed at eliminating the harmful effects on human health factors of its habitat	Knows	The impact of the environment on health, the factors influencing human health, the basics of valeology, the basics of preventive measures purposed for health strengthening
	Able to	To participate in the provision of medical and preventive care to the population, to assess the factors affecting the health of a particular patient.
	Masters	Methods of sanitary and educational work, assessment of individual risk factors
PC-5 commitment to collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, post-mortem and other studies in order to determine the state or of ascertaining the presence or absence of the disease	Knows	Methods of collecting complaints, anamnesis, examination of patients, indications for the appointment of additional methods of examination and examinations of specialists in internal diseases
	Able to	Correctly draw up the identified changes in a disease history, to assess the severity of the condition, to formulate a diagnosis, to make a plan of examination.
	Masters	Skills of general clinical examination, writing medical history, diagnosis formulation

PC- 6 ability to determine the patient's main pathological conditions, symptoms, disease syndromes, nosological forms in accordance with the International statistical classification of diseases and health-related problems, X revision	Knows	Clinical picture, classification, features of the course diagnostic methods and criteria for the diagnosis of the studied internal diseases, the formulation in accordance with the ICD codes
	Able to	To determine the leading syndromes, to assess the severity of the underlying disease or a combination of diseases with mutual aggravation, to determine the ICD code in accordance with clinical diagnosis
	Masters	Criteria for assessing the patient's condition on the basis of clinical diagnostic methods
PC-7 Readiness to carry out expert examination of temporary disability	Knows	The main orders for evaluation of temporary disability
	Able to	To formulate criteria for temporary and permanent disability depending on the work performed
	Masters	Rules of examination of temporary disability
PC-8 Ability to determine the tactics of management of patients with different nosological forms	Knows	Criteria for diagnostics of main therapeutic diseases studied and rules for routing patients with acute conditions and complicated course
	Able to	To assess the patient's condition for making tactical decisions on planned and emergency care, to identify and carry out priority diagnostic and therapeutic measures
	Masters	The main therapeutic and assessment skills and the choice of the medical care level
PC-11 Readiness to participate in the provision of emergency medical care in	Knows	Algorithms of emergency care in conditions requiring urgent intervention in the clinic of internal diseases

conditions that require urgent medical intervention	Able to	Assess the severity of the patient's condition, make quick decisions
	Masters	Skills to provide urgent care in life-threatening conditions in the clinic of internal diseases
PC-17 Ability and willingness to identify the main symptoms and syndromes of diseases, to analyze the functioning patterns of various organs and systems in various diseases, using the algorithm of diagnosis, to perform basic diagnostic measures to identify negative and life-threatening conditions	Knows	etiology, pathogenesis and prevention of the most common diseases; modern classification of diseases; clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in different age groups; criteria for the diagnosis of various diseases.
	Able to	to make a preliminary diagnosis - to synthesize information about the patient in order to determine the pathology and the causes of it; to outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result; to formulate a clinical diagnosis.
	Masters	the algorithm of preliminary diagnosis followed by the direction of the patient to the appropriate medical specialist; algorithm of detailed clinical diagnosis.
PC-19 Ability and willingness to perform basic therapeutic measures in the most common diseases and conditions in adults and adolescents, capable of causing severe complications and (or) death: diseases of the endocrine, cardiovascular, respiratory, digestive, genitourinary systems and blood, in a	Knows	methods of treatment and indications for their use: the mechanism of therapeutic action of physical therapy and physiotherapy, indications and contraindications to their appointment, especially their conduct; clinical and pharmacological characteristics of the main groups of drugs and the rational choice of specific drugs in the treatment of major pathological syndromes of diseases and

timely manner to identify life-threatening disorders (acute blood loss, respiratory disorders)		emergency conditions in patients, including the basics of anti-doping legislation.
	Able to	to develop a plan of therapeutic actions, taking into account the course of the disease and its treatment; to formulate indications for the chosen method of treatment, taking into account the etiotropic and pathogenetic agents, to justify pharmacotherapy for the main pathological syndromes and emergency conditions, to determine the route of administration, mode and dose of drugs, to assess the effectiveness and safety of the treatment; to use different methods of drug administration; provide first aid in case of emergency conditions, first aid to victims of lesions in emergency situations (heart failure, coma, shock), use the methods of their immediate elimination, to carry out anti-shock measures (partially implemented).
	Masters	the main medical diagnostic and therapeutic measures to provide first aid in emergency and life-threatening conditions.
PC-20 Readiness to participate in the provision of emergency medical care in conditions that require urgent medical intervention	Knows	Basic principles of evidence-based medicine and forms of presentation and analysis of medical information
	Able to	Interpret the results of the available information, allocate qualitative information, and use clinical recommendations
	Masters	Access to evidence-based research, quality medical information, public speaking skills
PC-21 Ability to participate in research studies	Knows	Principles of scientific research and data analysis

	Able to	Use available sources of information in a particular scientific field
	Masters	Skills of interpretation, elementary statistical processing of research results
PC-22 Readiness to participate in implementation of the new methods and techniques based on evidence-based research purposed for protection of public health	Knows	Principles of implementation of new techniques in practice
	Able to	Assess the possibility of introducing new methods into the diagnostics and treatment of patients
	Masters	Skills to evaluate new methods of diagnostics and treatment

ANNOTATION

Discipline "Policlinical Therapy" is purposed for students enrolled in the educational program 31.05.01"General medicine" and included in the basic part of the curriculum.

Discipline is realized on 5, 6 years in 9,10,11semesters.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" and the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the development of the discipline is 12 credits, 432 hours. The curriculum provides 88 hours of lectures, 159 hours of practical training and independent work of the student (185 hours.).

Discipline " Policlinical Therapy " refers to the basic part of the professional cycle of disciplines in the preparation of a specialist in the specialty "General medicine".

A basic feature in the construction and content of the course is the use of methods of active learning, software and hardware, educational fund, evaluation and electronic means of discipline.

The study of the discipline " Policlinical Therapy " is based on the basic knowledge gained in the study of fundamental and clinical disciplines: Anatomy, Variant anatomy; Histology, embryology, Cytology; Biochemistry; Normal physiology; Pathological anatomy, clinical pathological anatomy; Pathophysiology, clinical pathophysiology; Pharmacology; Hygiene; Nursing; Propedeutics of internal diseases, radiation diagnosis.

The course program is based on the basic knowledge gained by students:

- ability and willingness to implement ethical and deontological principles in professional activity (GPC 4);

- readiness for medical use of drugs and other substances and their combinations in solving professional problems (GPC-8);

- the ability to assess morphofunctional, physiological States and pathological processes in the human body to solve professional problems (GPC-9);

- readiness to ensure the organization of patient care and the provision of primary health care (GPC 10);

- readiness for collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, pathological and other investigations in order to determine the state or of ascertaining the presence or absence of the disease (5 PC);

- the ability to determine the tactics of management of patients with different nosological forms (PC-8);

- readiness to provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the life of the patient and do not require emergency medical care (PC 10);

- readiness to participate in the provision of emergency medical care in conditions requiring urgent medical intervention (PC 11).

Goal of the study: to form a holistic view of the main stages of the doctor's work in the provision of primary health care in an outpatient clinic; to acquire the competence of providing medical and preventive care to the adult population in ambulatory.

Objectives of the discipline:

- to study characteristics of organization, workload and physician outpatient clinics, temporary diagnostic capabilities of outpatient services;
- to develop competencies for the implementation of disease prevention among the adult population;
- to develop competencies for the implementation of clinical supervision of the adult population taking into account age, gender and initial health status;
- to develop the competence of clinical thinking in diagnostics of the most common therapeutic diseases and pathological conditions in the adult

population in outpatient units on the basis of ownership of propaedeutic and laboratory-instrumental methods of research;

- develop competence of clinical thinking to evaluate characteristics of course of the most common therapeutic diseases in the adult population and their outpatient treatment;
- to develop competence in rehabilitation activities among the adult population with somatic diseases, in an outpatient unit;
- develop competence to perform examination of temporary and permanent disability;
- develop competence to provide medical care to the adult population in case of emergency conditions at the prehospital stage

3. Requirements for the results of the discipline studying.

Code and formulation of competence	**Stages of competence formation**	
PC 2 the ability and willingness to conduct of preventive medical examinations, clinical examinations and dispensary observations.	**To know**	fundamentals of preventive medicine, organization of preventive measures aimed at improvement of public health; organization of medical control over the health of population, principles of medical examination of population.
	Be able to	to participate in organization and provision of medical and preventive, sanitary and anti-epidemic assistance for population, taking into account its social and professional (including professional sports), its age and sex structure; develop a plan of therapeutic (surgical) actions taking into account the course of the disease and its treatment.
	To master	interpretation of the laboratory and instrumental diagnostic methods results.
PC 5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	**To know**	etiology, pathogenesis of the most common diseases; criteria for the diagnosis of various diseases.
	Be able to	to determine the status of patient: to collect anamnesis, to conduct a questioning of a patient and/or his relatives, to conduct physical examination of the patient (examination, palpation, auscultation, measurement of blood pressure, determination of the arterial pulse properties, etc.); conduct a primary examination of systems and organs: nervous, endocrine, immune, respiratory, cardiovascular, blood and hematopoietic organs, digestive, urinary,

		reproductive, musculoskeletal and joints, eyes, ears, throat, nose; to make a preliminary diagnosis-to synthesize information about the patient in order to determine the pathology and causes of it.
	To master	the algorithm of preliminary diagnostics followed by referral of the patient to the appropriate medical specialist.
PC 6 the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review.	**To know**	etiology, pathogenesis of the most common diseases; temporary classification of diseases; clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in different age groups.
	Be able to	to outline the scope of additional studies in accordance with prognosis of disease, to clarify the diagnosis and obtain reliable results; to assess the patient condition for decision-making on necessity of rendering medical assistance; to formulate a clinical diagnosis.
	To master	methods of general clinical examination. algorithm of the developed clinical diagnosis.
PC 7 readiness for the examination of temporary disability, participation in the conduction of medical and social expert reviews, detection of human biological death	**To know**	basics of legislation of the Russian Federation for protection of public health and normative documents for carrying out evaluation n of working capacity; questioning for examination of working capacity and medical and legal assistance to the population.
	Be able to	fill in the medical history of an outpatient patient, issue standard medical documentation; apply legal and medical aspects of ascertaining a person's death, biological and clinical death.
	To master	proper maintenance of medical records.

PC 9 the willingness to treat patients with different nosological entities in the outpatient settings and a day hospitals	**To know**	features of organization and volume of the doctor work of out-patient and ambulatory units, modern diagnostic opportunities of ambulatory service, methods of carrying out urgent actions, indications for planned hospitalization of patients; diagnostic methods, diagnostic capabilities of methods of direct examination of the patient therapeutic, surgical and infectious profile, modern methods of clinical, laboratory, instrumental examination of patients.
	Be able to	set priorities for addressing the health problems of patient: critical (terminal) condition as pain and chronic disease, the condition with infectious disease; choose an individual type of care for the treatment of the patient in accordance with the situation: primary care, ambulance, hospitalization.
	To master	algorithm of the detailed clinical diagnosis; the main medical diagnostic and therapeutic measures to provide qualified medical care.

ANNOTATION

Academic discipline "Traumatology, orthopedy" is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the variable part of the curriculum discipline of choice, implemented in the 4th year in the 7, 8th semesters. The total complexity of the discipline is 252 hours, 7 credits. Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

Ability to abstract thinking, analysis, synthesis (CC-1);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (CPC – 1)

Course purpose:

Clinical training of students, necessary for subsequent independent medical practice, mastering the basics of examination, diagnosis, conservative and surgical treatment, rehabilitation of patients with pathology of the musculoskeletal system.

Tasks:

1. Formation of clinical thinking of a traumatologist-orthopedist.

2. Prepare a specialist in traumatology and orthopedics for independent professional treatment and diagnostic activities, who can conduct a differential diagnostic search, provide full medical care, including emergency conditions, take preventive and rehabilitative measures to preserve life and health all age periods of the patient's life, able to successfully solve their professional tasks.

3. Prepare a specialist in traumatology and orthopedics, possessing the skills and medical manipulations on the profile of the specialty, general medical procedures on the provision of emergency and emergency care.

To successfully study the discipline "Traumatology, orthopedics" the following preliminary competences should be formed for students:

GC-4 ability to act in unusual situations, to take social and ethical responsibility for decisions

GPC-9 the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks

PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases

PC-9 the willingness to treat patients with different nosological entities in the outpatient settings and a day hospitals

As a result of studying this discipline, students form the following universal, general professional and professional competencies:

Code of competence	**Stages of competence formation**	
the readiness to use techniques of first aid and techniques of protection in emergency situations (GC - 7)	Knows	principles of first aid, methods of protection in emergency situations
	Is able to	knows how to use first aid techniques and apply methods of protection in emergency situations
	Possesses	first aid skills and emergency protection skills
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	physiological signs of major pathological conditions, symptoms, syndromes, diseases, clinical entities, in accordance with the International Statistical Classification of Diseases and Related Health X review
	Is able to	to verify and determine the normal basic pathological conditions of the human body, as well as to diagnose the symptoms and syndromes of diseases, clinical entities, in accordance with the International Statistical Classification of Diseases and Related Health X review
	Possesses	basic skills of diagnosing pathological conditions, symptoms, syndromes, diseases, clinical entities

Code of competence	Stages of competence formation	
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Fundamentals of management of patients who need infusion-transfusion therapy
	Is able to	Draw up a program of infusion-transfusion therapy in various pathological conditions. Determine the indications for infusion-transfusion therapy.
	Possesses	Skills of establishing the diagnosis, prescribing and carrying out the necessary infusion-transfusion therapy in various pathological conditions;
the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease , which are not life-threatening and do not require emergency medical assistance (PC – 10)	Knows	Means of infusion therapy and their mechanism of action for the treatment of sudden acute illness conditions, exacerbations of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
	Is able to	To apply means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care.
	Possesses	Skills of applying means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation; (PC – 11)	Knows	Fundamentals of emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Is able to	To provide emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Possesses	Skills of providing emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy

The following methods of active / interactive training are used to form the above competences within the discipline "Traumatology, orthopedic":

1. 1. Provides for practical training using computer-based training programs.
2. 2. For the organization of independent work, the preparation of abstracts and reports is proposed for performance in the group and at the student

conference; and also, preparation for practical exercises, work with additional literature, preparation of essays, occupation conference.

3. The share of practical classes conducted in interactive forms is 10% of the classroom time; self-extracurricular work - 33% of the time.

RESUME

The discipline "Disaster Medicine" is purposed for students enrolled in the educational program 31.05.01 "General medicine»

Discipline is implemented on 5th year as a basic discipline.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01. "General medicine" and the curriculum of training in the specialty 31.05.01. “General medicine”.

The total complexity of the discipline is 3 credits, 108 hours. The curriculum provides 18 hours of lectures, 36 hours of practical classes and independent self-work of the student (54 hours.).

The course program is based on the basic knowledge gained by students:

- readiness to use first aid techniques, methods of protection in emergency situations (GPC-7);

- ability and willingness to implement ethical and deontological principles in professional activity (GPC 4);

- readiness to ensure the organization of care for patients and the provision of primary health care (GPC-10);

- readiness to participate in the provision of emergency medical care in conditions requiring urgent medical intervention (PC-11)

- readiness to participate in the provision of medical assistance in emergency situations, including participation in medical evacuation (PC-13)

- ability to organize medical care in emergency situations, including medical evacuation (PC-19)

The peculiarity in the construction and content of the course is the use of methods of active learning, software and hardware, methodological funds, evaluate

Purpose of the course:

Formation of knowledge in students aimed at the safe and comfortable human interaction with surrounding natural, human-made and biological-social

environment, reducing mortality and health problems from adverse factors of natural, human-made and biological-social nature in a war and emergency situations, surgical treatment, rehabilitation of patients with surgical pathology.

Objectives:

1. Acquisition of knowledge of the public health care system in emergency situations and ability to organize provision of medical care for population in emergency situations.

2. Formation of skills in students in assessment the health consequences of emergencies, providing medical assistance at the pre-hospital stage to victims of emergency situations, in war and peace time, participation in medical evacuation.

3. Formation of readiness to participate in the protective activities for population and medical personnel in emergency situations; - ability and readiness to organize health care of the population in the aftermath of emergency situations; - ability to substantiate reasoned decisions in terms of security;

4. Formation of motivation and ability of independent decision-making specialist in the organization of health care in the aftermath of an emergency.

As a result of the discipline studying students form the following general cultural and general professional competence (elements of competence):

Code and formulation of competence	**Stages of competence formation**	
GPC-4- ability to act in unusual situations, to take social and ethical responsibility for decisions	Knows	methods and tools for protection of patients, medical personnel and property of medical institutions in emergency situations
	Able to	find and make responsible decisions, assess the medical situation in emergency situations
	Masters	methods of evaluation of medical and tactical characteristics of injuries

GPC-7- the readiness to use techniques of first aid and techniques of protection in emergency situations	Knows	methods of the first aid, methods of protection in emergency situations
	Able to	provide the first aid, apply ways and methods of protection in emergency situations of different nature
	Masters	methods of the first aid and the main technical tools of individual and medical protection in emergency situations
GPC-10- the willingness to ensure care for sick people and primary pre-hospital care	Knows	Algorithms for performing basic medical diagnostic and therapeutic measures to provide primary first aid to victims of emergency and life-threatening conditions.
	Able to	Identify life-threatening disorders and provide primary first aid to victims in emergency situations.
	Masters	the technique of providing the first aid in case of emergency
PC-6 the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review.	Knows	the main pathological symptoms and syndromes of diseases, using the knowledge of the basics of biomedical and clinical disciplines taking into account the rules of the pathology course of inner organs, systems and the whole body.
	Able to	to analyze the patterns of functioning of various organs and systems in different diseases and pathological processes, to use the algorithm of diagnostics (main, concomitant, complications), taking into account The international statistical classification of diseases and health-related problems (ICD),
	Masters	perform the basic diagnostic measures to identify urgent and life-threatening conditions
PC-19- the ability to organize medical aid in case of emergencies, including medical evacuations	Knows	Basic principles of organization of medical care and theoretical foundations of the modern system of medical evacuation supporting population in emergency situations
	Able to	to organize medical care in emergency situations, to determine the order of evacuation of victims in emergency situations
	Masters	Skills of the medical care organization, receptions and ways of evacuation of victims at emergency situations

The key feature in the construction and content of the course is the use of

methods of active learning, software and hardware, teaching fund, evaluation and electronic tools for discipline provision.

ANNOTATION

The discipline "Anesthesia, Resuscitation, Intensive Care" is purposed for students enrolled in the educational program 31.05.01 "General Medicine". Discipline is implemented on the 6th year as a basic discipline.

Development of the working program of the discipline was made in accordance with the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “General Medicine” and the student training curriculum.

The total complexity of the discipline is 144 hours, 4 credits.

The course program is based on the basic knowledge gained by students:

- readiness for the use of medical devices provided by the procedures for the medical the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC-5)
- the ability to determining the tactics of patient surveillance with different nosological entities. (PC-8)
- the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation; (PC-11)

Goal of the course:

Formation of students' knowledge about violations of the vital functions of the body, the principles of intensive care and resuscitation, the main methods of providing first aid for emergency conditions, as well as the principles of perioperative anesthesia, anesthetic management of surgical interventions and diagnostic manipulations, control and prosthetics of vital functions of the body

Objectives:

1. Acquaintance of students with the etiology and pathogenesis of critical conditions, the pathophysiological essence of the processes occurring during the dying and restoration of the organism

2. The acquisition by students of knowledge on the diagnostics and principles of treatment of critical conditions in patients with surgical, therapeutic and other profiles;

3. Training in the complex of resuscitation measures in case of acute disorders of respiration and blood circulation, with clinical death; the use of modern methods of resuscitation and intensive care in assisting patients and victims in critical conditions of various etiologies; the formation of a sustainable algorithm of cardiopulmonary and brain resuscitation.

4. Formation of ideas about the principles of organization and possibilities of modern specialized anesthesiology and resuscitation services, modern methods of monitoring and detoxification, used in intensive care.

5. Familiarization of students with the principles of anesthetic management of surgical interventions and methods of anesthetic therapy.

6. Formation of ideas about the principles of organization and possibilities of a modern specialized anesthesiology service.

As a result of studying this discipline, students form the following general cultural and professional competences.:

Competence and its code	**Stages of competence formation**	
the readiness to use techniques of first aid and techniques of protection in emergency situations (GCC-7)	Knows	The use first aid techniques, methods of protection in emergency situations
	Is able to	Provide first aid, use methods of protection in emergency situations
	Possesses	Skill of the first aid, the use of methods of protection in emergency situations
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC-5)	Knows	Methods for examining patients for research purposes in order to recognize the condition or establish whether the disease is present or not
	Is able to	Identify, analyze and interpret patient examination data in order to recognize the condition or establish the presence or absence of the disease
	Possesses	Skill of systematic examination of the patient in order to recognize the condition or establish the fact of the presence or absence of the disease
the ability to determining the tactics of patient surveillance with different nosological entities. (PC-8);	Knows	Basics of management of patients with various nosological forms
	Is able to	Use educational and scientific literature to address the issues of determining the tactics of managing patients with various nosological forms
	Possesses	The ability to determine the tactics of managing patients with various nosological forms based on scientific and educational medical literature
the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation; (PC-11)	Knows	Methods of providing emergency medical care in conditions requiring urgent medical intervention
	Is able to	Apply methods of emergency medical care in conditions requiring urgent medical intervention.
	Possesses	Skill in applying emergency medical care methods for conditions requiring urgent medical intervention
the willingness to do a medical assistance in emergency situations, as well as in medical evacuation (PC-13);	Knows	Methods of providing emergency medical care in conditions requiring urgent medical intervention
	Is able to	Apply methods of providing emergency medical care in conditions requiring urgent medical intervention.
	Possesses	Skill in applying emergency medical care methods for conditions requiring urgent medical intervention

Annotation to the Work Program for the subject
«Hygiene»

The discipline " Hygiene "is intended for students enrolled in the educational program 31.05.01" General Medicine", is included in the basic part of the curriculum.

Discipline is realized on 3, 4 courses, 6, 7 semesters.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "General Medicine", the curriculum for training specialists in the specialty 31.05.01"General Medicine".

The total complexity of the development of the discipline is 7 credits, 252 hours. The curriculum provides 36 hours of lectures, 108 hours of practical training and independent work of the student (108 hours.).

Development of students ' conscious understanding of the relationship of human health with the environment, factors and living conditions, work is a necessary prerequisite for their active participation in the conduct of evidence-based and effective therapeutic measures, disease prevention, promotion of healthy lifestyles.

The study of hygiene is of particular importance in the formation of medical activity, in solving the list of problems for the prevention of diseases listed in the Federal state educational standard, in the development of environmental thinking of students.

A special feature in the construction and content of the course is the use of active learning methods, software and hardware, Fund methodical, evaluation and electronic means of discipline.

The discipline " Hygiene "is logically and meaningfully connected with such courses as" Biology"," Microbiology"," General and medical chemistry","Medical Informatics, mathematics".

The course program is based on the basic knowledge gained by students:
- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC – 1)

- readiness to use basic physical, chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC-7);
- the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation, natural disasters and other emergency situations (PC – 3)
- the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)

The purpose of the discipline "Hygiene" is the formation of students ' natural science worldview, preventive thinking on the basis of hygienic and environmental knowledge, competencies in systemic fundamental knowledge, skills in hygiene and human ecology, necessary for the subsequent practice of the doctor.

Objectives of the discipline:

* acquisition of students ' knowledge in the field of human hygiene and ecology, a systematic understanding of the interaction of the body and various environmental factors;

* formation of students ' practical knowledge, skills and abilities to identify and assess environmental pollution, the development of sanitary and hygienic and anti-epidemic measures;

* mastering the methods of hygienic assessment of the main environmental factors affecting the health of the population;

* formation of motivation to preserve and strengthen health;

* knowledge of the basics of legislation on sanitary-epidemiological and environmental well-being of the population, international and national hygienic and environmental standards;

* teaching students statistical methods of work with hygienic and environmental information;

* development of skills in the study of scientific literature and official statistical surveys.

As a result of studying this discipline the following General cultural and General professional competences (elements of competences):

Competence code and formulation	**Stages of forming the competence**	
PC-1 the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health	Knows	the information sources of reference and regulatory nature, the main regulatory documents relating to the organization and control of the sanitary and hygienic state of various institutions; the environmental factors affecting human health and livelihoods; mechanisms of influence of various factors on the human body; the modern requirements for sanitary and hygienic and anti-epidemic regime of various medical institutions
	Is able to	work independently with educational, scientific, regulatory and reference books, to conduct a search, turn the information obtained into a means for solving professional problems; determine and evaluate the parameters of the microclimate of industrial premises of various medical institutions; carry out instrumental and computational definitions of the natural and artificial illumination of the premises; evaluate the effectiveness of natural and artificial ventilation of the premises; evaluate the quality of drinking water; calculate the number of bactericidal irradiators in disinfecting the air and surfaces of the premises; assess the energy and nutritional value of the daily human diet, taking into account the coefficient of physical activity
	Possesses	methods of planning and developing a scheme of biomedical experiments; methods of assessing the health and physical

		development of the population, assessing the functional state of the central nervous system and mental performance; methods of conducting specific preventive measures to examine the conditions of external factors and the working environment; methods of assessing the health and physical development of the population, assessing the functional state of the central nervous system and mental performance
PC-15 the willingness to help patients and their relatives to get basic health habits, to get abilities of self-control of basic physiological features, which contribute to the prevention of diseases and health promotion	Knows	the basics of a healthy lifestyle as a factor in his safe life activity; the occupational hazards and prevention of occupational pathology of a doctor; the basic hygiene measures of a health-improving nature, basic physiological indicators that contribute to the preservation and promotion of health, and the prevention of diseases
	Is able to	teach people basic hygiene measures improving character, self-control skills in vital signs, contributing to the preservation and promotion of health, prevention of diseases
	Possesses	methods of hygienic education and education of the population; skills of organizational and methodological work in the field of health planning
PC-16 the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles	Knows	the risk factors and healthy lifestyle skills
	Is able to	carry out informational, educational and sanitary - educational work
	Possesses	education skills to eliminate risk factors and develop healthy lifestyle habits

ANNOTATION

Academic discipline "General surgery " is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the basic part of the curriculum, implemented in the 3th year in the 5,6 semesters. The total complexity of the discipline is 288 hours, 8 credits. Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

- Ability to abstract thinking, analysis, synthesis (GCC-1);
- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC-1).

The purpose of the academic discipline:

Formation of students' knowledge on the prevention, diagnosis, differential diagnosis of major surgical diseases and their most frequent complications, skills to make a plan of conservative and surgical treatment, to develop a set of measures for the rehabilitation of the patient, assessing his ability to work, dispensary features.

Tasks:

1. study of the basic principles of diagnostic and therapeutic activity in surgery.
2. mastering the basics of clinical examination of surgical patients and the skills of self-supervision of patients
3. familiarity with semiotics of the main types of surgical diseases
4. mastering the methods of providing first aid for surgical diseases, injuries.
5. to study the principles of diagnosis and differential diagnosis of surgical diseases in their typical and atypical manifestations, as well as in complicated forms of pathology
6. master the skills of interpreting the results of special research methods

7. be able to choose the method of treatment and prophylaxis, as well as the preparation of a rehabilitation plan for the main surgical diseases
8. master the skills of medical records

As a result of studying this discipline, students form the following universal, general professional and professional competencies:

Code and the wording of competence	**Stages of competence**	
GPC-11 the readiness to use medical devices, provided by medical assistance procedures	Knows	Rules of asepsis in the implementation of medical activities, the stages of treatment of surgical patients.
	Is able to	Put on and change sterile gloves, sterile gown independently and with the help of the operating sister. Perform preoperative processing and processing of the surgical field.
	Possesses	The technique of processing the hands of the surgeon and the surgical field with disinfectant solutions before surgery
PC-5 the readiness to collect and to analyze patient complaints, data of its history , the results of laboratory, instrumental postmortem and other examinations in order to recognize the incidence or the absence of diseases	Knows	the etiology, diagnosis, treatment and prevention of infectious diseases; the clinical signs, features of the course and possible complications of infectious diseases occurring in typical form; modern methods of clinical instrumental diagnosis of patients infection profile; features of the collection of pathological materials; precautions; special clothing; basic principles of diagnosis, treatment and rehabilitation of infectious diseases, indications for hospitalization with infectious diseases; principles of follow-up observation, rehabilitation of infectious patients; implementation of specific and nonspecific prevention of infectious diseases.
	Is able to	participate in the organization and provision of medical - preventive and sanitary anti-epidemic, prophylactic and rehabilitation assistance to the population with infectious diseases; interpret the results of the survey, make a preliminary diagnosis, outline the scope of additional studies to clarify the diagnosis; formulate a clinical diagnosis; develop a treatment plan taking into account the course of the disease, select and appoint drug therapy, use methods of non-drug treatment, to conduct rehabilitation measures.
	Possesses	the interpretation of the results of laboratory, instrumental methods of diagnosis with infectious disease; algorithm for making a preliminary diagnosis with the subsequent direction to additional examination and to specialist doctors; an algorithm for making a comprehensive clinical diagnosis of patients; the algorithm for the implementation of the main medical diagnostic and therapeutic measures to provide first medical aid in emergency and life-threatening conditions for infectious diseases.
PC-8 the ability to determining the	Knows	Fundamentals of management of patients who need infusion-transfusion therapy

tactics of patient surveillance with different nosological entities.	Is able to	Draw up a program of infusion-transfusion therapy in various pathological conditions. Determine the indications for infusion-transfusion therapy.
	Possesses	Skills of establishing the diagnosis, prescribing and carrying out the necessary infusion-transfusion therapy in various pathological conditions;
PC-10 the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease , which are not life-threatening and do not require emergency medical assistance	Knows	Means of infusion therapy and their mechanism of action for the treatment of sudden acute illness conditions, exacerbations of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
	Is able to	To apply means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care.
	Possesses	Skills of applying means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
PC-11 the willingness to assist at the delivering emergency medical care for the patients in the conditions, requiring urgent medical participation;	Knows	Fundamentals of emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Is able to	To provide emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Possesses	Skills of providing emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy

The following methods of active / interactive training are used to form the above competences within the discipline "General surgery":

1. Provides for practical training using computer-based training programs.

2. For the organization of independent work, the preparation of abstracts and reports is proposed for performance in the group and at the student conference; and also, preparation for practical exercises, work with additional literature, preparation of essays, occupation conference.

The share of practical classes conducted in interactive forms is 10% of the classroom time; self-extracurricular work - 33% of the time.

Annotation to the Work Program for the subject
“Epidemiology**”**

The discipline " Epidemiology "is intended for students of the direction 31.05.01" Medical care " and is included in the basic part of the curriculum.
The total complexity of the development of the discipline is 3 credits, 108 hours. The curriculum includes lectures (18 hours), practical classes (54 hours), independent work of students (36 hours). The discipline is implemented in the 5th year in the 9th semester. Evaluation of learning outcomes: credit.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "Medical care" (level of training specialty).

For the successful study of the discipline "Epidemiology" students should be formed the following preliminary competence:
- ability to abstract thinking, analysis, synthesis (GCC-1);
- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC – 1)
- the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)
- the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7)
- the ability to participate in researches (PC – 21)

The program on epidemiology provides training for a new generation of doctors, who possess the full range of epidemiological studies of both infectious and non-infectious diseases. Epidemiology is considered as a set of specific cognitive and practical activities aimed at protecting public health from infectious and non-infectious diseases, as the sum of epidemiological

knowledge about individual diseases and groups of diseases, as a science of the epidemic process. The main subject of epidemiology is morbidity.

Obtaining professional knowledge and practical skills is carried out through a consistent study of the epidemiological approach to the study of diseases, General epidemiology, epidemiological diagnosis, methods of epidemiological studies, disinfection, sterilization, disinsection and deratization, immunoprophylaxis, private epidemiology of anthroponoses, zoonoses and sapronoses in practice, by self-study of the recommended literature. The solution of situational problems of varying degrees of complexity, as close as possible to the conditions of practical activity, the analysis of materials of outbreaks of infectious diseases allow to develop the ability to assess the epidemic situation, the formulation of conclusions, decision-making, their registration in the form of acts of epidemiological examination, reports of outbreaks of infectious diseases. Students, analyzing the digital material on the incidence of a particular disease in a particular locality, perform individual work aimed at identifying the causal relationship between the incidence and the factors that determine it. An epidemiological diagnosis is formulated and a set of preventive and anti-epidemic measures is developed.

Knowledge control is carried out using the initial, boundary, final test items.

The purpose of the discipline "Epidemiology" - to master the theoretical and methodological foundations of the prevention of infectious and noncommunicable diseases.

Objectives of the discipline:

1. Students acquire knowledge in the field of epidemiology, systematic understanding of the causes and spread of infectious and non-communicable diseases;

2. Formation of practical knowledge, skills and abilities:

- dynamic assessment of the epidemic situation in a certain area on the basis of methodological epidemiological principles;

- epidemiological survey of outbreaks of infectious diseases, methods of diagnosis epidemiological priority nosological forms;

- selection of appropriate epidemic environment of anti-epidemic measures, taking into account their effectiveness and their competent implementation;

- dynamic assessment of the effectiveness of anti-epidemic measures and the quality of work of officials and organizational structures of the anti-epidemic system.

As a result of the study of this discipline in students formed the following professional competence:

Competence code and formulation	**Stages of forming the competence**	
PC-3 - the ability and willingness to conduct epidemiological protection, to organize the protection of public health in the focal points of especially dangerous infections, in case of degradation of the radiation situation , natural disasters and other emergency situations	Knows	the epidemic process and non-infectious epidemiology, the epidemiology of infectious and parasitic diseases, the implementation of anti-epidemic measures, protection of the population in the centers of especially dangerous infections, with a deterioration of the radiation situation and natural disasters
	Is able to	to perform preventive, hygienic and anti-epidemic measures
	Possesses	methods to assess the health and physical development of the population, methods of planning and design of biomedical experiments
PC-16 - the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles	Knows	the basic of a healthy lifestyle as a factor in safe life activity.
	Is able to	to conduct informational, educational and sanitary - educational work; to work independently with educational, scientific and reference literature
	Possesses	techniques of hygienic education and training of the population; skills of organizational and methodical work, health planning

Annotation

The discipline "Medical Physics" is intended for the direction of training on the 31.05.01 "medical business", students of the educational program "General Medicine". This course is included in the basic part of the curriculum and is implemented in the 2 course, 3 semester. The complexity of the discipline in accordance with the training curriculum is 4 credits and 144 academic hours.

The work program was compiled in accordance with the requirements of the federal state educational standard of higher education (level of training specialty), approved by order of the Ministry of Education and Science of the Russian Federation of 09.02.2016 No. 95.

Students are trained on the basis of the continuity of knowledge and skills acquired in the following disciplines: "Medical Informatics, Mathematics", "Philosophy", "History".

Content of the course "Medical Physics".

The subject of medical physics. Tasks, research methods. Methodological issues of medical physics. Introduction to the course of medical physics. The purpose, objectives and characteristics of the subject. The main sections of medical physics. Relationship with other disciplines. The history of the development of medical physics. The contribution of domestic and foreign scientists in the development of medical physics. The value of medical physics for theoretical and practical medicine. The relationship of medical physics with other sciences. Directions of development of modern medical physics.

Mechanics of rotational motion. Basic concepts. The equation of the dynamics of rotational motion. The concept of free axes of rotation, degrees of freedom. Centrifugation Biomechanical properties of skeletal muscles. Biomechanics of skeletal joints. Articulation and levers in the human musculoskeletal system. Mechanical work of man. Vestibular apparatus as an inertial orientation system. The nature of sound. Physical characteristics. Characteristics of the auditory sensation. Physical basis of sound research methods in the clinic. Biophysics of hearing. The interaction of ultrasound with biological objects. Ultrasound and its use in medicine. Ultrasound diagnostic methods. Basics of ultrasound stimulation and ultrasound therapy. Ultrasound in surgery. Ultrasound in pharmacy. Flow and fluid properties. Biophysical patterns of blood flow through the vessels.

Fluid viscosity Newton's equation. Newtonian and non-Newtonian fluids. The flow of viscous fluid through the pipes. Poiseuille formula. The movement of bodies in a viscous fluid. Stokes law. Methods for determining the viscosity of the fluid. Clinical method for determining blood viscosity. Laminar and turbulent flow. Reynolds number. Biophysical patterns of blood flow through the vessels. Biophysical features of the aorta. Biophysical features of arterioles of a big circle of blood circulation.

Biological electrodynamics. The main provisions of the electromagnetic field. Maxwell material equations. The interaction of the electromagnetic field with matter. Basic equations of Maxwell. Radiation and propagation of the electromagnetic field. Electromagnetic spectrum (scale of electromagnetic waves). Transformation of the electric field by physical media. The effect of electric fields on cells. The interaction of the electric component of the electromagnetic field with the body. Biological effect of low frequency electromagnetic field. Biological effect of high frequency electromagnetic field. Frequency-dependent biological effects of the electromagnetic field. The use of electromagnetic fields in medicine.

Ionizing radiation. Basics of Dosimetry. The physical basis of ionizing radiation. X-ray radiation. Brake X-radiation. Characteristic x-rays. Atomic x-ray spectra. Physical aspects of the interaction of x-rays with matter. The physical basis of the use of X-rays in medicine.

Radioactivity. The interaction of ionizing radiation with a substance. Biophysical basis of the effect of ionizing radiation on the body. Ionizing radiation detectors. The use of radionuclides and neutrons in medicine. Accelerators of charged particles and their use in medicine. Radiation dose and exposure dose. Dose rate. Quantitative assessment of the biological effects of ionizing radiation. Equivalent dose. Dosimetric instruments. Protection against ionizing radiation.

The goal is to form the students a holistic view of the theoretical foundations and basic physicochemical, mathematical and other natural science concepts, and methods for solving problems in biological systems.

Tasks:

• the acquisition by students of knowledge on the collection and analysis of patient complaints, his medical history, examination results, laboratory, instrumental, pathological and other studies in order to recognize the condition or establish the presence or absence of the disease;

• the acquisition by students of knowledge of medical physics, including those physical principles that underlie the functioning of cells, organs and tissues of the human body;

• the acquisition by students of knowledge of medical physics, including consideration of biophysical processes and properties related to organs, systems and tissues of the human body in health and disease;

• acquisition by students of a scientific outlook; the ability to conduct an active dialogue on the scientific issues of physical research; skills to present the results in the form of written (scientific article) and oral communications (reports).

To successfully study the discipline "Medical Physics" the following preliminary competences should be formed among the students:

• GC-1 - the ability to abstract thinking, analysis, synthesis;

• GC-2 - the ability to use basic philosophical knowledge to form a worldview;

• GC-3 - the ability to analyze the main stages and the laws of historical development of society to form civic position;

• GPC-5 - the ability and willingness to analyze the results of his own activity to prevent professional errors

• GPC-7 - the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems

• PC-6 - the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review.

As a result of studying this discipline, students form the following general professional competencies (elements of competencies).

Code and formulation of competence.	**Stages of formation of competence**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	**Know**	Biophysical parameters characterizing the functional state of organs and tissues: mechanical, electrical, electromagnetic, optical; biophysical phenomena and processes underlying the vital activity of the organism, their characteristics;

Code and formulation of competence.	Stages of formation of competence	
	Can	Measure physical parameters and evaluate biophysical properties of biological objects with the help of mechanical, electrical and optical methods;
	Master	Methods of evaluation of morphofunctional, physiological and pathological processes in the human body;
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	**Know**	Possibilities of instrumental, pathological-anatomical and other methods of research;
	Can	Interpret the results of laboratory, instrumental, pathological and anatomical and other research methods;
	Master	skills in working with diagnostic equipment; methods of interpreting received information;
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	**Know**	the main pathological conditions; radiation symptoms of diseases;
	Can	determine the patient's underlying pathological conditions, diseases; determine the patient's main radiation symptoms of disease;
	Master	algorithms of interpretation of the revealed radial symptoms.

ABSTRACT

The discipline " Medical Biotechnology"is designed for students enrolled in the educational program 31.05.01"General Medicine".

Discipline is implemented in the 2nd course, 3rd semester, is a variable discipline for choice.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 " General Medicine " (level of training specialty).

The total complexity of the development of the discipline is 4 credits, 144 hours. The curriculum includes 18 hours of lectures, practical classes (54 hours), and independent work of the student (18 hours).

The course program is based on the basic knowledge gained by students:

GPC-1- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security

GPC 7- the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems

The purpose of the discipline " Medical Biotechnology" is to teach students the basic methods of working with genetic engineering structures and the formation of a comprehensive understanding of the use of molecular biology methods in biomedical research.

Tasks:

* To study the theoretical basis of molecular biology and genetic engineering methods
* Become familiar with PCR and molecular cloning techniques
* Get acquainted with the methods of nucleotide sequence analysis
* To study basic methods of work with human cancer cell cultures
* To study the theoretical basis of the action of anticancer drugs

As a result of studying this discipline, the following professional competencies (elements of competencies) are formed in students.

Form of final knowledge control: pass-fail exam

Competence code and formulation	**Stages of competence formation**	
the willingness to solve common tasks of professional activity with the use of information and bibliographic	Knows	– place and role of molecular modeling in medicine; – main concepts, definitions, methods and approaches used in molecular genetic studies

resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC – 1)		in medicine; – use of molecular genetic technologies in pharmacology and clinical medicine; – biomedical problems solved by approaches of molecular genetic modeling
	Is able to	– formulate problems of molecular genetic studies in medicine
	Possesses	– the main principles of molecular genetic research organizing in medicine

the readiness to use medical devices, provided by medical assistance procedures (GPC -11)	Knows	– methods, technologies and products of molecular genetic studies in medicine
	Is able to	– use knowledge of methods, technologies and products of molecular genetic studies in medicine for the patient treatment of
	Possesses	– skills and planning the introduction of new products and molecular genetic studies in medicine for patients treatment

the willingness to participate in implementation of new methods and techniques aimed at protection of public health. (PC – 22)	Knows	– place and role of molecular modeling in medicine; – main concepts, definitions, methods and approaches used in molecular genetic studies in medicine; – use of molecular genetic technologies in pharmacology and clinical medicine; – biomedical problems solved by approaches of molecular genetic modeling
	Is able to	– formulate problems of molecular genetic studies in medicine
	Possesses	– the main principles of molecular genetic research organizing in medicine

For the formation of the above competencies in the discipline "Medical Biotechnology" the following methods of active / interactive learning are used:

Lectures:

1. Lecture-visualization
2. Lecture-conversation

Workshops:

1. Seminar dispute
2. Workshop
3. Expanded conversation
4. Laboratory work

RESUME

The working program "Pharmacology" is intended for the 3rd year students enrolled in the educational program 05.31.01 "General Medicine", included in the basic part of the curriculum, and implemented within the 3rd year, in 5^{th}, 6^{th} and 7^{th} semesters.

The total volume of the discipline studied is 288 hours (8 credits) with lectures (54 hours), practical classes (108 hours) and independent self-work (108 hours including 27yours for exam preparation). The course of pharmacology ends with an exam at the end of the 7^{th} semester.

In developing the working program of the discipline is made in accordance with the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “General Medicine” (level of specialty) and the curriculum for preparation of students.

The course program is based on the basic knowledge gained by students.:

ability to abstract thinking, analysis, synthesis (GC-1);

readiness to use basic physicochemical, mathematical and other natural science concepts, and methods in solving professional problems (GPC-7);

The discipline "Pharmacology" is closely related to the other disciplines. During the study it relies on the biological sciences and provides for preliminary mastery of such disciplines as: anatomy, histology, cytology, biology, physiology, inorganic, physical and organic chemistry, biochemistry, microbiology, etc.

Purpose of the program - mastering by the students of the basic conceptions of general pharmacology and pharmacology of individual systems of the body, the mechanisms of action of drugs, knowledge of molecular targets for drugs, the development of integrated thinking in future specialists, allowing them to predict positive and negative aspects of the drug effects as well as their combinations, formation of skills to apply acquired knowledge in professional activities.

Objectives:

- master basic information on general pharmacology, the mechanisms of the drug effects in biological targets, pharmacokinetics, pharmacodynamics and the use of major groups of drugs;

- to teach students the basic principles of the written prescription designs and their rules, the ability to write prescriptions for medicines in various dosage forms and combinations;

- be able to analyze the effect of drugs at the level of the whole organism, organ, cell, subcellular structures and molecules;

- know the principles of action of the main pharmacotherapeutic groups of medicinal substances, issues of the molecular mechanism of their action and safety profile;

- determine the indications and contraindications for prescribing drugs for major diseases;

- take into account the influence of various factors (gender, weight, age, history, comorbidity, the use of other drugs, etc.) on the results of drug therapy;

- have an knowledge of drug toxicology and the principles of first aid in case of acute drug poisoning;

- to predict and timely prevent development of adverse drug reactions, concerning the aspects of the molecular action of drugs.

To successfully study the discipline "Pharmacology" the following preliminary competences should be previously formed among students:

GPC-8 - willingness to work in a team, tolerantly perceive social, ethnic, confessional and cultural differences;

GPC-9 - readiness to solve standard tasks of professional activity using information, bibliographic resources, biomedical terminology, information and communication technologies and taking into account the basic requirements of information security;

PC-14 - willingness to determine the need for the use of natural therapeutic factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and sanatorium-resort treatment.

As a result of this discipline studying is formation of the following competencies in students:

Code and formulation of competence	**Stages of competence formation**	
GPC-8 - readiness for the medical use of drugs and other substances and their combinations in solving professional problems;	**To know**	Typical pathological processes in the human body and the mechanisms of their development
	Be able to	Explain changes in the patient's body based on knowledge of typical pathological processes.
	To master	Skills of interpretation of disorders in the patient's body to explain the correction of existing violations
GPC-9 - ability to assess morphological and functional, physiological states and pathological processes in the human body to solve professional problems	**To know**	**-** basic concepts of pharmacokinetics and pharmacodynamics; - mechanisms responsible for development of drug resistance; - the basic principles of an individualized approach to the pharmacological treatment of diseases;
	Be able to	- explain the mechanisms of the main pathological processes; - explain the mechanisms of action studied during the course of drugs.
	To master	- the skill of choosing a drug on the basis of its pharmacological properties, mechanisms, and localization of the action and the possibility of replacing it with another drug in the absence; - skills to predict the possible interaction of drugs with the combined use of various drugs; - skills of work with reference and scientific

		literature, electronic databases, internet resources for solving professional problems; - the basics of measures to provide first aid before emergency and life-threatening conditions, acute poisoning with drugs.
PC-14 - willingness to determine the need for the use of natural therapeutic factors, drug, non-drug therapy and other methods in patients in need of medical rehabilitation and sanatorium-resort treatment.	**To know**	- current problems and trends in the development of pharmacology; - theoretical and methodological foundations of pharmacology; - rules for prescribing drugs in various dosage forms
	Be able to	- explain the mechanisms of the main pathological process occurrence;
	To master	- the methodology of processing pharmacological, diagnostic information using modern computer technologies.

ANNOTATION

The discipline " Dermatology "is intended for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the basic part of the curriculum.

Discipline is implemented on 4th year, is obligatory clinical discipline.

Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline. The total complexity of the discipline is 108 hours, 3 credits.

Discipline "Dermatology" refers to the professional cycle of disciplines.

The course program is based on the medical knowledge obtained by students:

GPC-8 readiness for medical use of drugs and other substances and their combinations in solving professional problems

PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases

PC-6 the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review.

PC-8 the ability to determining the tactics of patient surveillance with different nosological entities.

The purpose of the discipline «Dermatology» is to acquire knowledge of etiology, epidemiology, pathogenesis, clinical manifestations, as well as the principles of diagnosis and diagnosis, treatment and prevention of skin diseases, sexually transmitted diseases and infections (STIs).

Tasks: acquisition of students ' knowledge of etiology, epidemiology, pathogenesis, clinic of skin infectious diseases and chronic dermatoses, STIs;

- teaching students the most important methods of physical examination, allowing timely diagnosis of skin diseases and STIs

- teaching students to recognize clinical signs of skin and venereal diseases during examination of the patient, in determining the severity of the pathological process;

- teaching students the ability to identify the leading clinical signs, symptoms, syndromes of skin diseases and STIs;

- teaching students to choose the best methods of laboratory and instrumental examination of the main skin diseases, STIs and drawing up an algorithm of differential diagnosis;

- training to conduct a full range of medical, rehabilitation and preventive measures among patients with various nosological forms of skin diseases and STIs;

- training students to provide patients with skin diseases and STI first aid in the event of emergency conditions;

- teaching students to choose the optimal schemes of etiotropic treatment of the most common skin diseases and STIs;

- training of students in registration of medical documentation (medical records of inpatient or outpatient patients with skin disease and STIs, certificate of disability, statistical card, etc.).);

- familiarization of students with the principles of organization and work of medical institutions that provide assistance to patients with skin diseases and STIs;

- development of skills in the study of scientific literature and official statistical reviews;

- formation of communication skills with dermatological patients and STIs, taking into account ethics and deontology, depending on the identified pathology and characteristics of patients;

- formation of the student's communication skills with the team.

As a result of the study of this discipline, students form the following Common professional (GPC) and professional competence (PC):

Code and formulation of competence	**Stages of competence formation**

the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	classification and main characteristics of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications to the use of drugs, side effects; General principles of design of receptors and formulation of prescription drugs.
	Is able to	to analyze the effect of drugs on the totality of their pharmacological properties and the possibility of their use for therapeutic treatment; prescribe medicines, use various drugs, use the basic antibacterial, antiviral and biological drugs; to assess the possible manifestations of drug overdose and ways to eliminate them; to justify the principles of pathogenetic therapy of the most common diseases.
	Possesses	skills in the use of drugs in the treatment, rehabilitation and prevention of various diseases and pathological conditions.
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	etiology, diagnosis, treatment and prevention of skin and venereal diseases; clinical picture, features of the course and possible complications diseases that occur in the typical form; modern methods of clinical instrumental diagnosis of patients dermatovenerological profile; features of collection of pathological materials; precautionary measures, basic principles of diagnosis, treatment and rehabilitation of skin and venereal diseases, indications for hospitalization; principles of regular medical observation , rehabilitation patients'; implementation of specific and non-specific prevention of skin diseases, sexually transmitted diseases and infections.
	Is able to	to participate in the organization and provision of medical and sanitary- anti-epidemic, preventive and rehabilitation assistance to the population with dermatological diseases; interpret the results of the examination, make a preliminary diagnosis, outline the scope of additional studies to clarify the diagnosis; formulate a clinical diagnosis; develop a treatment plan taking into account the

		course of the disease, choose and assign drug therapy, use methods of non-drug treatment, to carry out rehabilitation measures.
	Possesses	interpretation of the results of laboratory, instrumental methods of diagnosis of skin and venereal diseases; the algorithm of the preliminary diagnosis with the subsequent direction on an additional examination and medical specialists; algorithm of statement of the developed clinical diagnosis by the patient; algorithm of performance of the main medical diagnostic and medical actions for rendering the first medical care at urgent and life-threatening conditions at skin and venereal diseases.
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	General and special research methods in the main sections of dermatology and venereology; basic diagnostic techniques used in the defeat of the skin and mucous membranes.
	Is able to	To obtain information about the development and course of the disease; to identify possible etiological factors, to apply objective methods of examination of the patient, to identify common and specific signs of dermatological and venereal disease; to assess the severity of the patient; to determine the need and sequence of the use of special research methods (laboratory, x-ray, endoscopic, functional), as well as consultations of narrow specialists, to interpret the data.
	Possesses	Formed theoretical and practical skills to establish the diagnosis and determine the tactics of management of the patient with skin and venereal disease.
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	General and special methods of research and treatment in the main sections of dermatology and STIs, modern technologies and equipment
	Is able to	Apply objective methods of examination of the patient, to identify common and specific signs of dermatological and venereal disease; To determine the indications for hospitalization of the patient, to determine its urgency, to organize hospitalization in accordance with the patient's condition; Determine the indications for outpatient treatment for skin diseases and sexually transmitted infections (STIs)
	Possesses	Knowledge for the purpose of differential diagnosis and establishment of the final clinical diagnosis, and carrying out necessary treatment

		at skin and venereal diseases, STIs; Knowledge to carry out the necessary control of healing and subsequent follow-up of dermatological and venereal patients .

ABSTRACT

The discipline " Medical Biotechnology"is designed for students enrolled in the educational program 31.05.01"General Medicine".

Discipline is implemented in the 3 course, 6th semester, is a variable discipline for choice.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 " General Medicine " (level of training specialty).

The total complexity of the development of the discipline is 3 credits, 108 hours. The curriculum includes 18 hours of lectures, practical classes (36 hours), and independent work of the student (18 hours).

The course program is based on the basic knowledge gained by students:

GPC-1- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security

GPC 7- the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems

The purpose of the discipline " Medical Biotechnology" is to teach students the basic methods of working with genetic engineering structures and the formation of a comprehensive understanding of the use of molecular biology methods in biomedical research.

Tasks:

* To study the theoretical basis of molecular biology and genetic engineering methods

* Become familiar with PCR and molecular cloning techniques

* Get acquainted with the methods of nucleotide sequence analysis

* To study basic methods of work with human cancer cell cultures

* To study the theoretical basis of the action of anticancer drugs

As a result of studying this discipline, the following professional competencies (elements of competencies) are formed in students.

Form of final knowledge control: pass-fail exam

Competence code and formulation	**Stages of competence formation**	
the willingness to solve common tasks of professional activity with the use of information and bibliographic	Knows	– place and role of molecular modeling in medicine; – main concepts, definitions, methods and approaches used in molecular genetic studies

resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC – 1)		in medicine; – use of molecular genetic technologies in pharmacology and clinical medicine; – biomedical problems solved by approaches of molecular genetic modeling
	Is able to	– formulate problems of molecular genetic studies in medicine
	Possesses	– the main principles of molecular genetic research organizing in medicine

the readiness to use medical devices, provided by medical assistance procedures (GPC -11)	Knows	– methods, technologies and products of molecular genetic studies in medicine
	Is able to	– use knowledge of methods, technologies and products of molecular genetic studies in medicine for the patient treatment of
	Possesses	– skills and planning the introduction of new products and molecular genetic studies in medicine for patients treatment

the willingness to participate in implementation of new methods and techniques aimed at protection of public health. (PC – 22)	Knows	– place and role of molecular modeling in medicine; – main concepts, definitions, methods and approaches used in molecular genetic studies in medicine; – use of molecular genetic technologies in pharmacology and clinical medicine; – biomedical problems solved by approaches of molecular genetic modeling
	Is able to	– formulate problems of molecular genetic studies in medicine
	Possesses	– the main principles of molecular genetic research organizing in medicine

For the formation of the above competencies in the discipline "Medical Biotechnology" the following methods of active / interactive learning are used:

Lectures:

1. Lecture-visualization
2. Lecture-conversation

Workshops:

1. Seminar dispute
2. Workshop
3. Expanded conversation
4. Laboratory work

ANNOTATON

Discipline " Neurology, Medical genetics" is purposed for the students enrolled in the educational program 31.05.01"General medicine" and included into the basic part of the curriculum. Discipline is implemented in the 4, 5th year, 8,9 semesters. The total complexity of the discipline is 216 hours, 6 credits.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education (the level of training of highly qualified personnel) in the specialty 31.05.01 "General medicine" and the curriculum of training students in the profile “General medicine”.

The course program is based on the basic knowledge gained by students:

- readiness to solve standard tasks of professional activity with the use of bibliographic resources, medical and biological terminology, information and communication technologies, taking into account the basic requirements of information security (GPC-1);

- ability and willingness to implement ethical and deontological principles in professional activity (GPC-4);

- ability to assess morphofunctional, physiological States and pathological processes in the human body to solve professional problems (GPC-9);

Purpose of the study: development of the discipline "Neurology, Medical genetics" consists in the study of the main diseases of the nervous system, the acquisition of skills in building classifications, in mastering the methodology of examination of patients with pathology of the nervous system with the interpretation of laboratory and instrumental methods of examination of the structures of the nervous system, in the development of the principles of neurological diagnosis (syndrome, topical, etiological) for the formation of clinical thinking of the future doctor.

The objectives are:

- Getting knowledge of etiology, epidemiology, pathogenesis and risk factors of nervous diseases by students;

- training students the most important methods of objective examination, allowing timely diagnosis of damage to the nervous system;

- training students to recognize clinical signs of neurological pathology during the examination of the patient, in determining the severity of the pathological process;

- training students the ability to identify the leading syndromes of nervous diseases;

- training students the choice of optimal methods of laboratory and instrumental examination in major neurological diseases and the preparation of differential diagnosis algorithm;

- training to conduct a full range of medical, rehabilitation and preventive measures among patients with various nosological forms of neurological diseases;

- training students to provide patients with first aid in case of emergency conditions;

- training students to choose the optimal schemes of etiological and pathogenic treatment of the most common nervous system;

- familiarization of students with the principles of organization and operation of medical institutions that provide assistance to patients with neurological pathology;

- formation of skills in the study of scientific literature and official statistical reviews;

- formation of communication skills with neurological patients and their representatives, taking into account ethics and deontology, depending on the identified pathology and characteristics of patients;

- formation of the student's communication skills with the team.2. As a result of the discipline studying students are to form the following professional competencies.

Requirements for the results of the discipline studying:

Code and formulation of competence	Stages of competence formation	
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	Principles of etiological, pathogenetic, symptomatic treatment of major diseases of the CNS and peripheral nervous system.
	Able to	Assign pathogenetic therapy taking into account the etiology of the disease with the use of drug therapy in patients in need of medical rehabilitation.
	Masters	Methods of providing medical care
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	1. Maintenance of standard accounting and reporting medical documentation in medical organizations 2. Basics of preventive medicine, organization of preventive measures aimed at improving the health of the population
	Able to	1. Plan, analyze and evaluate the quality of medical care, the health status of the population and the impact of environmental and industrial factors on it 2. To assess the social factors affecting the physical and psychological health of the patient: cultural, ethnic, religious, individual, family, social risk factors; to make a preliminary diagnosis-to synthesize information about the patient in order to determine the pathology and the causes of its causes; 3. Outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain reliable results
	Masters	1. Proper management of medical records 2. Methods of General clinical examination
the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review. (PC – 6)	Knows	Principles of etiological, pathogenic, symptomatic treatment of major diseases of the CNS and peripheral nervous system. Providing emergency and emergency care, indications and contraindications for the appointment of therapeutic measures, evaluation of the results of treatment
	Able to	Assign pathogenic therapy based on the etiology of the disease
	Masters	Methods of providing medical care
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Principles of etiological, pathogenic, symptomatic treatment of major diseases of the CNS and peripheral nervous system. Providing emergency and emergency care, indications and contraindications for the appointment of therapeutic measures, evaluation of the results of treatment

	Able to	Assign pathogenic therapy based on the etiology of the disease
	Masters	Methods of providing medical care

Annotation to the Work Program for the subject
“Infectious Diseases**”**

The discipline "Infectious diseases" is intended for students, enrolled in educational program 31.05.01 "Medical care», included in the basic part of the curriculum. Discipline is implemented on a 5 course, 9,10 semester.

In the development of the working program of the discipline used Federal state educational standard higher education in specialty 31.05.01 "General Medicine", educational the plan of training of specialists in the specialty 31.05.01 " General Medicine".

The total complexity of the development of the discipline is 6 credits units, 216 hours. The curriculum provides 36 hours of lectures, 108 hours of practical training and independent work of the student (45 hours.).

When studying this discipline, students form the skills of clinical and laboratory-instrumental diagnostics, treatment of the main infectious and parasitic diseases, emergency care in life-threatening conditions caused by infectious diseases, the organization of preventive and anti-epidemic measures in the focus of infectious disease.

The goal of the discipline is the formation of professional competences in the field of knowledge in general and private infectiology, the ability to apply this knowledge for the diagnosis, treatment and prevention of infectious diseases.

The aim of the discipline is to give students the theoretical foundations of knowledge in the field of Infectious Diseases, such as:

- the implementation of dispensary observation of patients;

- diagnosis of infectious diseases based on clinical and laboratory and instrumental methods of research;

- diagnosis of emergency conditions in infectious diseases; in medical activities:

- treatment of infectious diseases using therapeutic methods;

- rendering medical assistance in case of emergency conditions that developed in infectious diseases;

- carrying out medical-evacuation measures and rendering medical assistance to the population in extreme conditions of epidemics.

- carrying out rehabilitation activities among the population who have had an infectious disease;

- maintenance of accounting and reporting medical records filled in for an infectious patient;

- analysis of scientific literature and official statistical reviews;

- preparation of essays on modern scientific problems of infectious diseases.

For successful study of course " Infectious Diseases " following preliminary competences (part of competence) must be formed:

- the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems GPC – 8)

- the readiness to collect and to analyze patient complaints, data of its history , the results of laboratory, instrumental postmortem and other examinations in order to recognize the incidence or the absence of diseases (PC – 5)

- the ability of determining the patient's basic pathological conditions , symptoms , syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)

- the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)

- the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease , which are not life-threatening and do not require emergency medical assistance (PC – 10)

On completion of the course following general professional and special professional competences are expected be formed:

Competence code and formulation	Stages of forming the competence	
GPC-8 - the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	the classification and main characteristics of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications to the use of drugs, side effects; general principles of receptor design and formulation of prescription medicinal formulations.
	Is able to	to analyze the effect of drugs on the basis of their pharmacological properties and the possibility of their using for therapeutic treatment; write prescriptions for medicines, use different medicines, apply basic antibacterial, antiviral and biological preparations; evaluate the possible manifestations of overdose of drugs and how to eliminate them; substantiate the principles of pathogenetic therapy of the most common diseases.
	Possesses	skills in the use of drugs in the treatment, rehabilitation and prevention of various diseases and pathological conditions.
PC-5 the readiness to collect and to analyze patient complaints, data of its history , the results of laboratory, instrumental postmortem and other examinations in order to recognize the incidence or the absence of diseases	Knows	the etiology, diagnosis, treatment and prevention of infectious diseases; the clinical signs, features of the course and possible complications of infectious diseases occurring in typical form; modern methods of clinical instrumental diagnosis of patients infection profile; features of the collection of pathological materials; precautions; special clothing; basic principles of diagnosis, treatment and rehabilitation of infectious diseases, indications for hospitalization with infectious diseases; principles of follow-up observation, rehabilitation of infectious patients; implementation of specific and nonspecific prevention of infectious diseases.
	Is able to	participate in the organization and provision of medical - preventive and sanitary anti-epidemic, prophylactic and rehabilitation assistance to the population with infectious diseases; interpret the results of the survey, make a preliminary diagnosis, outline the scope of additional studies to clarify the diagnosis;

		formulate a clinical diagnosis; develop a treatment plan taking into account the course of the disease, select and appoint drug therapy, use methods of non-drug treatment, to conduct rehabilitation measures.
	Possesses	the interpretation of the results of laboratory, instrumental methods of diagnosis with infectious disease; algorithm for making a preliminary diagnosis with the subsequent direction to additional examination and to specialist doctors; an algorithm for making a comprehensive clinical diagnosis of patients; the algorithm for the implementation of the main medical diagnostic and therapeutic measures to provide first medical aid in emergency and life-threatening conditions for infectious diseases.
PC-6 the ability of determining the patient's basic pathological conditions , symptoms,syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review.	Knows	the clinical signs, features of the course and possible complications of the most common infectious diseases; modern classification of infectious diseases; criteria for the diagnosis of infectious diseases.
	Is able to	determine the patients basic pathological conditions, symptoms, syndromes, diseases, nosologic forms; formulate a topical diagnosis; to make preliminary and final diagnoses with a reflection of the etiology, course, nature and degree of dysfunction; outline the scope of additional studies to clarify the diagnosis and obtain a reliable result.
	Possesses	basic skills of algorithm of the developed clinical diagnosis.
PC-8 the ability to determining the tactics of patient surveillance with different nosological entities	Knows	methods of treating patients with infectious diseases; the mechanism of action of the main groups of drugs; medical indications and contraindications to their use; complications caused by their use.
	Is able to	develop a plan of therapeutic measures for various infectious diseases; select an individual type of care for the patient in accordance with the situation: primary care, ambulance, hospitalization; formulate indications for the chosen method of treatment, taking into account etiotropic and pathogenetic means, to justify pharmacotherapy in a particular patient with the main pathological syndromes, to determine the route of administration,

		the regimen and dose of drugs carry out the appointment of drug therapy for children, taking into account the clinical picture of the disease.
	Possesses	the tactics of managing patients with various nosological forms.
PC-10 the willingness to deliver medical first aid in case of sudden acute diseases and conditions, exacerbation of a chronic disease , which are not life-threatening and do not require emergency medical assistance	Knows	methods of treating patients with infectious diseases; the mechanism of action of the main groups of drugs; medical indications and contraindications to their use; complications caused by their use.
	Is able to	select an individual type of care for the patient in accordance with the situation: primary care, ambulance, hospitalization; formulate indications for the chosen method of treatment, taking into account etiotropic and pathogenetic means, to justify pharmacotherapy in a particular patient with the main pathological syndromes, to determine the route of administration, the regimen and dose of drugs carry out the appointment of drug therapy for children, taking into account the clinical picture of the disease.
	Possesses	skills the willingness to manage and treat patients with various nosological forms.

ANNOTATION

The discipline "Propaedeutics of internal diseases, radiation diagnosis" is intended for students enrolled in the educational program of 31.05.01 "General Medicine", is included in the basic part of the curriculum.

Discipline is implemented in 2, 3 courses in 4, 5, 6 semesters.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “General Medicine” was used, the curriculum for preparing students for the General Medicine profile.

The total complexity of the discipline is 360 hours, 10 credit units (lectures - 90 hours, practical exercises - 162 hours, independent work of students - 108 hours).

Developing in students a conscious understanding of the relationship of human health with the environment, factors and living conditions, and labor activity is a necessary prerequisite for their active participation in carrying out scientifically grounded and effective therapeutic measures and preventing diseases.

The study of the basics of therapy is of particular importance in the formation of medical practice, in solving the list of problems in the diagnosis and treatment of diseases cited in the Federal State Educational Standard, in developing students' clinical thinking.

A special feature in the construction and content of the course is the use of active learning methods, software and hardware, a collection of methodological, evaluation and electronic means of discipline support.

The discipline "Propedeutics of internal diseases" is logically and meaningfully connected with such courses as "Human Anatomy", "Histology, Cytology, Embryology", "Basics of Nursing".

The course program is based on the basic knowledge gained by students:

- the ability and willingness to implement ethical and deontological principles in professional activities (GPC 4);

- ability to assess morphofunctional, physiological states and pathological processes in the human body to solve professional problems (GPC -9);

- readiness to ensure the organization of patient care and the provision of primary medical care (GPC 10);

- readiness to provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the life of the patient and do not require emergency medical care (PC 10);

- willingness to participate in the provision of emergency medical care in conditions requiring urgent medical intervention (PC 11).

The purpose of the course: teaching students research methods and rules for diagnosing diseases of internal organs in the course of clinical training of a young specialist - the formation of important professional skills for examining a patient, the basics of clinical thinking, as well as medical ethics and deontology.

Tasks:

- the study of methods for direct examination of the patient (questioning, examination, palpation, percussion, auscultation, blood pressure measurement, the study of the properties of arterial pulses, etc.);

- the study of some methods of laboratory and instrumental diagnosis of diseases of internal organs (general and biochemical analysis of blood, urine tests, studies of pleural contents, sputum tests, stool tests, ECG, echoCG, spirography, etc.)

- the study of the main clinical symptoms and syndromes of diseases of internal organs and the mechanisms of their occurrence;

- the study of the symptomatology of the most common diseases of internal organs occurring in a typical classical form;

- the formation of ideas about the basic principles of the diagnostic process (the foundations of clinical thinking);

- the formation of ideas about the basic principles of medical ethics and deontology.

Requirements to the results of the implementation of the discipline.

Code and specification of the competence	**Stages of competence generation**	
Ability and willingness to implement ethical and deontological principles in professional activities (GPC 4)	Know	Behavioral norms during inspection of the patient, ethics and deontology during an interview with the patient and his relatives
	Be able	To observe the rules of conduction when working with the team. To maintain confidentiality when meeting with medical background of the patient, the results of additional methods of examination
	Possess	Rules of etiquette to keep medical secrecy
PC – 5 - the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Know	Anatomical, physiological, age and sexual characteristics of a healthy and sick person; the causes of the main pathological processes in the body and the mechanisms of their development; main symptoms and syndromes of internal disease.
	Be able	To make an inquiry of patient condition, patient's present complaints, history of the present disease (anamnesis morbi), past history (anamnesis vitae) To use palpation, percussoin and auscultation techniques for evaluation of heart and lung condition
	Possess	Methods of physical examination of the patient; Skills of interpretation of the received data, allocation of symptoms and syndromes of the disease
PC – 8 the ability to determining the tactics of patient surveillance with different nosological entities.	Know	The main clinical symptoms and syndromes of diseases of internal organs and the mechanism of their occurrence; Symptomatology of the most common of internal diseases occurring in a typical classical form; diagnose the main clinical syndromes and justify this diagnosis
	Be able	to present the results of the examination of the patient in the case history
	Possess	skills in interpreting the results of general survey, palpation, percussion, auscultation and main instrument and laboratory diagnostic methods

Annotation

The discipline "Pediatrics" is part of the basic professional training cycle for students. It is worth 10 credits and compromises of 324 study hours: 54 hours in lectures, 162 hours in practical lessons, 81 independent study hours; additional 27 hours are allocated for exams. The teaching period is Year 4 and 5, Semester 8, 9 and A.

The aim of this discipline is to develop the theoretical and practical knowledge, understanding and skills of diagnostics, medical tactics, clinical screening, preventive healthcare of the most common diseases of children of different age, and the first aid in relation to the nosology of a disease.

Learning objectives:

- Develop an ability to communicate with healthy and sick children and their parents;
- Learn how to obtain objective data when examining children, and interpret the obtained data considering the anatomical and physiological features and age norms;
- Develop practical skills to be able to diagnose the most common disease of children of different age groups, including acute infections and conditions that may threaten child's life;
- Learn the principles of clinical thinking.

Students must know:

- anatomical and physiological characteristics of organs and systems of a healthy child, normal growth and development rates (physical and psychomotor), characteristics of immunity, metabolism and homeostasis of children;
- principles of rational feeding of a healthy and sick child in the first year of life, dietary patterns for children over one year old
- features of etiology, pathogenesis, clinical picture and flow of childhood diseases, including factors contributing to chronic disease and the development of decease complications;
- principles of first aid under emergency conditions at the prehospital stage.

- principles of the organization and work of pediatric hospitals, prevention of nosocomial infections, creation of favorable conditions for the stay of patients and working conditions of medical personnel;
- principles of organization and direction of work on the formation of a healthy lifestyle of a child and their family;

Students must be able to:

- determine the condition and status of the child: take anamnesis, conduct a survey/interview the child and/or their parents, conduct a physical examination of the child; assess the condition of the child to make a decision about the need of providing medical care;
- establish priorities for treating child's disease under different parameters: a condition with pain, a condition with a chronic disease, a condition with an infectious disease, disability;
- assess the factors affecting the physical and psychological health of children: individual, family, social risk factors (violence, illness and death of relatives, etc.); make a preliminary diagnosis – to systematize information about a child in order to determine the pathology and the causes of it;
- outline the scope of research to clarify the diagnosis and obtain reliable results;
- create an individual treatment plan for a child in relation to their condition: primary care, ambulance, hospitalization;
- formulate a clinical diagnosis;
- develop a plan of therapeutic action, taking into account the course of the disease and its treatment requirements;
- formulate indications for the chosen method of treatment taking into account etiotropic and pathogenetic means; justify pharmacotherapy in a particular child under the main pathological syndromes and emergency conditions; determine the type of administering, regime and dosage of drugs; evaluate the effectiveness and safety of the treatment;
- identify conditions requiring hospitalization and refer patients to

appropriate specialists in a timely manner;

- provide emergency care for children.

Student must possess (have thorough knowledge of):

- methods of general clinical examination of children, depending on the age group;
- interpretation of laboratory results, instrumental methods of diagnosis, taking into account the age characteristics of children;
- diagnosis algorithm;
- the main medical diagnostic and therapeutic measures to provide first medical aid in emergency and life-threatening conditions of children;
- correct way of keeping medical records.

Some material can be allocated to independent study, followed by knowledge review in lectures and consolidating this knowledge during practical lessons.

In accordance with the requirements of the Federal State Educational Standards of Higher Education for the discipline 31.05.01. "General Medicine" to the content and level of training of the graduate, after studying the discipline the student must possess the following competencies:

- the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)
- the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)
- the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)
- the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)

Following a successful completion of this discipline, the following

competences (or elements of competences) are formed in students:

Competency code and formulation	Stages of competence formation	
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Know	The principles of modern pharmacotherapy and the management of patients with the most common diseases of internal organs, including emergency care
	Is able to	Carry out the treatment of patients with the most common diseases of the internal organs, including emergency care
	Possess	Modern methods of rational, individualized pharmacotherapy
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Know	The basic principles of collection of complaints and anamnesis, results of examination of children and adolescents, interpretation of laboratory results and instrumental examination in order to verify the diagnosis
	Is able to	Evaluate the results of subjective and objective methods of examination of the patient
	Possess	Skills of examination of a sick child (collection of complaints and anamnesis, evaluation of examination results)
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Know	The main symptoms, syndromes of diseases of internal organs, nosological forms in accordance with the International Statistical Classification of Diseases
	Is able to	Identify patient's pathological conditions, symptoms, syndromes of diseases of internal organs, nosological forms in accordance with the International Statistical Classification of Diseases and problems related to health.
	Possess	Skills to establish nosological forms in patients in accordance with the International Statistical Classification of Diseases on the basis of certain symptoms and syndromes

the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Know	Principles of etiological, pathogenetic, symptomatic treatment of major diseases of internal organs. Providing emergency aid and emergency care, indications and contraindications for prescribing therapeutic measures, evaluation of treatment results
	Is able to	Assign pathogenetic therapy based on the etiology of the disease
	Possess	Methods of providing medical care

RESUME

The discipline "Obstetrics and gynecology" is proposed for students enrolled into the educational program 30.05.01 "General medicine".

Discipline is implemented on 4 and 5 years as the basic discipline.

Development of the working program of the discipline was made according to the Federal state educational standard of higher education in the specialty 30.05.01 "General medicine" and the curriculum of training students.

The total complexity of the development of the discipline is 13 credits, 468 hours. The curriculum provides 72 hours of lectures, 216 hours of practical training and independent work of the student (126 hours).

The course program is based on the basic knowledge gained by students:

ability to abstract thinking, analysis, and synthesis (GCC-1);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1)

Purpose of the course:

Preparation of a qualified specialist capable of initial examination of a pregnant woman and a gynecological patient, with establishment of preliminary diagnosis, provision of urgent medical care in emergency conditions, the treatment of gynecological diseases and complications of pregnancy, possessing certain knowledge in the field of obstetrics and gynecology, taking into account further training and professional activities in the specialty "General medicine".

Objectives:

1. mastering by students the basic medical research methods (questioning, examination, palpation, percussion, auscultation) necessary in the daily practice of an obstetrician-gynecologist;

2. identification of the main clinical manifestations – symptoms and syndromes – at different stages of the disease development with the help of these methods;

3. development of student knowledge of clinical and physiological features of the women reproductive system;

4. formation of the student professional medical ethics and deontology, the basics of medical clinical thinking;

5. familiarization of students with the principles of organization of work of obstetric and gynecological hospital, prevention of nosocomial infections in medical institutions;

6. to give students an idea of the prevalence and importance of gynecological and obstetric diseases and the relationship of these diseases with the pathology of other organs and systems, including patterns of occurrence, course and treatment of diseases;

7. formation in a student of skills in diagnosis, treatment of gynecological and obstetric diseases, diagnosis and differential diagnostics of life-threatening conditions and the provision of the first urgent medical care in these conditions;

8. formation in student the skills in the study of scientific literature and official statistical reviews as well as reviews of modern scientific problems in the field of obstetrics and gynecology;

9. formation in student the skills of communication and interaction with the team, partners, patients.

As a result of this discipline study, the students form the following general professional and professional competences:

Code and formulation of competence	**Stages of competence formation**	
the readiness for medical use of drugs and other medical substances and their	Knows	main medicines prescribed for obstetric complications and gynecological diseases
	Able to	prescribe drugs for pregnant women, women in labor and gynecological patients

combinations in solving professional problems (GPC – 8)	Masters	Methods of proper use of drugs and their combinations in obstetric complications and gynecological diseases
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	the method of collection and analysis of patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, pathological and other investigations in order to determine the state or of ascertaining the presence or absence of obstetric complications and gynecological diseases
	Able to	to collect and analyze patient's complaints, data of anamnesis, physical examination, laboratory, instrumental, pathological and other investigations in order to determine the state or of ascertaining the presence or absence of obstetric complications and gynecological diseases
	Masters	methods of collection and analysis of the patient's complaints, his / her medical history, examination results, laboratory, instrumental, pathoanatomical and other studies in order to recognize the condition or establish the presence or absence of obstetric complications or gynecological disease
- the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review. (PC – 6)	Knows	methods of determining the main pathological conditions, symptoms, syndromes of obstetric and gynecological diseases, nosological forms in patients in accordance with The international statistical classification of diseases and health-related problems, X revision
	Able to	to determine in patients the main pathological conditions, symptoms, syndromes of obstetric and gynecological diseases, nosological forms in accordance with the International statistical classification of diseases and health-related problems, X revision
	Masters	methods of detection in patients of the main pathological conditions, symptoms, syndromes of obstetric and gynecological diseases, nosological forms in accordance with The international statistical classification of diseases and health-related problems, X revision
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	management methods of patients with obstetric and gynecological diseases
	Able to	to determine the management tactics of patients with obstetric and gynecological diseases
	Masters	methods of appointment of management tactics for patients with obstetric and gynecological diseases
the willingness to realize a prenatal care as well as child delivery (PC – 12)	Knows	methods of physiological pregnancy and normal parturition
	Able to	to carry out physiological pregnancy and parturition
	Masters	tactics of physiological pregnancy and parturition

The following methods of active/interactive training are used to develop the abovementioned competencies within the discipline "Obstetrics and gynecology":

1. It is supposed to conduct practical training using computer training programs.

2. Conducting interactive role-playing games in order to develop the skills of interviewing pregnant women and gynecological patients and counseling skills.

3. For the organization of independent work is offered to prepare essays and reports for presentation in the group and at the student conference as well as preparation for practical classes, work with additional literature, preparation of essays, lesson-conference.

4. Competition in groups for the best knowledge of the discipline.

The share of practical training conducted in interactive forms is 10% of in-classroom time; independent extracurricular work - 33% of the whole time.

ANNOTATION

Academic discipline "Psychiatry" is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the basic part of the curriculum, implement 108 324 hours, 9 credits. Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

The course program is based on the basic knowledge gained by students: the - - ability to abstract thinking, analysis, synthesis (GPC-1)

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC – 1)

the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC 7)

the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC 9)

The goal is to master the skills of primary diagnosis of mental and behavioral disorders for their timely detection, referral of the patient to a specialist, emergency psychiatric and drug-logical care, as well as pharmacological and psychotherapeutic correction of mild mental disorders in the provision of medical and preventive care to the population and General medical practice.

The objectives of the discipline are:

- acquisition of knowledge of etiology, epidemiology, pathogenesis and risk factors of psychiatric diseases by students;
- teaching students the most important methods of objective examination, allowing timely diagnosis of psychiatric pathology;

- teaching students to recognize clinical signs of a psychiatric disorder on examination, the patient, in determining the severity of pathological process;
- teaching students the ability to identify the leading syndromes of psychiatric disorders;
- teaching students the choice of optimal methods of laboratory and instrumental examination in major psychiatric diseases and the algorithm of differential diagnosis;
- training to conduct a full range of treatment, rehabilitation and preventive measures among patients with various nosological forms of psychiatric diseases;
- teaching students to provide patients with first aid in case of emergency conditions;
- teaching students to choose the optimal schemes of etiological and pathogenetic treatment of the most common mental disorders;
- familiarization of students with the principles of organization and operation of medical institutions that provide assistance to patients with psychiatric pathology;
- formation of skills in the study of scientific literature and official statistical reviews;
- formation of communication skills with psychiatric patients and their representatives, taking into account ethics and deontology, depending on the identified pathology and characteristics of patients;
- formation of the student's communication skills with the team.

To know:

- principles of the organization of the psychiatric service in the Russian Federation;
- international and Russian classification of mental disorders;
- the legal order of psychiatric examination and involuntary hospitalization in a psychiatric hospital;

- the main drugs used in psychiatry, the principles of their selection, contraindications for their intended use, possible side effects;

- analytical methods used in psychiatry, their diagnostic capabilities, indications;

- the main symptoms and syndromes of mental disorders, their diagnostic value, the role of these syndromes in the development of medical tactices;

- data on the prevalence, manifestations, course, therapy, prognosis of the most common mental diseases, their influence on the adaptation of patients and the possibility of their labor and social rehabilitation;

- the main types of pathology of character and the impact that they can have on the course of mental and somatic diseases on the choice of methods of psychotherapy;

- medicines, medical manipulations, environmental and social factors that increase the risk of mental disorders, the principles of prevention of mental illness;

Able to:

- to collect a complete medical history of the patient, to conduct a questioning of the patient, his/her relatives (to collect biological, medical, psychological, social information

- timely identify the most acute mental disorders that may pose an immediate danger to the life and health of the patient and those around him;

- interpret the results of the examination, give the patient a preliminary diagnosis, outline the volume of additional studies to clarify the diagnosis.

- assist in an urgent situation and, if possible, treat the most dangerous and urgent mental disorders (psychomotor agitation, aggressive and suicidal behavior, refusal to eat, epileptic status, severe delirium, poisoning by psycho-active substances);

- to organize supervision, deduction and transportation of an excited and socially dangerous patient;

- recognize mental disorders, manifesting somatic symptoms for timely referral of the patient to a psychiatrist;

- competently conduct a conversation with patients of different profiles and their relatives, taking into account their personal peculiarities, awareness and leading motives;

- use the elements of psychotherapy in the complex treatment of various diseases (including somatic);

- describe the mental status of the patient on the basis of clinical and paraclinical examination of persons with mental disorders;

- manage the mentally ill patients with description of the medical history of patients with mental disorders;

- conducting protocols of clinical analysis of the mentally ill, experimentally-psychological examination of the mentally ill and self-examination;

- complete cards the for examination of patients with mental disorders in a scientific study based on case histories, paraclinical data;

- work with visual material of experimental psychological tests, diagnostic methods for the study of mental functions, personality characteristics, psycho-physiological indicators.

- draw up a treatment plan for the patient (regimen, diet, medication, physiotherapy, etc.), taking into account the individual diagnosis, indications and contraindications for each treatment method

- to evaluate the effectiveness of treatment, to establish the possible manifestations of undesirable side effects of drugs and measures for their prevention and elimination- сформулировать ближайший и отдаленный прогноз.

To master:

- - methods of general clinical examination;

- interpretation of the results of laboratory, instrumental diagnostic methods

- algorithm of statement of the developed clinical diagnosis

- interpretation of the results of laboratory, instrumental diagnostic methods

- an algorithm for rehabilitation and clinical examination of patients

2. As a result of studying this discipline, the students form the following professional competencies.

Requirements for the results of mastering the discipline:

Competence and its code	Stages of the competence formation	
PC-5: the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	The system of examination and detailed patient questioning
	Is able to	conduct a physical examination, clinical examination
	Possesses	interpretation of the results of modern laboratory and instrumental analysis, morphological analysis of biopsy and other material
PC-6: the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review.	Knows	Principles in the course of pathological processes in need of treatment of diseases in accordance with the International Statistical Classification of Diseases and Health Problems, X view
	Is able to	Apply objective methods of examination of the patient, to identify general and specific signs of the disease
	Possesses	Skills in order to establish the diagnosis and conduct the necessary treatment for diseases
PC-8: the ability to determining the tactics of patient surveillance with different nosological entities.	Knows	The procedure for the examination of temporary disability, testimony. Procedure for ascertaining the death of a person
	Is able to	Determine and write out a list of temporary disability. Establish the fact of death of a person
	Possesses	The method of the medical records filling
GPC-8: the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	Principles of etiological, pathogenetic, symptomatic treatment of major psychiatric diseases.
	Is able to	Assign pathogenetic therapy taking into account the etiology of the disease with the use of drug therapy in patients in need of medical rehabilitation.
	Possesses	Methods of providing medical care

Abstract to the working program of discipline

«Stomatology»

The discipline " Stomatology "is intended for students enrolled in the educational program 31.05.01" General medicine", is included in the basic part of the curriculum.

Discipline is implemented on a 6-course, discipline is obligatory.

In developing the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the profile 31.05.01"General medicine".

The total complexity of the discipline is 108 hours, 3 credits (54 hours of classroom training (18 lectures, 36 practical), 54 hours in the IWS)

The purpose of the course: to develop knowledge of etiology, pathogenesis, clinic of oral diseases, maxillofacial area, as well as the principles of examination of patients with oral pathology, maxillofacial area, treatment and prevention of dental diseases.

Tasks:

prevention of diseases among the population through preventive and anti-epidemic measures;

- participation in the preventive medical examinations, health examinations, follow-up;

- collection and medical and statistical analysis of information on indicators of dental morbidity of different age and sex groups and its impact on their health;

- diagnosis of dental diseases and pathological conditions of patients;

- diagnosis of emergency conditions of patients;

- examination of temporary disability and participation in other types of medical examination;

- provision of dental care in outpatient and day hospital conditions;

- participation in the provision of medical assistance in emergency situations, including participation in medical evacuation;

- participation in medical rehabilitation and Spa treatment of patients with dental diseases;

- formation of the population, patients and their family members motivation aimed at

preservation and strengthening of the health and health of people around;

- training of patients in basic hygienic measures of health-improving nature, contributing to the prevention of dental diseases and health promotion;

The course program is based on the basic medical knowledge gained by specialists:

GPC -8 readiness for medical use of drugs and other medical substances, and their combination in solving professional problems

GPC-11 the readiness to use medical devices, provided by medical assistance procedures

PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases

PC-6 the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review;

PC-8 the ability to determining the tactics of patient surveillance with different nosological entities;

Code and formulation of competence.	**Stages of formation of competence**	
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	the volume of assistance in dental diseases and trauma of the maxillofacial region at the stages of medical evacuation; types of complications in diseases and injuries of the maxillofacial region, their prevention and treatment
	Can	a local anesthesia;
	Masters	implementation of the main medical diagnostic and therapeutic measures to provide first aid to dental patients in emergency and life-threatening conditions;
the readiness to use medical devices, provided by medical assistance procedures	Knows	To use a medical device
	Can	To use a medical device

Code and formulation of competence.	Stages of formation of competence	
(GPC -11)	Masters	Application of medical devices - Bix for storage of sterile instruments and material - Scales including electronic scales for children up to 1 year - Dispensers for liquid soap, disinfectants - Container for disinfection of tools and consumables - Capacity for collection of household and medical waste - Container for disposal of syringes, needles and other disposable instruments
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	Regularities of the course of pathological processes in need of orthodontic treatment
	Can	Apply objective methods of examination of the patient, to identify common and specific signs of orthodontic disease;
	Masters	Knowledge in order to establish the diagnosis and conduct the necessary treatment for orthodontic diseases;
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	Etiology, pathogenesis and clinical picture of major dental diseases; basic methods of examination of dental patients
	Can	To diagnose oral diseases; to identify indications for emergency hospitalization
	Masters	Maintenance of medical records; clinical examination of the maxillofacial area; interpretation of the results of laboratory, instrumental methods of diagnosis in patients of different ages, reading different types of radiographs; preliminary diagnosis of patients and, if necessary, followed by sending them for additional examination
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Indications for hospitalization of dental patients; the volume of assistance in dental diseases and trauma of the maxillofacial region at the stages of medical evacuation
	Can	to identify indications for emergency hospitalization; to provide emergency assistance to injured persons on an outpatient basis; to carry out transport immobilization and prepare victims for transportation; to take measures to prevent the development of complications of trauma and purulent-inflammatory diseases of the maxillofacial region

Code and formulation of competence.	Stages of formation of competence	
	Masters	interpretation of the results of laboratory, instrumental methods of diagnosis in patients of different ages, reading different types of radiographs;

ANNOTATION

Discipline " Otolaryngology "is purposed for students enrolled in the educational program 31.05.01"General medicine".

Discipline is implemented in the 6 year as a basic discipline.

Development of the working program of the discipline was made in accordance to the Federal state educational standard of higher education in the specialty 31.05.01 "Medicine" and curriculum of the student trainings.

The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic knowledge gained by students:

The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic knowledge gained by students:

- the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)
- the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)
- the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)
- the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)

the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)

Goal of the course: formation of the basic knowledge of common problems in the field of otorhinolaryngology, respectively, the competence of the General practitioner in students.

Objectives:

1. To teach students the basics of knowledge of etiology, pathogenesis, main symptoms, diagnostics criteria, principles and methods of sanitary and educational work of the most common ORL- diseases.

2. Students must be able to conduct a questioning of patient with ORL-pathology, evaluate the data obtained, formulate a preliminary clinical diagnosis, outline a plan of additional research methods, fill in the medical history, evaluate the results of the examination, establish and justify a clinical diagnosis.

3. Students must master the clinical methods of examination of ORL-patient; interpretation of the results of laboratory and instrumental methods of diagnostics, the basic algorithm of clinical diagnostics.

4. Students must master the algorithm for performing basic diagnostic and therapeutic measures to provide the first aid in emergency conditions in otorhinolaryngology.

As a result of the learning of this discipline, students form the following general professional and professional competences:

Code and formulation of competence	**Stages of competence formation**	
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	Basic principles of surgical and conservative treatment in patients with ORL-diseases
	Is able to	To determine the tactics of treatment of patients with ORL-diseases.
	Possesses	Skills of working with guidance documents, standards, defining approaches to the treatment of patients with ORL-diseases
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	General and special research methods in the main sections of medicine in patients with ORL-diseases
	Is able to	To obtain information about the development and course of the disease; to apply objective methods of examination of the patient, to identify General and specific signs of the disease; to assess the severity of the patient's condition; to determine the need for and sequence of application of special research methods (laboratory, x-ray, endoscopic, functional), to interpret the data obtained in patients with diseases of ORL-organs.
	Possesses	Skills in order to establish the diagnosis and to provide expert care to patients with diseases of

		ORL organs.
the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review. (PC – 6)	Knows	modern classification of diseases in accordance with the international statistical classification of diseases and problems related to health and problems, x revision; clinical picture of the main pathological conditions, symptoms, syndromes, features of the course and possible complications of the most common-diseases of ORL-organs.
	Is able to	To determine in patients the main pathological conditions, symptoms, syndromes of ORL-diseases in accordance with The international statistical classification of diseases and health-related problems, x view
	Possesses	Clinical examination of the patient's ORL-organs; assessment of the changes detected during the examination and the formulation of the preliminary diagnosis; preparation of the examination plan taking into account the preliminary diagnosis; formulation of the diagnosis according to The international statistical classification of diseases and health-related problems, x revision
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Basic tactics of management of patients with acute and chronic diseases of ORL-organs
	Is able to	Make a program of diagnostic and therapeutic measures for chronic and acute diseases of ORL-organs
	Possesses	Make a treatment plan in accordance with the standards for patients with ORL-diseases.

The following methods of active/ interactive learning are used to form the above competences within the discipline " Otolaryngology":

1. It provides for practical training using computer training programs.
2. For the organization of independent work it is offered to prepare abstracts and reports for performance in group and at student conference; and also preparation for practical employment, work with additional literature, preparation of abstracts, occupation-conference.

The share of practical training conducted in interactive forms is 10% of classroom time; independent extracurricular work-50% of the time

ANNOTATION

Discipline "Ophthalmology "is purposed for students enrolled in the educational program 31.05.01"General medicine".

Discipline is implemented in the 6 year as a basic discipline.

Development of the working program of the discipline was made in accordance to the Federal state educational standard of higher education in the specialty 31.05.01 "Medicine" and curriculum of the student trainings.

The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic knowledge gained by students:

- the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)
- the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)
- the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)
- the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)

the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)

Goal of the course: is mastering the special methods of diagnostics and treatment of diseases of the visual organ, formation of the medical thinking basics and skills providing solutions for professional problems and the use of the algorithm of medical activity to provide first aid in emergency and life-threatening situations, prevention, diagnostics, treatment and rehabilitation of patients with eye disease and its subordinate apparatus.

Objectives:

1. to teach students the ability to examine adult patients with pathology of the vision organ and to identify the symptoms of their disorders;

2. to give students up-to-date knowledge of etiology, pathogenesis, symptoms, diagnostics, treatment, prevention and expert evaluation of major ophthalmic diseases;

3. to form clinical thinking in students, ability to establish and justify independently the diagnosis of the most common ophthalmic diseases, to carry out their differential diagnostics, to provide first aid, to prescribe treatment for emergency conditions in accordance with the list of pathological conditions and diseases of the qualification characteristics of the specialty " Ophthalmology " and to make a plan of measures for the prevention of this category of diseases;

4. to instill in students the skills of deontology, moral and ethical legal culture as well as communication skills with the patient, his relatives and friends, taking into account the legal foundations of medical law.

As a result of the learning of this discipline, students form the following general professional and professional competences:

Code and formulation of competence	**Stages of competence formation**	
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	Basic principles of surgical and conservative treatment in patients with diseases of the organs of vision
	Is able to	To determine the tactics of treatment of patients with diseases of the organs of vision
	Possesses	Skills to work with guidance documents, standards, defining approaches to the treatment of patients with diseases of the organs of vision
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	General and special methods of research in the main sections of medicine in patients with diseases of the organs of vision
	Is able to	Get information about the development and course of the disease; apply objective methods of examination of the patient, to identify general and specific signs of the disease; assess the severity of the patient; determine the need and consistency of applying special research methods (laboratory, x-ray, endoscopic, functional), interpret the data obtained in patients with diseases of the organs of vision.
	Possesses	Skills to establish the diagnosis and provide qualified assistance to patients with diseases of

		the organs of vision
the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review. (PC – 6)	Knows	modern classification of diseases in accordance with the International Statistical Classification of Diseases and Problems Related to Health and Problems, X revision; clinical picture of the main pathological conditions, symptoms, syndromes, features of the course and possible complications of the most common eye diseases
	Is able to	Identify in patients the main pathological conditions, symptoms, syndromes of eye diseases in accordance with the International Statistical Classification of Diseases and Health Related Problems, X view
	Possesses	Conducting a clinical examination of the patient's organs of vision; an assessment of the changes identified during the examination and the formulation of the preliminary diagnosis; drawing up a survey plan based on a preliminary diagnosis; formulating a diagnosis according to the International Statistical Classification of Diseases and Related Health Problems, X revision
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Basics of management of patients with acute and chronic diseases of the organs of vision
	Is able to	To draw up a program of diagnostic and therapeutic measures for chronic and acute diseases of the organs of vision.
	Possesses	Make a treatment plan in accordance with the standards of patients with diseases of the organs of vision.

The following methods of active/ interactive training are used to form the above mentioned competencies within the discipline "Ophthalmology":

1. Execution of practical training with the use of computer training programs is supposed.
2. For organization of the independent self-work it is proposed to prepare essays and reports for presentation in the group and at the student conference; as well as preparation for practical classes, work with additional literature, preparation of essays and lesson-conference.

The share of practical training conducted in interactive forms is 10% of the whole classroom time; independent extracurricular self-work – 50% of the whole time.

Annotation

Discipline "Phthisiology"is purposed for students enrolled in the educational program 31.05.01"General medicine".

Discipline is implemented in the 6 year as a basic discipline.

Development of the working program of the discipline was made in accordance to the Federal state educational standard of higher education in the specialty 31.05.01 "Medicine" and curriculum of the student trainings.

The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic knowledge gained by students:

The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic knowledge gained by students:

- the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)
- the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)
- the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)
- the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)

the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)

The goal of the discipline is the formation of professional competences in the field of knowledge in general and private infectiology, the ability to apply this knowledge for the diagnosis, treatment and prevention of tuberculosis.

The aim of the discipline is to give students the theoretical foundations of knowledge in the field of Phthisiology, such as:

- the implementation of dispensary observation of patients;

- diagnosis of tuberculosis based on clinical and laboratory and instrumental methods of research;

- diagnosis of emergency conditions in Phthisiology;

- treatment of Phthisiology using therapeutic methods;

- rendering medical assistance in case of emergency conditions that developed in Phthisiology;

- carrying out medical-evacuation measures and rendering medical assistance to the population in extreme conditions of epidemics.

- carrying out rehabilitation activities among the population who have had an tuberculosis;

- maintenance of accounting and reporting medical records filled in for an infectious patient;

- analysis of scientific literature and official statistical reviews;

- preparation of essays on modern scientific problems of infectious diseases.

On completion of the course following general professional and special professional competences are expected be formed:

Competence code and formulation	**Stages of forming the competence**	
CPC-8 the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	the classification and main characteristics of drugs, pharmacodynamics and pharmacokinetics, indications and contraindications to the use of drugs, side effects; general principles of receptor design and formulation of prescription medicinal formulations.
	Is able to	to analyze the effect of drugs on the basis of their pharmacological properties and the possibility of their using for therapeutic treatment; write prescriptions for medicines, use different medicines, apply basic antibacterial, antiviral and biological preparations; evaluate the possible manifestations of overdose of drugs and how to eliminate them; substantiate the principles of pathogenetic therapy of the most common diseases.
	Possesses	skills in the use of drugs in the treatment,

		rehabilitation and prevention of various diseases and pathological conditions.
PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	the etiology, diagnosis, treatment and prevention of infectious diseases; the clinical signs, features of the course and possible complications of infectious diseases occurring in typical form; modern methods of clinical instrumental diagnosis of patients infection profile; features of the collection of pathological materials; precautions; special clothing; basic principles of diagnosis, treatment and rehabilitation of infectious diseases, indications for hospitalization with infectious diseases; principles of follow-up observation, rehabilitation of infectious patients; structure of infectious and phthisiological services, principles of organization, organization and mode of operation of infectious departments implementation of specific and nonspecific prevention of infectious diseases.
	Is able to	participate in the organization and provision of medical - preventive and sanitary anti-epidemic, prophylactic and rehabilitation assistance to the population with infectious diseases; interpret the results of the survey, make a preliminary diagnosis, outline the scope of additional studies to clarify the diagnosis; formulate a clinical diagnosis; develop a treatment plan taking into account the course of the disease, select and appoint drug therapy, use methods of non-drug treatment, to conduct rehabilitation measures.
	Possesses	the interpretation of the results of laboratory, instrumental methods of diagnosis with infectious disease; algorithm for making a preliminary diagnosis with the subsequent direction to additional examination and to specialist doctors; an algorithm for making a comprehensive clinical diagnosis of patients; the algorithm for the implementation of the main medical diagnostic and therapeutic measures to provide first medical aid in emergency and life-threatening conditions for infectious diseases.

PC-6 the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review.	Knows	the clinical signs, features of the course and possible complications of the most common infectious diseases; modern classification of infectious diseases; etiology, epidemiology, pathogenesis of tuberculosis; -clinical picture, features of the course and possible complications of tuberculosis, occurring in typical form in different age groups; criteria for the diagnosis of infectious diseases.
	Is able to	determine the patients basic pathological conditions, symptoms, syndromes, diseases, nosologic forms; formulate a topical diagnosis; to make preliminary and final diagnoses with a reflection of the etiology, course, nature and degree of dysfunction; outline the scope of additional studies to clarify the diagnosis and obtain a reliable result;
	Possesses	basic skills of algorithm of the developed clinical diagnosis; the interpretation of the results of laboratory and instrumental diagnostic methods; algorithm for making a preliminary diagnosis to a patient with suspected tuberculosis.
PC-8 the ability to determining the tactics of patient surveillance with different nosological entities	Knows	methods of treating patients with infectious diseases; the mechanism of action of the main groups of drugs; medical indications and contraindications to their use; complications caused by their use; the basic principles of diagnosis, treatment and rehabilitation of patients with tuberculosis, indications for hospitalization; rules for the collection of pathological materials from the patient; implementation of specific and nonspecific prevention of tuberculosis% determine indications for outpatient treatment and hospitalization of a patient with tuberculosis.
	Is able to	develop a plan of therapeutic measures for various infectious diseases; select an individual type of care for the patient in accordance with the situation: primary care, ambulance, hospitalization; formulate indications for the chosen method of treatment, taking into account etiotropic and pathogenetic means, to justify pharmacotherapy in a particular patient with the main pathological syndromes, to determine the route of administration, the regimen and dose of drugs carry out the appointment of drug therapy for children, taking into account the clinical picture of

		the disease.
	Possesses	the tactics of managing patients with various nosological forms.

ANNOTATION

The discipline "Oncology, radiation therapy" is intended for students enrolled in the educational program of higher education on 31.05.01 "General Medicine", is included in the basic part of the curriculum, is implemented on the 6th course in the 12th semester. The total complexity of the discipline is 108 hours, 3 credit units.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “Medical care” (specialty level) has been used.

The course program is based on the basic medical knowledge gained by students**:**

the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)

- the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)

the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)

- the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)

- the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC – 16)

The purpose of mastering the discipline "Oncology, radiation therapy" is: to teach students the theoretical and practical basics of prevention, diagnosis and treatment of oncological diseases

Tasks

1. To study the main nosological forms of oncological diseases

2. To teach the basics of early diagnosis of oncological diseases in the clinic and at home;
3. To teach the basics of carrying out a complex of treatment-and-prophylactic measures at the pre-hospital stage in an oncological clinic;
4. To study modern tactics in relation to oncological patients.
5. To study modern methods of treatment of oncological diseases, including radiation therapy
6. To study the features of medical care for oncological patients.

To solve these problems, a course of thematic lectures, clinical analyzes of patients, mastering of modern diagnostic methods and methods of treatment are planned.

As a result of studying this discipline, students form the following general professional and professional competencies:

	Этапы формирования компетенции	
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	The basic principles of surgical, chemotherapeutic, radiation and symptomatic treatment of cancer patients.
	Is able to	Determine the tactics of treatment of cancer patients in various stages of the pathological process.
	Possesses	Skills of working with guidelines, standards, defining approaches to the treatment of cancer patients
- the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	General and special methods of research in patients suffering from oncological diseases.
	Is able to	Get information about the development and course of the disease; apply objective methods of examination of the patient, to identify general and specific signs of the disease; assess the severity of the patient; determine the need and sequence of applying special research methods (laboratory, x-ray, endoscopic, functional), interpret the findings in patients suffering from oncological diseases.

	Этапы формирования компетенции	
	Possesses	Formed skills to establish the diagnosis and provide primary health care for patients suffering from cancer
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	The main pathological symptoms and syndromes of oncological diseases, their main forms, principles of clinical classification, principles of diagnosis of oncological disease according to the International Statistical Classification of Diseases and Related Health Problems, X revision
	Is able to	Identify pathological symptoms and syndromes of oncological diseases of various localization, formulate a clinical diagnosis of oncological diseases according to the International Statistical Classification of Diseases and Related Health Problems, X revision
	Possesses	The skill of diagnostic search of symptoms and syndromes that are specific for oncological diseases of various localizations, for making a clinical diagnosis of oncological diseases. according to the International Statistical Classification of Diseases and Related Health Problems, X revision
- the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Fundamentals of management of patients suffering from oncological diseases.
	Is able to	Use guidance documents and standards to determine possible approaches to the treatment of cancer patients.
	Possesses	Skills of working with guidelines and standards to determine possible approaches to the treatment of cancer patients

ANNOTATION

The discipline " Evidence-based medicine "is designed for students enrolled in the educational program 31.05.01" General Medicine", is included in the basic part of the curriculum, implemented in the 3rd year in the 5th semester. The total complexity of the discipline is 108 hours, 3 credits

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "Medical care" (level of training specialty), the curriculum of training students.

The course program is based on the basic knowledge gained by students:

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1)

the ability and willingness to analyze the results of his own activity to prevent professional errors (GPC-5)

Course purpose:

- acquisition of knowledge in planning and conducting research from the standpoint of evidence-based medicine. Acquisition of knowledge in evidence-based medicine and improvement of skills of practical work with sources of medical information.

Objectives:

- familiarization of the student with the modern aspects of evidence-based medicine, to lay a holistic view of modern clinical diagnosis, therapy, public health organization from the perspective of evidence-based medicine.
- study and development of basic methods of clinical and epidemiological analysis;
- acquisition of students ' knowledge about the planning and conduct of randomized clinical trials; levels of evidence and classes of recommendations;
- formation of skills necessary to solve individual research and applied problems in the field of evidence-based medicine using knowledge of the basic requirements of information security;

As a result of the study of this discipline in students formed the following professional competence.

Requirements for the results of the discipline:

Competence and its code	Stages of competence formation	
the ability and willingness to analyze the results of his own activity to prevent professional errors (GPC-5)	Knows	methodology of evidence-based medicine
	Able to	use the methodology of evidence-based medicine to analyze the results of their own educational and scientific activities
	Masters	skills in applying evidence-based medicine methodology for planning a scientific experiment
the readiness to analysis and public presentation of medical information based on evidence-based medicine (PC – 20)	Knows	the concept of a public presentation of medical information on the basis of evidence-based medicine
	Able to	Explain the concept of publicly available medical information based on evidence-based medicine.
	Masters	skills in public presentation of evidence-based medical information
the ability to participate in researches (PC – 21)	Knows	Research methodology
	Able to	plan research
	Masters	Research skills

ANNOTATION

The discipline "Public Health, Health Economics" is intended for students enrolled in the educational program of 31.05.01 "General Medicine". Discipline is implemented on the 3.4 course in the 6th and 7th semester, it is an obligatory variable discipline. The total complexity of the discipline is 216 hours, 6 credits.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education was used in the specialty 31.05.01 “Medicine”, approved by order of the Ministry of Education and Science of the Russian Federation of February 09, 2016 No. 95, the curriculum for preparing students.

The course program is based on the basic knowledge gained by students:

the ability to analyze the main stages and patterns of the historical development of society for the formation of citizenship (GCC-3);

readiness to work in a team, tolerantly perceive social, ethnic, confessional and cultural differences (GCC-8);

the ability to use the basics of economic and legal knowledge in professional activities (GPC-3);

The purpose of mastering the discipline: participation in the formation of competencies, including measures for the preservation and strengthening of public health, the elimination of risk factors and the formation of a healthy lifestyle, organization, management and workflow in the field of public health, the examination of temporary disability, the collection and analysis of health information population, assessment of the quality of medical care, to form knowledge and skills in the field of public health and health care and its defining; systems ensuring the preservation, strengthening and restoration of health of the population as a whole and of certain homogeneous groups of the population; organizational medical technologies and

management processes, including economic, administrative and organizational; trends in health care in foreign countries.

Objectives of the discipline:

- students acquire skills in the study and analysis of indicators characterizing the state of health of various age-sex, social, professional and other groups of the population;
- knowledge of the theoretical foundations of health care, the legal framework for the protection of health and medical activities;
- familiarization of students with the principles of organization and work of medical institutions;
- training students in the design of basic medical accounting records;
- the acquisition by students of skills on the main issues of the examination of temporary and permanent disability;
- knowledge of methods and means of improving the functioning of health care facilities.
- the introduction of new economic and medico-social technologies in the activities of medical institutions

As a result of studying this discipline, students form the following **general professional and professional competences (elements of competencies):**

Code and formulation of competence	**Stages of competence forming**	
the ability to use the basics of economic and legal knowledge in professional activity (GPC-3)	know	Basics of economic and legal knowledge in professional activities
	Know how	Use regulatory documents and planning methods for organizing professional activities in a medical organization
	Master	Knowledge of regulatory documents and methods of economic analysis for use in calculating the performance of medical organizations

the readiness to maintain and report medical documents (GPC – 6)	Know	Regulations adopted in health care, technical regulations, standards, orders, recommendations, terminology, current classifications for the qualitative management of medical records
	Know how	carry out a statistical evaluation of their work and the activities of the medical organization using the accounting and reporting medical documentation
	Master	Skills of keeping medical records at all stages of treatment and preventive work
the ability and willingness to use social methods of data collection and analysis of medical and statistical information on health indicators of population (PC – 4)	Know	Current trends in the state of public health and methods of its assessment; regulatory framework for accounting for specific groups of diseases, the main accounting and reporting forms, consolidating indicators of the state of health of the population
	Know how	To conduct and analyze the state of health of the population and certain groups with the help of special medico-demographic indicators, to develop measures for its strengthening and preservation
	Master	Skills of calculation of indicators and evaluation of medical and statistical information, skills to develop measures to strengthen and preserve the health of the population
the ability to use the basic principles of organization and management in the field of public health protection, at medical institutions and their structural divisions (PC– 17)	Know	Fundamentals of the legislation of the Russian Federation on the organization of activities of medical organizations, the principles of financing public health organizations; health insurance system; issues of management and economic activities of medical organizations, including the basics of competition and pricing in the market of medical services.
	Know how	Evaluate the volume, quality and costs of medical institutions for the provision of medical care, use economic methods to assess its effectiveness and plan the activities of the medical organization.
	Master	Methods for calculating volume, quality and cost

		indicators and indicators of the economic efficiency of medical care, the development of measures to improve it; management decision-making, financial and organizational planning skills.
the willingness to participate in the evaluation of the quality of medical care using basic health statistics (PC – 18)	Know	The main regulatory documents for assessing the quality of medical care; levels, types and methods of assessing the quality of medical services, criteria for assessing the quality of resources, the process and outcome of medical care
	Know how	Assess and analyze the performance of the medical organization, a separate unit, an individual employee
	Master	Methods for calculating the volume and quality indicators of the medical organization, department, individual employee; skills to develop measures to improve the quality of care

The following active / interactive learning methods are used to form the above competencies within the discipline "Public Health and Healthcare, Healthcare Economics":

1. It is planned to conduct practical training using computer-based training programs.

2. For the organization of independent work, preparation of essays and reports is proposed for performance in the group and at the student conference; and also preparation for practical exercises, work with additional literature, preparation of essays, occupation conference.

The share of practical classes conducted in interactive forms is 10% of the classroom time; self-extracurricular work - 42% of the time.

ANNOTATION.

Academic discipline " Transfusiology "is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the variable part of the curriculum discipline of choice, implemented in the 5th year in the 9th semester. The total complexity of the discipline is 144 hours, 4 credits. Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

PC-5 - willingness to collect and analyze patient complaints, his medical history, examination results, laboratory, instrumental, pathological and other studies in order to recognize the condition or establish the presence or absence of the disease;

PC-10 - willingness to provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care;

PC-13 - willingness to participate in the provision of medical care in emergency situations, including participation in medical evacuation;

The purpose of the academic discipline "Transfusiology" is: to teach students the theoretical and practical basics of infusion-transfusion therapy, necessary for a doctor of any specialty.

Tasks

1. Teach the basics of drawing up a program of infusion and transfusion therapy 2. To study the rules of blood transfusion, its components and products, blood substitutes
3. To study the basics of prevention and treatment of post-transfusion complications and reactions.
4. To study the basics of infusion-transfusion therapy in the treatment of pathological conditions requiring intensive care

5. Organization of work of medical institutions of blood service, organization of blood donation.

6. To study modern technologies in Transfusiology

To solve these problems, a course of thematic lectures, clinical analyzes of patients, possessing modern diagnostic methods and methods of treatment is planned.

As a result of studying this discipline, students form the following universal, general professional and professional competencies:

	Stages of competence formation	
willingness for medical use of drugs and other substances and their combinations in solving professional problems (GPC-8);	Knows	Blood components and products, blood substitutes and other means of infusion-transfusion therapy, indications, contraindications to their use, methods of administration, criteria of effectiveness, possible complications, methods of prevention and treatment of complications of ITT
	Is able to	To apply means of infusion-transfusion therapy to correct circulatory disorders, acid-base balance and water-salt metabolism.
	Possesses	Methods of infusion-transfusion therapy for the correction of circulatory disorders, acid-base balance and water-salt metabolism.
willingness to collect and analyze patient complaints, his medical history, examination results, laboratory, instrumental, pathological and other studies in order to recognize the condition or establish the presence or absence of the disease; (PC-5)	Knows	General and special methods of examination of patients who need infusion-transfusion therapy
	Is able to	Collect information on the development of the disease; apply objective methods of examination of the patient, to identify general and specific signs of the disease; assess the severity of the patient; determine the need and sequence of the use of special research methods (laboratory, x-ray, endoscopic, functional), interpret the findings in patients who need infusion-transfusion therapy
	Possesses	Formed skills that allow to establish the diagnosis and provide qualified medical care to patients who need infusion-transfusion therapy
ability to determine tactics of management of patients with different nosological forms (PC-8);	Knows	Fundamentals of management of patients who need infusion-transfusion therapy
	Is able to	Draw up a program of infusion-transfusion therapy in various pathological conditions. Determine the indications for infusion-transfusion therapy.

	Stages of competence formation	
	Possesses	Skills of establishing the diagnosis, prescribing and carrying out the necessary infusion-transfusion therapy in various pathological conditions;
willingness to provide medical care for sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care (PC-10)	Knows	Means of infusion therapy and their mechanism of action for the treatment of sudden acute illness conditions, exacerbations of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
	Is able to	To apply means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care.
	Possesses	Skills of applying means of infusion-transfusion therapy for the treatment of sudden acute diseases, conditions, exacerbation of chronic diseases that are not accompanied by a threat to the patient's life and do not require emergency medical care
willingness to participate in the provision of emergency medical care in conditions requiring urgent medical intervention (PC-11);	Knows	Fundamentals of emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Is able to	To provide emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy
	Possesses	Skills of providing emergency medical care in conditions requiring urgent medical interventions, including post-transfusion reactions and complications of infusion-transfusion therapy

RESUME

The discipline "Medical rehabilitation "is purposed for students enrolled in the educational program 31.05.01" General medicine" and included in the basic part of the curriculum.

Discipline is implemented in the 5 year A semester

Development of the working program of the discipline was made in accordance to the federal state educational standard of higher education (the level of training of highly qualified personnel) in the specialty 31.05.01 "General medicine", the curriculum of training students in the profile of General Medicine

The total complexity of the discipline is 108 hours, 3 credits.

The course program is based on the basic medical knowledge gained by specialists:

the ability to use the methods and means of physical culture to ensure full social and professional activities (GPC - 6);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1)

the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)

Course goal: the program is the formation of systemic knowledge and skills of students on medical rehabilitation.

Objectives:

- study of organization of rehabilitation and prevention of disability;

- teaching students the ability to choose the tools and methods of rehabilitation and prevention of disabilities;

- formation of student practical skills related to organization of rehabilitation and prevention of disability.

To know:

- regulation of the basic provisions of rehabilitation and prevention of disability;

- WHO documents relating to rehabilitation;

- normative documents of the Ministry of health of the Russian Federation on rehabilitation;

- general issues of organization of medical rehabilitation service in Primorsky Krai;

- theoretical and methodological basis of medical rehabilitation (concept of consequences of the disease-ICIDH, ICF);

- form of individual program of medical rehabilitation;

- clinical and rehabilitation groups of patients;

- criteria of disability; methods of assessing the functional state and life of patients with therapeutic profile (IHD, AH, etc.)

To able to:

- form a clinical and functional diagnosis according to the examination and functional studies;

- assess the functional state and life activity of patients with the most common disabling therapeutic pathology;

- choose tools and methods of rehabilitation for the listed categories of patients.

To master:

- examination and functional research skills

- skills to assess the functional state and life activity of patients with the most common disabling therapeutic pathology

- skills to determine the methods of rehabilitation

2. As a result of the study of this discipline, students form the following professional competencies.

Requirements for the results of the discipline studying:

Competence and its code	Stages of competence formation	
PC-1 the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health	Knows	Principles of occurrence and (or) spread of diseases, their early diagnosis, identification of the causes and conditions for their occurrence and development,
	Is able to	To carry out a set of measures aimed at preserving and promoting health.
	Possesses	Skills in implementing activities aimed at preserving and promoting health
PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	Methods of history taking and interpretation of laboratory, instrumental, autopsy and other studies
	Is able to	Evaluate the results of history data, the results of the examination, laboratory, instrumental, autopsy and other studies
	Possesses	Skills of an assessment of data of the anamnesis, results of survey, laboratory, tool, pathoanatomical and other researches
PC-8 the ability to determining the tactics of patient surveillance with different nosological entities.	Knows	Nosological forms of the disease, the management of patients with various diseases
	Is able to	To provide the necessary medical care and rehabilitation measures in various nosological forms.
	Possesses	Skills of providing medical care and rehabilitation measures in various nosological forms
PC-14 the readiness for determining the need to use natural healing factors, the drug, non-drug therapy and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment	Knows	Basic rules of hygienic measures of well-being
	Is able to	Carry out hygiene measures of a health nature
	Possesses	Skills for teaching patients and their relatives basic hygienic measures of a health-improving nature, skills for self-monitoring of basic physiological indicators,
GPC-8 the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	List of essential drugs and other substances and their combinations.
	Is able to	To carry out the treatment of patients with the most common diseases of internal organs and rehabilitation measures
	Possesses	Modern methods of rational, individualized pharmacotherapy

Resume of the working program of discipline

«Clinical Pharmacology»

The discipline " Clinical Pharmacology"is intended for students enrolled in the educational program 31.05.01" General medicine" and included into the basic part, included in the basic part of the curriculum, implemented 6th year in the B semester.

The total complexity of the discipline studying is 5 credits, 180 hours. The curriculum includes lectures (17 hours), practical classes (51 hours), independent self-work of students (112 hours).

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (the level of training specialty), curriculum of the student training.

The course program is based on the basic knowledge gained by students:

ability to abstract thinking, analysis, synthesis (GC-1);

readiness for medical use of drugs and other substances and their combinations in solving professional problems (GPC-8);

the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC-9);

the readiness for determining the need to use natural healing factors, the drug, non-drug therapy and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment (PC-14)

The goal of the program is to expand the art and science training of the future medical specialists in the field of clinical pharmacology. The study of the most effective and safe pharmaceuticals or their combinations for the information of doctors on the basis of knowledge of pharmacodynamics, pharmacokinetics, drug interactions, adverse drug reactions, principles of evidence-based medicine.

Objectives:

- formation of knowledge concerning the main issues of clinical pharmacology (pharmacodynamics, pharmacokinetics, pharmacogenetics, drug interactions, undesirable drug reactions, pharmacoeconomics, pharmacoepidemiology).
- formation of ideas about the sections of clinical pharmacology, regulating rational choice of drugs: evaluation of efficacy and safety, drug formulary, pharmacoeconomics, pharmacoepidemiology.

. As a result of this discipline studying, students form the following professional competencies (elements of competencies).

Code and formulation of competence	**Stages of competence formation**	
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	Typical pathological processes in the human body and mechanisms of their development
	Able to	Explain changes in the patient's body based on knowledge of typical pathological processes.
	Masters	Skills of interpretation of disorders in the patient's body to explain the correction of existing disorders
the readiness for determining the need to use natural healing factors, the drug, non-drug therapy and other methods of treatment in patients who are in need of medical rehabilitation and sanatorium treatment (PC – 14)	Knows	- actual problems and tendencies of pharmacology development; - theoretical and methodological bases of pharmacology; - rules for prescribing medicines in various dosage forms
	Able to	- explain the mechanisms of the main pathological processes;

	Masters	- methodology of pharmacological and diagnostic information processing with the help of modern computer technologies;

ANNOTATION

Academic discipline " Forensic medicine " is designed for students enrolled in the educational program of higher education 31.05.01" General medicine", included in the basic part of the curriculum, implemented in the 6th year in the C semesters. The total complexity of the discipline is 144 hours, 4 credits. Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" (level of training specialty) was used in the development of the working program of this discipline.

The course program is based on the medical knowledge obtained by students:

the ability to use the basics of economic and legal knowledge in professional activity (GPC-3)

the readiness to maintain and report medical documents (GPC – 6)

the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)

the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review. (PC – 6)

Purpose of discipline is to form students ' knowledge of theoretical and practical issues of forensic medicine to the extent necessary for the successful performance of specialist duties.

Objectives:

- To acquaint students with the legal regulation and organization of forensic medical examination, the responsibility of the doctor for causing harm to health in the process of providing medical care and committing professional and professional offenses;

- To acquaint students with the morphological features of the pathological processes in various types of external influences and extreme conditions.

As a result of studying this discipline, the following professional competencies (elements of competencies) are formed in students.

Code and formulation of competence	Stages of competence formation	
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	-working with magnifying devices (microscopes); - to justify the nature of the pathological process and its clinical and morphological manifestations in the most common diseases; - analyze the patterns of functioning of various organs and systems in various diseases and pathological processes; - analyze morphological manifestations of the main pathological symptoms and syndromes of diseases
	Able to	-pathologic conceptual apparatus; - skills of the analysis of laws of functioning of various bodies and systems at diseases and pathological processes; - skills of analysis of morphological changes in tissues and organs in various diseases and pathological processes, taking into account the requirements of the International statistical classification of diseases and health-related problems (ICD)
	Masters	-working with magnifying devices (microscopes); - justify the nature of the pathological process and its clinical and morphological manifestations in the most common diseases; - analyze the patterns of functioning of various organs and systems in various diseases and pathological processes; - to analyze morphological manifestations of the main pathological symptoms and syndromes of diseases
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	- the basic laws of development and life of the body on the basis of the structural organization of cells, tissues and organs; - histological and functional features of tissue elements, methods of their research; structure, topography and development of cells, tissues, organs and systems of the body in interaction with their function in the norm, especially the organizational and population levels of life.
	Able to	-work with magnifying devices (microscopes); - to justify the nature of the pathological process and its clinical and morphological manifestations in the most common diseases; - analyze the patterns of functioning of various organs and systems in various diseases and pathological processes; - to analyze morphological manifestations of the main pathological symptoms and syndromes of diseases

	Masters	- pathologic conceptual apparatus; - skills of the analysis of laws of functioning of various bodies and systems at diseases and pathological processes; - skills of analysis of morphological changes in tissues and organs in various diseases and pathological processes, taking into account the requirements of the International statistical classification of diseases and health-related problems (ICD)
readiness for the examination of temporary disability, participation in the conduction of medical and social expert reviews, detection of human biological death (PC – 7)	Knows	Signs of human biological death
	Able to	To ascertain the biological death of a person
	Masters	Skills ascertaining human biological death

The following methods of active/ interactive training are used to form the above mentioned competencies within the discipline "Forensic medicine":

1. Execution of practical training with the use of computer training programs is supposed.
2. For organization of the independent self-work it is proposed to prepare essays and reports for presentation in the group and at the student conference; as well as preparation for practical classes, work with additional literature, preparation of essays and lesson-conference.

The share of practical training conducted in interactive forms is 10% of the whole classroom time; independent extracurricular self-work – 50% of the whole time.

Annotation to the Work Program for the subject "Physical training"(«Элективные курсы по физической культуре и спорту»)

Working program discipline "Physical training"(«Элективные курсы по физической культуре и спорту») is intended for students enrolled in the educational program 31.05.01 "General Medicine". Discipline is implemented in 1,2,3 courses, 2,3,4,5,6 semesters. Total complexity of the discipline "Physical training"(«Элективные курсы по физической культуре и спорту») is 328 academic hours.

The discipline "Physical training"(«Элективные курсы по физической культуре и спорту») refers to the choice disciplines of the variable part of the curriculum. The course is a continuation of the discipline " Physical Training and Sport"

The purpose of the discipline is the formation of the physical culture of the individual, the formation of the ability of the directed use of various means of physical culture and sports to preserve and promote health, psychophysical training and self-preparation for future professional activities.

Tasks of the discipline:

• formation of physical culture of the personality of the future professional who is in demand in the modern labor market;

• development of physical qualities and abilities, improvement of the functional capabilities of the body, strengthening individual health;

• enrichment of individual experience in practicing specially-applied physical exercises and basic sports

• mastering the system of professional and vital practical skills;

• mastering the system of knowledge about physical education, their role in the formation of a healthy lifestyle;

• mastering the skills of creative cooperation in collective forms of exercise.

To study the discipline "Physical training"(«Элективные курсы по физической культуре и спорту») successfully, the following preliminary competences should be formed:

• the ability to use a variety of means of physical activity in individual physical education classes, focused on improving body efficiency, preventing diseases;

• presence of interest and habits to practice physical culture and sports systematically;

• knowledge of the system of personal and public hygiene, knowledge of the rules of regulation of physical activity.

As a result of studying this discipline, the following general cultural competencies are formed.

Competence code and formulation	**Stages of forming the competence**	
GPC-6 the ability to use the methods and tools of physical training to ensure full social and professional activities	Knows	- general theoretical aspects of physical education, their role and importance in the formation of a healthy lifestyle; - principles and methods of organizing, refereeing physical culture and sports events
	Can	- build an individual trajectory of physical and sporting achievements independently; -use a variety of means and methods of physical culture to preserve and promote health, improve working capacity; -use the methods of self-control of one's own physical condition; - work in a team to achieve common and personal goals
	Possesses	-Various forms and types of physical activity for the organization of a healthy lifestyle; - the tools of self-control of individual health indicators and physical fitness; - motor actions of basic sports and able to actively apply them in gaming and competitive activities; - a system of professional and vital practical skills that ensure the preservation and strengthening of physical and mental health

RESUME

Discipline " Roentgenology, Radiodiagnostics" is included in the variable part of the curriculum discipline of choice, implemented in the 3rd year in the 6th semester. The total complexity of the discipline is 108 hours, 3 credits.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "Medical care" (level of training specialty).

The course program is based on the basic medical knowledge obtained by specialists:

- the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1)

the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7)

The purpose of the development of the discipline is the formation of students 'professional knowledge on radiology, radiation diagnosis, the formation of students' fundamentals of clinical thinking, professional skills, informed, integrated use of imaging techniques necessary for further training and professional activities in medical specialties; mastering the basics of examination, diagnosis of patients with various nosological forms necessary for subsequent independent medical activity.

Objectives.

1. Training in the discipline of radiology, radiology, revealing in its sections of radiation detection methods of pathology of all organs and systems in patients in clinical practice.

2. Deepening and consolidation of students ' knowledge of the physical foundations of radiation diagnosis, technologies for obtaining x-ray and ultrasound images, as well as the mechanisms of biological action of various types of radiation on the tissue.

3. To systematize the existing knowledge and formation of students ' ideas about modern methods of radiation diagnosis. To develop the ability of rational choice of the method of radiological examination, examination of the patient by methods of x-ray, echography, possession of concepts and interpretation of the obtained data of x-ray and ultrasound in the diagnosis of common diseases and conditions.

4. Providing theoretical knowledge and practical skills, the breadth of scientific approach to solving problems of radiology, radiology.

5. Formation of students ' skills in the study of scientific literature and official statistical reviews on the sections of the discipline, the preparation of reviews of modern scientific problems in the field of radiation diagnosis.

6. The combination of specific knowledge in the discipline of radiology, radiology with methodological and interdisciplinary aspects, allowing to form specialists with a broad Outlook, able to perceive their professional activities as a means of solving a complex of medical, economic, moral, ethical and social problems.

To solve these problems, a course of thematic lectures, clinical analysis of patients, the development of modern diagnostic methods and methods of treatment is planned.

As a result of the study of this discipline, students form the following competencies:

Competence and its code	**Stages of competence formation**	
the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	Knows	Methods of implementation of set of measures aimed at the preservation and promotion of health, methods of assessment of natural and social environmental factors in the development of human diseases, forms and methods of sanitary and educational work;
	Able to	Assess the causes and conditions of the induction and development of diseases in humans; to assess the natural and social factors of the environment in the development of human diseases; to search for solutions to various problems in unusual situations, to carry out sanitary and educational work with the population and patients;
	Masters	Methods of assessment of natural and social environmental factors in the development of human diseases; the basics of preventive measures to prevent diseases; the principles of sanitary and educational work on hygienic issues,

Competence and its code	Stages of competence formation	
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	General and special research methods in the main sections of therapy; basics of ultrasound and methods of radiation diagnostics in various sections of medicine.
	Able to	obtain information about the development and course of the disease; to identify general and specific radiological and US signs of the disease; to assess the severity of the patient's condition; to determine, interpret the data.
	Masters	Skills that allow to establish a diagnosis based on the results of X-ray and US methods in the most common therapeutic diseases;
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	Physical and technical basis of radiation diagnosis. Technologies for obtaining images of biological tissues and organs, methods of radiation examination, rules of patient preparation, basic accesses, scanning modes. Possibilities of methods of radiation diagnosis in modern clinical practice.
	Able to	Distinguish between the normal picture and anatomical and physiological parameters of X-ray and sonography of organs and images typical of common diseases. Interpret X-ray and sonograms in typical pathological processes and evaluate the conclusion of a specialist of radiation diagnosis
	Masters	Skills of diagnosis according to X-ray and US methods of research

ANNOTATION

The discipline "Modern Laboratory Technologies and Complexes" is intended for students enrolled in the educational program of higher education on 31.05.01 "Medicine", is included in the optional part of the curriculum by the discipline of choice, is implemented on the 3rd course in the 6 semester. The total complexity of the discipline is 108 hours, 3 credit units.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “Medical care” (specialty level) has been used.

The course program is based on the basic knowledge gained by students:

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1);

- the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7);

The purpose of the discipline studying is the formation of professional competence in the field of knowledge of the discipline "Modern laboratory systems and complexes", which will allow students to evaluate and identify in samples of biomaterial the deviations caused by the structural and functional disorders of the state and activities of various organs, tissues, systems of the body.

The **objectives** of the discipline are:

- knowledge of modern methods of laboratory examination of patients, their diagnostic capabilities;
- mastering the technique of collecting biological material for laboratory research
- knowledge of algorithms for laboratory diagnostics of various diseases in the clinic of internal diseases, pediatrics, surgical pathology.

- ability to interpret the results of laboratory studies, including taking into account the continuity of outpatient, inpatient, laboratory, preoperative examination;
- making a plan of laboratory examination taking into account the features of laboratory tests.
- mastering the methods of bedside diagnostics using "dry chemistry".

As a result of the study of the discipline "Modern laboratory systems and complexes" students form the following general cultural/ general professional/ professional competence (elements of competence).

Competence and its code	**Stages of competence formation**	
- the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)	Knows	The structure and functioning of the human body in the normal and pathology, identified by laboratory diagnostics.
	Able to	Using the methods of laboratory diagnostics to determine the structure and function of human organs in normal and pathological conditions.
	Masters	The basics of determining the structure and function of human organs in the norm and pathology, identified by methods of laboratory diagnosis.
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	Modern methods of clinical, laboratory, instrumental examination of patients, their diagnostic capabilities;
	Able to	justify the need for clinical and laboratory examination of the patient identify and analyze clinically relevant information obtained in the laboratory examination of patients; morphological analysis of biopsy, surgical and sectional material
	Masters	Skills for interpretation of the results of laboratory studies, morphological descriptions of biopsy, operational and sectional material Skills for competent registration of the medical history in the section of appointment of laboratory examination and interpretation of its results.
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification	Knows	pathophysiological characteristics of the main clinical syndromes and their parameters described by the results of laboratory studies
	Able to	to substantiate pathogenetically justified methods (principles) of diagnostics among adults and adolescents, taking into account their age and gender groups
	Masters	- interpretation of the results of laboratory methods of

of Diseases and problems related to health , the 10th review. (PC – 6)		diagnostics - technique of biological material collection for laboratory studies in children, adolescents and adults; - methods of assessing the effectiveness of therapy on the results of laboratory monitoring of informative parameters
	Matsers	- to diagnose diseases and pathological processes taking into account the results of clinical and immunological examination - methods of bedside diagnosis (glucose determination, the use of urinary strips, allergodiagnostics) using " dry chemistry»

The following methods of active/ interactive learning are used to form the above competences within the discipline "Modern laboratory systems and complexes": problem lecture, discussion.

ANNOTATION

Discipline Clinical and Laboratory Diagnostics " is included in the variable part of the curriculum discipline of choice, implemented on 5^{th} year in the 10^{th} semester. The total complexity of the discipline is 72 hours, 2 credits.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "Medical care" (level of training specialty).

The course program is based on the basic medical knowledge obtained by students:

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (GPC – 1);

the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7);

the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional tasks (GPC – 9)

The purpose is to form knowledge about the principles of laboratory diagnostics of pathological metabolic processes, detection and monitoring of various diseases, to apply the knowledge gained in solving clinical problems.

Objectives:

* familiarization with the range of laboratory methods taking into account the organizational structure of health care institutions and the cost of research;

* familiarization with the qualitative capabilities of modern laboratory studies, taking into account the sensitivity, specificity, acceptable variation of methods;

* study of indications and contraindications to examinations;

* establishment of continuity of outpatient, inpatient, preoperative laboratory examination;

* analysis of possible causes of false results, distortions associated, including pharmacotherapy and improper preparation of the patient for the study (providing pre-analytical stage);

* training in the rules of the pre-analytical stage. formation of skills of analytical work with information (educational, scientific, normative-reference and other sources).

As a result of studying this discipline, the following professional competencies (elements of competencies) are formed in students.

Discipline " Roentgenology, Radiodiagnostics" is included in the variable part of the curriculum discipline of choice, implemented in the 3rd year in the 6th semester. The total complexity of the discipline is 108 hours, 3 credits.

In the development of the working program of the discipline used the Federal state educational standard of higher education in the specialty 31.05.01 "Medical care" (level of training specialty).

The course program is based on the basic medical knowledge obtained by students:

Competence and its code	Stages of competence formation	
the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC – 7)	Knows	the main ways of metabolism of amino acids, proteins, carbohydrates, lipids, nucleotides, nucleic acids and the main violations of their metabolism in the human body
	Able to	to evaluate the informativeness of various biochemical determinations for blood and urine analysis in some pathological conditions (diabetes mellitus, liver, kidney, heart pathology)
	Masters	skills for the solution of biochemical and professional tasks.
the ability and willingness to conduct of preventive medical examinations, clinical examinations and dispensary observations. (PC – 2)	Knows	Modern methods of clinical, laboratory, instrumental examination of patients, their diagnostic capabilities;
	Able to	justify the need for clinical and laboratory examination of the patient identify and analyze clinically relevant information obtained in the laboratory examination of patients; morphological analysis of biopsy, surgical and sectional material
	Masters	Skills for interpretation of the results of laboratory studies, morphological descriptions of biopsy, operational and sectional material Skills for competent registration of the medical history in the section of appointment of laboratory examination and

		interpretation of its results.
- the ability to participate in researches (PC – 21)	Knows	the laws of the course of pathological processes in organs, systems and in the body as a whole;
	Able to	- make a plan of biochemical examination of biological fluids for pathogenetically sound clinical diagnosis.
	Masters	- interpretation of the results of laboratory research methods based on pathogenetic patterns of disease development
the willingness to participate in implementation of new methods and techniques aimed at protection of public health. (PC – 22)	Knows	regularities of functioning of individual organs and systems the main methods of clinical and immunological examination laboratory markers of the functional state of the organism of an adult and an adolescene
	Able to	interpret the results of the main methods of laboratory diagnostics to identify pathological processes in human organs and systems; to make the individual algorithms of the patient examination based on the estimated or revised primary and associated diagnoses
	Masters	- to diagnose diseases and pathological processes taking into account the results of clinical and immunological examination - methods of bedside diagnosis (glucose determination, the use of urinary strips, allergodiagnostics) using " dry chemistry»

The following methods of active/ interactive learning are used to form the above competences within the discipline "Clinical and laboratory diagnostics": problem lecture, discussion.

Annotation

The discipline "Molecular Genetic Technology" is intended for students enrolled in higher educational program 05.31.01 "General medicine", course included in the curriculum as a variable discipline of choice, implemented at the 5th year , 10 term. Total complexity of the discipline is 72 hours, 2 credit units.

In the work program developing, the Federal state educational standard for higher education 31.05.01 specialty “General Medicine” (specialty level) was used.

The course program based on basic medical knowledge gained by students:

CPC-7 - the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems;

PC-20 - the readiness to analysis and public presentation of medical information based on evidence-based medicine

PC-21 - ability to participate in researches;

PC-22 - the willingness to participate in implementation of new methods and techniques aimed at protection of public health.

Discipline is logically and meaningfully associated with such courses as "Biology", "Computer science, Medical informatics", "Biology", "Biochemistry", "Histology, Embryology, Cytology", "Pharmacology", "Clinical biochemistry", "Biochemistry pathological processes”, “Clinical and laboratory diagnostics”, “Immunology”.

Discipline goal: preparing students for research activities related to the modeling of biomolecules, as well as complex molecular systems: complexes, solutions, interface surfaces

Tasks:

1) acquaintance with modern achievements in the field of computer modeling of the dynamics of biomolecular objects and systems;

2) training in work with modern databases, software packages on molecular modeling and molecular dynamics using high-performance computing systems

3) mastering modern methods of molecular modeling of biostructures.

4) readiness for professional operation of modern research equipment and instruments.

"Molecular Genetic Technology" is an important discipline for the preparation of students of the 05/31/01 "medicine". it is designed to expand the methodological arsenal of the student and teach him to use modern tools that have emerged in the field of modern biology and medicine. in connection with the rapid development of methods for conducting experiments in silico, it is necessary to develop the ability to apply these methods for the effective conduct of biochemical, pharmacological and medical research.

to successfully study the discipline "Molecular Genetic Technology" the following preliminary competences should be formed for students:

As a result of studying this discipline, students form the following general cultural and professional competencies:

Competence code and formulation	**Stages of competence formation**	
CPC-7 - the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems	Knows	– place and role of molecular modeling in medicine; – main concepts, definitions, methods and approaches used in molecular genetic studies in medicine; – use of molecular genetic technologies in pharmacology and clinical medicine; – biomedical problems solved by approaches of molecular genetic modeling
	Is able to	– formulate problems of molecular genetic studies in medicine
	Possesses	– the main principles of molecular genetic research organizing in medicine
PC-2 - the ability and willingness to conduct of preventive medical examinations, clinical examinations and dispensary observations;	Knows	– the main principles of medical examinations in order to conduct genetic research
	Is able to	– organize medical examinations in order to conduct genetic research
	Possesses	– the main skills of medical examinations in order to conduct genetic research
PC-21 - ability to participate in researches;	Knows	– techniques for molecular genetic studies in medicine
	Is able to	– how to plan molecular genetic studies in medicine;
	Possesses	– skills to plan molecular genetic studies in medicine;

ANNOTATION

Discipline " Medical Research Methodology" is designed for students enrolled in the educational program 31.05.01"General medicine" is included in the variable part of the curriculum. Discipline is implemented on a 6 year 11th semester.

Development of the working program of the discipline is made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" and the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the development of the discipline is 2 credits, 72 hours. The curriculum provides 18 hours of lectures, 36 hours of practical training and independent work of the student (18 hours), the credit is in the 11th semester.

The successful development of the discipline is provided by the "income" knowledge and skills that students get in the study of the following disciplines:

Philosophy (knowing of the forms and methods of scientific knowledge, their evolution);

Bioethics (knowledge of moral and ethical norms, rules and principles of professional medical behavior, ethical foundations of modern medical legislation, knowledge of basic ethical documents of domestic and international professional medical associations);

Economics (ability to analyze economic problems);

History of medicine (knowledge of the history of formation and development of medical science);

Physics, mathematics (knowledge of mathematical methods of solving intellectual problems and their application in medicine, the ability to make calculations on the results of the experiment, to carry out basic statistical processing of experimental data);

Informatics, medical Informatics (knowledge of the theoretical foundations of Informatics, collection, storage, search, processing, conversion, dissemination of information in medical and biological systems, the use of information computer

systems in medicine and health care, the ability to use educational, scientific, popular literature, internet, possession of basic information conversion technologies).

In turn, the knowledge, skills acquired by students in the course of studying the discipline " Medical Research Methodology " may become a basis for successful development of the following disciplines:

Epidemiology

Public health and health care

Evidence medicine

In addition, the study of the discipline creates the basis for the student subsequent execution of research work (R&D).

The purpose of the discipline " Medical Research Methodology " is the formation of the students basic knowledge, basic practical skills necessary for the implementation of research activities in the field of public health.

Objectives of the discipline:

1. Formation of knowledge about the principles of research activities and features of its implementation in medicine and health care.
2. Formation of knowledge about modern technologies, ways and methods of organization (design) of scientific research in medicine and health care.
3. Formation of knowledge about the types of scientific literature, the principles of research of scientific information, the main types of library catalogs and electronic databases of scientific literature (including foreign ones), teaching students the methods of searching and analyzing scientific literature with the resources of specialized (university) libraries, local electronic databases, internet and official statistical reviews.
4. Formation of knowledge about bibliographic description of scientific sources, including electronic, formation of skills of bibliographic description of different types of scientific literature.
5. Formation of knowledge about the types of abstracts, their structure, features of the abstract review, methods of compression of the source text, stable speed,

used in abstracting, fixing the algorithm of action in the preparation of monographic and review essay.

6. Formation of knowledge about the features of the scientific text on samples of scientific articles, formal requirements for the design of the scientific text, the main ways of presenting numerical information (tables, diagrams), the principles of optimal choice of one of the ways.

As a result of the study of this discipline in students the following general professional and professional competences (elements of competences) are formed:

Competence and its code	**Stages of competence formation**	
the ability and willingness to analyze the results of his own activity to prevent professional errors (GPC-5)	Knows	Methods of analysis, finding the problem, designing the optimal sequence of actions to achieve the goal, methods of planning scientific activities, evaluation and control of it. Principles of independent decision-making in the field of management of research organization
	Able to	Use educational, scientific, popular science literature, internet for professional activities. Analyze the results of their own activities to prevent professional errors and critically evaluate modern theoretical concepts and trends in medicine. To implement the principles of personal responsibility for decisions made in the organization of scientific research.
	Masters	Methods of analysis of the outcomes of their own activities to prevent professional mistakes: possession of various managing functions: planning, organization, regulation, monitoring and controlling, having the ability to consciously choose the optimal strategy, etc
the readiness to analysis and public presentation of medical information based on evidence-based medicine (PC – 20)	Knows	The essence of the evidence based medicine; types of scientific sources of information; methods of evaluation of scientific sources of information; algorithm of monographic and review essay; features of the scientific text and its design requirements; ways of presenting numerical information
	Able to	To analyze and evaluate the information of scientific sources; to make a monographic and review essay on the topic of research; to analyze ways of presenting numerical data in terms of speed of perception, data volume, logic; to use text and graphic editors to present the results of the study; to create a presentation

		to the report on the results of the study.
	Masters	Skills of scientific text design; skills of determining the type of numerical data; skills of choosing the optimal way to represent numerical data using different types of tables and charts
the ability to participate in researches (PC – 21)	Knows	The essence of research activities in medicine and health care; stages of scientific medical research and their content; design options for scientific medical research; the nature of errors in the results of scientific medical research and the causes of their occurrence.
	Able to	Plan scientific medical research; anticipate errors in the results of scientific medical research and take measures to minimize them.
	Masters	Skills of sample formation using various methods; skills of using the simplest methods of randomization in the formation of comparison groups; skills of forming comparison groups by means of paired selection; skills of calculating and evaluating a set of indicators based on the results of the observational (cohort) study; skills of calculating and evaluating a set of indicators based on the results of the experimental study; skills of calculating and evaluating a set of indicators characterizing the validity of the diagnostic test.
the willingness to participate in implementation of new methods and techniques aimed at protection of public health. (PC – 22)	Knows	Norms of international law, the main provisions of the legal documents of the Russian Federation regulating research activities in medicine and health care, as well as work on the practical use and implementation of the results of scientific medical research; the nature and classification of costs associated with medical intervention; types of effectiveness of medical activities, their essence and content; features of clinical and economic research
	Able to	Evaluate medical interventions in terms of cost-benefit ratio
	Masters	Skills of clinical and economic analysis

RESUME

The discipline "Commercialization of Scientific Research" is purposed for students enrolled in the educational program 31.05.01 "General medicine", and included in the variable part of the curriculum. Discipline is implemented on 6th year, 11th semester.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine", the curriculum of training in the specialty 31.05.01"General medicine".

The total complexity of the discipline studying is 2credits, 72 hours. The curriculum provides 18 hours of lectures, 36 hours of practical classes and independent self-work of the student (18 hours.), credit is in the 11th semester.

The purpose of the discipline studying " Commercialization of Scientific Research " is the formation of systematic representation and professional competence in students in the field of commercialization of scientific and practical activities, competent presentation of their developments and developments of colleagues in the market.

Objectives of the discipline:

- formation of knowledge for commercialization of scientific and practical developments
- formation of competencies for the competent presentation of their scientific and practical developments in the market.
- study of the legal framework for the organization and management of scientific research
- mastering the systems of scientific activity management
- familiarization with the methods and criteria for evaluating the effectiveness of scientific research
- mastering the evaluation and analysis of the innovation project effectiveness
- familiarization with the basics of patent research and patent licensing work.

- formation of skills in the study of scientific literature and official statistical reviews on the commercialization of scientific and practical developments.

As a result of the study of this discipline the following General professional and professional competences (elements of competences) are formed in students:

Competence and its code	Stages of competence formation	
the ability and willingness to analyze the results of his own activity to prevent professional errors (GPC-5)	Knows	Methods of analysis, finding the problem, designing the optimal sequence of actions to achieve the goal, methods of planning scientific activities, evaluation and control of it. Principles of independent decision-making in the field of management of research organization
	Able to	Use educational, scientific, popular science literature, internet for professional activities. Analyze the results of their own activities to prevent professional errors and critically evaluate modern theoretical concepts and trends in medicine. To implement the principles of personal responsibility for decisions made in the organization of scientific research.
	Masters	Methods of analysis of the outcomes of their own activities to prevent professional mistakes: possession of various managing functions: planning, organization, regulation, monitoring and controlling, having the ability to consciously choose the optimal strategy, etc
the readiness to analysis and public presentation of medical information based on evidence-based medicine (PC – 20)	Knows	The essence of the evidence based medicine; types of scientific sources of information; methods of evaluation of scientific sources of information; algorithm of monographic and review essay; features of the scientific text and its design requirements; ways of presenting numerical information
	Able to	To analyze and evaluate the information of scientific sources; to make a monographic and review essay on the topic of research; to analyze ways of presenting numerical data in terms of speed of perception, data volume, logic; to use text and graphic editors to present the results of the study; to create a presentation to the report on the results of the study.
	Masters	Skills of scientific text design; skills of determining the type of numerical data; skills of choosing the optimal way to represent numerical data using different types of tables and charts

the ability to participate in researches (PC – 21)	Knows	The essence of research activities in medicine and health care; stages of scientific medical research and their content; design options for scientific medical research; the nature of errors in the results of scientific medical research and the causes of their occurrence.
	Able to	Plan scientific medical research; anticipate errors in the results of scientific medical research and take measures to minimize them.
	Masters	Skills of sample formation using various methods; skills of using the simplest methods of randomization in the formation of comparison groups; skills of forming comparison groups by means of paired selection; skills of calculating and evaluating a set of indicators based on the results of the observational (cohort) study; skills of calculating and evaluating a set of indicators based on the results of the experimental study; skills of calculating and evaluating a set of indicators characterizing the validity of the diagnostic test.
the willingness to participate in implementation of new methods and techniques aimed at protection of public health. (PC – 22)	Knows	Norms of international law, the main provisions of the legal documents of the Russian Federation regulating research activities in medicine and health care, as well as work on the practical use and implementation of the results of scientific medical research; the nature and classification of costs associated with medical intervention; types of effectiveness of medical activities, their essence and content; features of clinical and economic research
	Able to	Evaluate medical interventions in terms of cost-benefit ratio
	Masters	Skills of clinical and economic analysis

ANNOTATION

The discipline "Reproductive Health" is intended for students enrolled in the educational program 31.05.01 "General medicine".

Discipline is implemented on 6nd year as an optional discipline.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" and curriculum of training students.

The total complexity of the discipline is 72 hours, 2 credits.

The course program is based on the basic knowledge previously gained by students:

ability to abstract thinking, analysis, synthesis (CC-1);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC-1);

Goal of the course:

Provide students information about human psychosexual development, sexual health, the culture of intimacy, reproductive health through the prevention of sexually transmitted infections (STIs) and unwanted pregnancies; to train a qualified specialist to promote knowledge about sexual and reproductive health.

Objectives of the discipline:

1. Teaching students the anatomical and physiological characteristics of the male and female body.
2. Instill the basics of gender and sexual hygiene
3. Give the concept of the foundations of human sexual health
4. Get acquainted with modern methods of contraception.
5. To teach methods of prevention of sexually transmitted diseases.
6. Learn the basics of marriage and family life

As a result of this discipline study, students form the following general professional and professional competences:

Code and formulation of competence	**Stages of competence formation**	
the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)	Knows	basic principles of ethics and deontology
	Able to	ethically correctly present material about the basics of reproductive health
	Masters	ethical and deontological principles in the presentation of sexual hygiene and basics of human reproductive health
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	the main contraceptives prescribed for prevention of unwanted pregnancy
	Able to	to recommend to modern and effective methods of contraception
	Masters	methods of consultation on the choice of methods of contraception
the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health (PC – 1)	Knows	anatomical and physiological features of the female body, the main sexually transmitted infections, methods of protection from unwanted pregnancy and sexual infections, the basics of marriage hygiene
	Able to	recommend measures aimed at preserving reproductive health and preventing sexually transmitted infections
	Masters	methods of implementation of the set of measures aimed at preserving health, modern and effective protection from unwanted pregnancy, prevention of inflammatory diseases of the genital organs by methods of protection from sexually transmitted infections, including formation of healthy lifestyle, sexual culture and rejection of bad habits

The following methods of active/ interactive training are used to develop the abovementioned competencies within the discipline "Reproductive Health":

1. Conduction of practical training is supposed using computer training programs.

2. Conduction of interactive role-playing games to practice the skills of presentation of material on gender and sexual hygiene and skills of patients counseling.

3. For the organization of independent work, it is offered to prepare essays and reports for presentation in the group and at the student conference; as well as preparation for practical classes, work with additional literature, preparation of abstracts, lesson-conference.

The share of practical training conducted in interactive forms is 10% of the whole classroom time; independent extracurricular work is 63% of the whole time.

ANNOTATION

The discipline "Reproductive Health" is intended for students enrolled in the educational program 31.05.01 "General medicine".

Discipline is implemented on 6nd year as an optional discipline.

Development of the working program of the discipline was made in accordance with the Federal state educational standard of higher education in the specialty 31.05.01 "General medicine" and curriculum of training students.

The total complexity of the discipline is 144 hours, 4 credits.

The course program is based on the basic knowledge previously gained by students:

ability to abstract thinking, analysis, synthesis (GC-1);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies , taking into account the main requirements for information security (GPC-1);

Goal of the course:

Provide students information about human psychosexual development, sexual health, the culture of intimacy, reproductive health through the prevention of sexually transmitted infections (STIs) and unwanted pregnancies; to train a qualified specialist to promote knowledge about sexual and reproductive health.

Objectives of the discipline:

1. Teaching students the anatomical and physiological characteristics of the male and female body.
2. Instill the basics of gender and sexual hygiene
3. Give the concept of the foundations of human sexual health
4. Get acquainted with modern methods of contraception.
5. To teach methods of prevention of sexually transmitted diseases.
6. Learn the basics of marriage and family life

As a result of this discipline study, students form the following general professional and professional competences:

Code and formulation of competence	**Stages of competence formation**	
the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)	Knows	basic principles of ethics and deontology
	Able to	ethically correctly present material about the basics of reproductive health
	Masters	ethical and deontological principles in the presentation of sexual hygiene and basics of human reproductive health
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	the main contraceptives prescribed for prevention of unwanted pregnancy
	Able to	to recommend to modern and effective methods of contraception
	Masters	methods of consultation on the choice of methods of contraception
the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health (PC – 1)	Knows	anatomical and physiological features of the female body, the main sexually transmitted infections, methods of protection from unwanted pregnancy and sexual infections, the basics of marriage hygiene
	Able to	recommend measures aimed at preserving reproductive health and preventing sexually transmitted infections
	Masters	methods of implementation of the set of measures aimed at preserving health, modern and effective protection from unwanted pregnancy, prevention of inflammatory diseases of the genital organs by methods of protection from sexually transmitted infections, including formation of healthy lifestyle, sexual culture and rejection of bad habits

The following methods of active/ interactive training are used to develop the abovementioned competencies within the discipline "Reproductive Health":

1. Conduction of practical training is supposed using computer training programs.

2. Conduction of interactive role-playing games to practice the skills of presentation of material on gender and sexual hygiene and skills of patients counseling.

3. For the organization of independent work, it is offered to prepare essays and reports for presentation in the group and at the student conference; as well as preparation for practical classes, work with additional literature, preparation of abstracts, lesson-conference.

The share of practical training conducted in interactive forms is 10% of the whole classroom time; independent extracurricular work is 63% of the whole time.

ANNOTATION

The discipline "Sexual Health of Men and Women" is intended for students enrolled in the educational program 30.05.01 "General Medicine".

Discipline is implemented on the 6th course, is a discipline of choice.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 30.05.01 “General Medicine”, the curriculum for preparing students were used.

The total complexity of the discipline is 144 hours, 4 credits.

The course program is based on the basic knowledge gained by students:

Ability to abstract thinking, analysis, synthesis (CC-1);

the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security (CPC-1);

Course purpose:

Acquisition by students of information about human development, reproductive health, culture of intimate relationships, maintaining health by preventing unwanted pregnancy, sexually transmitted infections (STIs); training a qualified specialist to promote knowledge about reproductive health.

Objectives of the discipline:

1. Training students in anatomical and physiological features of the female body.

2. To introduce the basics of human reproduction

3. Give the concept of the fundamentals of human reproductive health.

4. To instill the basics of hygiene sex and sex

5. Familiarize yourself with modern methods of contraception.

6. To teach the prevention of sexually transmitted infections.

As a result of studying this discipline, students form the following general professional and professional competencies.

Code and formulation of competence	Stages of competence formation	
the ability and willingness to implement the ethical and deontological principles in professional activities (GPC – 4)	Knows	basic principles of ethics and deontology
	Able to	ethically correctly present material about the basics of reproductive health
	Masters	ethical and deontological principles in the presentation of sexual hygiene and basics of human reproductive health
the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems (GPC – 8)	Knows	the main contraceptives prescribed for prevention of unwanted pregnancy
	Able to	to recommend to modern and effective methods of contraception
	Masters	methods of consultation on the choice of methods of contraception
the ability and willingness to implement a set of measures aimed at the preservation and promotion of health. It includes the formation of a healthy lifestyle, the prevention of occurrence and (or) the spread of diseases, their early diagnosis, the identification of their causes, as well as this set is aimed at elimination of harmful effects of environmental factors on human health (PC – 1)	Knows	anatomical and physiological features of the female body, the main sexually transmitted infections, methods of protection from unwanted pregnancy and sexual infections, the basics of marriage hygiene
	Able to	recommend measures aimed at preserving reproductive health and preventing sexually transmitted infections
	Masters	methods of implementation of the set of measures aimed at preserving health, modern and effective protection from unwanted pregnancy, prevention of inflammatory diseases of the genital organs by methods of protection from sexually transmitted infections, including formation of healthy lifestyle, sexual culture and rejection of bad habits

The following methods of active/interactive learning are used to develop the above competencies within the discipline "Sexual Health of Men and Women":

1. Conduction of practical training is supposed using computer training programs.

2. Conduction of interactive role-playing games to practice the skills of presentation of material on gender and sexual hygiene and skills of patients counseling.

3. For the organization of independent work, it is offered to prepare essays and reports for presentation in the group and at the student conference; as well as preparation for practical classes, work with additional literature, preparation of abstracts, lesson-conference.

The share of practical training conducted in interactive forms is 10% of the whole classroom time; independent extracurricular work is 63% of the whole time.

Resume of the working program of discipline

«Neurosurgery»

The discipline "Neurosurgery" is intended for students enrolled in the direction of 31.05.01 "General Medicine" and is an optional discipline. Discipline is implemented on the 4th course, in the 8th semester. The complexity of the discipline 2 credits, 72 hours.

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “Medicine”, the curriculum for training specialists in the specialty 31.05.01 “Medicine” from 2016 were used.

The course program is based on the basic knowledge gained by students:

GCC-1 - the ability to abstract thinking, analysis, synthesis

GCC-5 - the readiness to self-development, self-realization, self-education, to use ofcreativity

GPC-1 - the willingness to solve common tasks of professional activity with the use of information and bibliographic resources, biomedical terminology, information and communication technologies, taking into account the main requirements for information security

GPC-2 - the willingness to communicate in oral and written forms in Russian and foreign languages to solve the problems of professional activity

GPC-4 - the ability and willingness to implement the ethical and deontological principles in professional activities

GPC-7 - the readiness to use basic physical and chemical, mathematical and other natural science concepts and methods in solving professional problems

GPC-9 - the capacity for the assessment of morphological and physiological states and pathological processes in the human body for solving professional task

The goal of the the discipline "Neurosurgery" mastering is to study the main diseases of the nervous system, requiring surgical treatment, acquisition of skills of building classifications, in mastering the methodology of patient examination with pathology of the nervous system with the interpretation of laboratory and

instrumental methods of examination of nervous system structures, in the development of the principles of neurological diagnosis (syndrome, topical, etiological) for the formation of clinical thinking of the future doctor.

The objectives of the discipline are:

- development in students the knowledge of etiology, epidemiology, pathogenesis and risk factors of nervous diseases;
- teaching students the most important methods of objective examination, allowing timely diagnostics of the nervous system disorders;
- teaching students to recognize clinical signs of neurosurgical pathology during examination of the patient determining the severity of pathological process;
- teaching students the ability to identify the leading syndromes of nervous diseases;
- teaching students to choose the best methods of laboratory and instrumental examination in major neurological diseases and the algorithm of differential diagnosis;
- training to conduct a full range of medical, rehabilitation and preventive measures among patients with various nosological forms of neurological diseases;
- training students to provide patients with the first aid in the event of emergency conditions;
- teaching students to choose the optimal schemes of etiopathogenetic treatment of the most common diseases of the nervous system;
- familiarization of students with the principles of organization and work of medical institutions providing surgical care to patients with neurological pathology;
- development of skills in the study of scientific literature and official statistical reviews;
- formation of communication skills with the neurosurgical patient and his representatives taking into account ethics and deontology depending on the revealed pathology and characterological features of patients;
- formation of communication skills of student with a team.

As a result of studying this discipline the following general professional/ professional competences (elements of competences) are to be formed in students.

Code and formulation of competence	**Stages of competence formation**	
GPC-8 the readiness for medical use of drugs and other medical substances and their combinations in solving professional problems	Knows	Principles of etiological, pathogenetic, symptomatic and surgical treatment of major diseases of the central nervous system and peripheral nervous system.
	Is able to	Assign pathogenetic therapy and surgical treatment, taking into account the etiology of the disease with the use of drugs, therapy in patients in need of medical rehabilitation.
	Possesses	Methods of medical care
PC-5 the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases	Knows	1. Maintenance of standard accounting and reporting medical documentation in medical organizations of neurosurgical profile 2. Basics of preventive medicine, organization of preventive measures aimed at improving the health of the population
	Is able to	1. To plan, analyze and evaluate the quality of medical care, the health status of the population and the impact of environmental and industrial factors on it. 2. To assess the social factors affecting the physical and psychological health of the patient: cultural, ethnic, religious, individual, family, social risk factors; to make a preliminary diagnosis; -to synthesize information about the patient in order to determine the pathology and causes of its causes; 3. To outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain reliable results
	Possesses	1. Proper maintenance of medical records 2. Methods of general clinical examination
PC-6 the ability of determining the patient's basic pathological conditions, symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health, the 10th review.	Knows	Principles of etiological, pathogenetic, symptomatic and surgical treatment of major diseases of the central nervous system and peripheral nervous system. Provision of emergency and emergency care, indications and contraindications for surgical treatment, evaluation of treatment results
	Is able to	Assign pathogenetic therapy based on the etiology of the disease
	Possesses	Methods of medical care
PC-8	Knows	Principles of etiological, pathogenetic, symptomatic

the ability to determining the tactics of patient surveillance with different nosological entities.		and surgical treatment of major diseases of the central nervous system and peripheral nervous system. Provision of emergency and emergency care, indications and contraindications for surgical treatment, evaluation of treatment results
	Is able to	Prescribe pathogenetic therapy based on the etiology of the disease
	Possesses	Methods of medical care

Annotation

The discipline " Medical genetics" is intended for students enrolled in the educational program 31.05.01. “General Medicine”, included in the basic part of the curriculum, is implemented in the 4th year in 8 semester. The total complexity of the discipline is 36 hours, 1 credits

In developing the work program of the discipline, the Federal State Educational Standard of Higher Education in the specialty 31.05.01 “General Medicine” (level of specialty), the curriculum for preparing students were used.

The course program is based on the basic knowledge gained by students: the ability to abstract thinking, analysis, synthesis (CC-1);
the willingness to solve common tasks of professional activity with the use of information and bibliographic resources , biomedical terminology , information and communication technologies , taking into account the main requirements for information security (GPC – 1)

The purpose of the discipline is to master the theoretical foundations of the diagnosis, prevention and treatment of hereditary diseases by students. When studying the section of medical genetics, students will become familiar with the patterns of transmission in generations of hereditary diseases, the formation of multifactorial pathology involving genetic factors, aspects of the occurrence of sporadic congenital pathology, and de nova mutation.

The main task is to teach students a clinical approach to the assessment of hereditary pathology.

As a result of studying this discipline, students form the following general professional and professional competencies:

Competence code and formulation	**Stages of forming the competence**	
the readiness for medical use of drugs and other medical substances and their combinations in solving	Knows	Principles of etiological, pathogenetic, symptomatic treatment of the main hereditary diseases
	Is able to	To prescribe pathogenetic therapy taking into

professional problems (GPC – 8)		account the etiology of the disease with the use of drug therapy in patients who need medical rehabilitation.
	Possesses	Methods of providing medical care
the readiness to collect and to analyze patient complaints, data of its history, the results of laboratory, instrumental, postmortem and other examinations to recognize the incidence or the absence of diseases (PC – 5)	Knows	1. maintaining a typical accounting and reporting medical records in medical organizations 2. Fundamentals of preventive medicine, the organization of preventive measures aimed at improving the health of the population
	Is able to	1. plan, analyze and evaluate the quality of medical care, the state of public health and the influence of environmental and production factors on it 2. assess the social factors affecting the patient's physical and psychological health: cultural, ethnic, religious, individual, family, social risk factors; make a preliminary diagnosis - to synthesize information about the patient in order to determine the pathology and the causes of its cause; 3. to outline the amount of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result
	Possesses	1. Proper medical record keeping 2. Methods of general clinical examination
the ability of determining the patient's basic pathological conditions , symptoms, syndromes, diseases in accordance with the International Statistical Classification of Diseases and problems related to health , the 10th review. (PC – 6)	Knows	Principles of etiological, pathogenetic, symptomatic treatment of the main diseases of the central nervous system and peripheral nervous system. Providing emergency and emergency care, indications and contraindications for prescribing therapeutic measures, evaluation of treatment results
	Is able to	Assign pathogenetic therapy based on the etiology of the disease
	Possesses	Methods of providing medical care
the ability to determining the tactics of patient surveillance with different nosological entities. (PC – 8)	Knows	Principles of etiological, pathogenetic, symptomatic treatment of the main diseases of the central nervous system and peripheral nervous system. Providing emergency and emergency care, indications and

		contraindications for prescribing therapeutic measures, evaluation of treatment results
	Is able to	Assign pathogenetic therapy based on the etiology of the disease
	Possesses	Methods of providing medical care

Annotation to the Work Program for the course
“Russian Language (an advanced course)”

The discipline "Russian language (Advanced course)” is intended for the students studying according to the educational program 31.05.01 " General Medicine " enters an optional part of the curriculum.

The discipline is implemented on 3,4,5 courses, in 5,6,7,8,9,10 semester.

Developing the working program of a subject matter Federal state educational standard of the higher education in the specialty 31.05.01 " General Medicine ", the curriculum of training of specialists in the specialty 31.05.01 "General Medicine " are used.

The general labor input of development of discipline is 7 credits, 252 hours. The curriculum provided 162 hours of a hand on lab training classes and individual student’s work (90 hours).

Feature in construction and the maintenance of a course is use of methods of active training, program and technical means, fund of methodical, estimated and electronic means of ensuring of discipline. This discipline is directly connected with disciplines "Russian and the standards of speech", "(Russian) Foreign language" is continuation of discipline. Features of course creation is the contingent of the students having basic level of knowledge of Russian.

The program of a course relies on the basic knowledge and competeces gained by the students :

- the readiness to self-development, self-realization, self-education, to use of creativity (GCC-5)

- the willingness to communicate in oral and written forms in Russian and foreign languages to solve the problems of professional activity (GPC-2)

- the readiness for educational activities to eliminate the risk factors and promote healthy lifestyles (PC-16);

- the readiness to analysis and public presentation of medical information based on evidence-based medicine (PC - 20).

The goal of the discipline is mastering of language knowledge (phonetic, lexical, grammatical and spelling), formation and improvement of language skills and oral skills, formation and development of communicative and speech competence of students, improvement speech standard of future experts/At realization of the practical purpose of training - formation of ability and readiness of future expert for cross-cultural communication - occurs gradual and consecutive strengthening of professional and business orientation of training according to adequate abilities of foreign-language speech activity, really necessary for future professional activity of the expert in the field of medicine.

The tasks of discipline are

• To acquaint students with the main standards of modern Russian in its oral and written forms, factors of successful speech behavior and methods of its improvement.

• To develop attention to violations of standards of the literary language and ability to correct them and also the aspiration to get rid of mistakes in own speech.

• To report the main data on the speech, its structural and functional qualities.

• To acquaint students with a concept of functional style. To give an idea of stylistic differentiation of the modern Russian literary language.

• To acquaint students with a concept of functional style. To give an idea of stylistic differentiation of the modern Russian literary language.

• To improve skills of not difficult possession of stylistic resources of language on the basis of judgment of theoretical questions of stylistic differentiation of language means of different levels (from phonetic to syntactic).

• To develop and improve skills of producing texts of different style and genre accessory, texts of scientific and professional medical appointment.

• To develop at the students practicing in medical uchrezhedniya ability to conduct professional dialogue with the patient, to make out results of inquiry in the medical card, to work with material in the conditions of hospital.

• To improve skills of the competent letter and speaking, to prepare student to dialoque with sick patients.

• To impart skills and abilities of a public statement, conducting a business conversation, negotiations, discussions.

As a result of the study of this discipline the students form the following types of the general cultural and general professional competence.

Competence code and formulation	**Stages of forming the competence**	
GPC-2 the willingness to communicate in oral and written forms in Russian and foreign languages to solve the problems of professional activity	Knows	communication basics, principles and methods of organizing communication in Russian and a foreign language
	Is able to	create and edit texts of the scientific and professional orientation; summarize and annotate information; create communication materials; organize the negotiating process, including with the use of modern means of communication in Russian and a foreign language
	Possesses	skills of business and public communications, basic grammatical structures of the scientific and spoken language
(PC – 20)the readiness to analysis and public presentation of medical information based on evidence-based medicine	Knows	Methods of public presentation of medical information in Russian
	Is able to	To make a report, report, presentation in Russian
	Possesses	Skills of public speaking in Russian