

## ANNOTATED PROGRAM CONTENT

### Academic disciplines

#### "History of Kyrgyzstan, history of medicine»

**The purpose of the discipline:** teaching the course "History of Kyrgyzstan, history of medicine" in higher education institutions of Kyrgyzstan is to provide students with a holistic view of the history of the Kyrgyz and other peoples of Kyrgyzstan, instill in the younger generation a sense of patriotism and active citizenship, respect for the historical past of the people of Kyrgyzstan.

The course is designed to provide medical students with knowledge about the main stages of the historical development of Kyrgyzstan from ancient times to the present, ethnogenesis and formation of the Kyrgyz nation, to show the inseparability of the history of the development of Kyrgyzstan with the history of world civilizations. The study of national history is one of the most important means of strengthening interethnic harmony and mutual understanding of the people Kyrgyzstan, patriotic education of young people. Study of the main stages of medical development.

#### **Objectives of the discipline:**

- to form ideas about the main historical stages in the formation and development of the Kyrgyz statehood;
- to show the organic interrelation of Kyrgyz history with world history on the examples of different epochs;
- to analyze the general and special aspects of the development of the state and society;
- to form historical concepts and categories;
- to introduce the basics of the civilizational approach in the analysis of historical events and phenomena;
- to develop students ' sense of citizenship and patriotism;
- to develop students ' skills of independent work, interest in it;
- to introduce the student of the main stages of medical development.

**Content of the discipline.** The ancient period in the history of the Kyrgyz and Kyrgyzstan.

The Turkic era: the main stages of statehood formation. Kyrgyzstan in the period of Genghis Khan's conquests. The Kyrgyz people in the XVI-XIX centuries. Relations with neighboring nations and states. Kyrgyz and Kokand Khanate. Kyrgyzstan-penal colony-Russian Empire (1855-1917). Stages of formation of the Kyrgyz Soviet statehood. The Great Patriotic War. Socio-political and socio-economic development of

Kyrgyzstan in the 50s-early 90s of the XX century. Sovereign Kyrgyzstan. Problems of socio-political and socio-economic development. History of medicine.

As a result of mastering the discipline " History of Kyrgyzstan, History of medicine»

**the student should know:**

- the main historical events, stages of the evolution of statehood and its institutions,
- features of socio-economic development,
- specifics of the modernization process,
- foreign policy trends and changes in the geopolitical situation,
- content of cultural traditions and historical heritage,
- the main stages of medical development.

**be able to:**

- independently to analyze socio-political and scientific literature,
- plan and evaluate your activities based on this analysis.

**possess to:**

- skills in presenting your own point of view in a reasoned manner;
- skills of public speech, argumentation, introduction of discussion and polemics, critical perception of information.

**The total labor intensity of mastering the discipline is 4 credits.**

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### ***"Philosophy»***

**The purpose of the discipline:** the assimilation of philosophical knowledge is a necessary condition form of systematic content worldviews and development conceptual and categorical thinking and one of the ways of modern individual socialization. The course of philosophy is designed to develop students ' ability to think critically, master dialectical thinking, which is the objective basis for the formation of medical and later clinical thinking. To give student the minimum knowledge necessary for every educated person about spiritual realities and philosophical and methodological values. Mastering the proposed program on the basis of comprehension of historical-philosophical and system-problematic issues. This material will allow future doctors to form their own philosophical and civic position on the most important issues of modern medicine, as well as the ability to independently comprehend current problems in modern public life.

**Objectives of the discipline:**

- To acquaint students with the main stages of the development of the theoretical thought of humanity, expressed in philosophy. To reveal the interrelation of philosophical concepts that influenced the formation of medicine as a science, using examples of the great life, outstanding doctors-thinkers throughout the entire historical development.
- Highlight the moral and medical problems of a general practitioner.
- to introduce students with the Kyrgyz philosophical tradition.
- Education of patriotism, through familiarization with the nomadic culture of our ancestors.
- Help us to understand the unique role of philosophy in the development of civilization and human culture,

- to understand the interaction with other areas of human activity and cultures, especially with medical activities.
- To reveal the interaction and interrelation of philosophy, bioethics, deontology, principles, norms that determine the development of medicine as a special field of human practice throughout the history of all mankind.
- To reveal the continuing relevance of philosophy, its main ideas, problematic reflections, research in the formation and development of a mature human personality, in creating a civilized socio-cultural environment, in understanding the contradictions and difficulties of modern human development, revealing the content of the category "society" and determining the characteristics of society as a system.
- To reveal the specifics of consciousness as 1) the highest form of reflection of the surrounding reality; 2) the properties or functions of highly organized matter (brain) to reflect the world in ideal images. Define cognition as: 1) the form of activity; 2) active, purposeful reflection of the surrounding world of the human mind.
- Moral and ethical orientation of medical university students in the context of the scientific and technological revolution, global progress and civilizational crisis.
- Help students master the categorical apparatus of philosophy, the mastery of which develops the humanitarian and philosophical culture and the ideological position of the future doctor. Develop a holistic vision of the world on a rational basis of knowledge.
- Develop students' skills in studying philosophical literature, teach them to work on abstracts on philosophy, taking into account the relevant formal and substantive requirements.

### **Content of the discipline.**

Section 1. "History of philosophy", reflection of the theoretical formation thought of mankind. Philosophy as a way of forming and developing a worldview.

Interrelation of philosophy and medicine. Moral orientation of medical art and philosophy in the cultures of the Ancient East. Anthropocentrism of ancient Greek philosophy. Philosophical understanding of medicine in the Ancient era. Formation and development of medical education in theological schools. Theosophical foundations of human health in the Middle Ages. Philosophy of the Renaissance, Modern times, Enlightenment. German classical philosophy. Philosophy and medicine in this period. Development of photometrical knowledge and skills of the ancient Kyrgyz people from the standpoint of spontaneous materialism.

Section 2. "Ontology and theory of knowledge" Philosophy of being. Information as a state of matter, information-wave medicine and biology. Philosophical and medical aspects of consciousness, physiological bases of spiritual and psychic phenomena. The problem of the criterion of truth in philosophy and medicine. Dialectics as a science. Synergistics as a method of complex consideration the disease concepts and health.

Section 3 "Social philosophy" Philosophical analysis of society and man.

Medicine as a sphere of universal culture. Global problems of humanity.

As a result of mastering the discipline "Philosophy", the student should **know:**

- philosophical aspects: worldview, socially and personally significant problems and processes;
- general concept of a person and his multidimensionality;
- general concept of consciousness and self-awareness;
- the essence and meaning of cognition; fundamentals of social philosophy;
- philosophical foundations of epistemology, research methods and techniques;
- methods and techniques of philosophical analysis of problems;
- forms and methods of scientific knowledge, their evolution;
- main categories and concepts of the academic discipline;
- basic principles of building oral and written speech, rules of argumentation;
- types of information sources.

**be able to:**

- to choose and apply methods and different techniques to solve social and professional problems;
- to evaluate the adequacy, fruitfulness and effectiveness of methods the humanities (philosophical) sciences in solving social and professional problems;
- be aware of the basic nature of social and humanitarian sciences in solving social and professional problems;
- differentiate the possibilities of different views on the solution of ideological, socially and personally significant philosophical problems;
- independently perform actions to solve non-standard problems that require a choice based on a combination of known methods, in an unpredictably changing situation;
- determine the place, role and significance of worldview, socially and personally significant philosophical problems;
- independently perceive information from various sources: extract and analyze information;
- to select notes from various sources;
- to compare the presentation of the same questions in different sources, identify commonalities and find differences; use reference and additional literature;
- to think critically: find errors in a particular text;
- to complete incomplete text material;
- to quote and make various types of comments;
- to transform text material: highlight the main thing, shorten the text to several lines without distorting the meaning;
- to make a plan, theses; take notes;
- to make a conclusion about the text you read;
- to make generalizations, formulate and argue conclusions, understand, evaluate and process the text;
- independently to perform the actions of solving non-standard problems that require a choice based on a combination of known methods, in an unpredictably changing situation.

**possess to:**

- ability of solving social and professional problems using the main provisions of the humanities (philosophy).;
- skills of analyzing, setting problems and choosing the optimal way to solve them, various forms of text presentation (report, state (description));
- to tell, (narration);

- to compare, to summarize, to summarize (definition, explanation);
- to substantiate, prove, refute (argumentation, reasoning);
- Skills of presenting an independent point of view, analysis and logical thinking, public speech, conducting discussions and round tables;
- skills of analysis and logical thinking.

**The total labor intensity of mastering discipline is 4 credits.**

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### ***"Manas studies"***

**The purpose of discipline** is to create accurate and correct ideas about subject of "Manas Studies", and its essence, the basics of worldview and traditional medicine of the Kyrgyz people, reflected at the epic.

#### **Objectives of the discipline:**

- to determining the place and role of the folk epic "Manas" in world culture;
- to disclosure of the essence of spiritual culture Kyrgyz people based on the epic "Manas", religions, folk traditions and games, features of Kyrgyz ethics;
- to determine the place and role of traditional Kyrgyz medicine based on the epic "Manas»
- to study of the historical periodization of Kyrgyz folk medicine based on the epic "Manas»;
- to introduce the psychotherapeutic effects of prisoners in the "power of the word" used in folk medicine
- to introduce with the representatives of traditional medicine and the range of their functional responsibilities.
- to study of empirical and rational methods of treatment by ancient Kyrgyz people based on the epic "Manas»;
- to study of animal medicines and mineral origin based on the epic "Manas".

#### **Content of the discipline.**

Study of the epic "Manas" in the pre-Soviet, Soviet and modern period. Genre features of oral folk art of Kyrgyz people. Traditional medicine based on the epic "Manas". Historical periodization of Kyrgyz folk medicine. Representatives of traditional medicine and the range of their functional responsibilities in the epic "Manas". Rational and empirical aspects of treatment of Kyrgyz people based on the epic "Manas". Mystiko-religious aspects of traditional medicine of the Kyrgyz people based on the epic "Manas".

Kyrgyz beliefs about the magical causes of diseases. Ritual actions related to the treatment of various diseases according to the epic "Manas". Empirical methods of treatment based on the epic "Manas". Medicines of animal and mineral origin. Folk surgery, climate therapy. Herbal medicine, organotherapy. Psychotherapy or the power of the word in folk medicine. Sacred symbolism of diseases, animistic and fetishistic aspects of traditional medicine. Kyrgyz worldview and its characteristic features. Pre-Islamic beliefs and Islam based on the epic "Manas". Folk customs and traditions, folk games and entertainment of the Kyrgyz people based on the epic "Manas".

**As a result of mastering the discipline "Manas Studies", the student should know:**

- formation of "Manas studies as a science;
- methodology of studying "Manas studies»;
- principles action of traditional medicine of the Kyrgyz people based on the epic "Manas»;
- chronology development of traditional medicine of the Kyrgyz people based on the epic "Manas»;
- methods of psychotherapeutic influences used in folk medicine;
- representatives of traditional medicine and the range of their functional responsibilities;
- empirical and rational methods of treatment by ancient Kyrgyz people based on the epic Manas»;
- study of animal medicines and mineral origin based on the epic "Manas»;
- the main historical stages of the emergence and development of the epic "Manas»;
- the main variants of the epic "Manas»;
- names of storytellers-manaschi; the role and place of manaschi in the spiritual life of the Kyrgyz people;
- cultural, historical and cognitive values of the epic "Manas".

**be able to:**

- to describe the historical epoch reflected in the epic "Manas»;
- to know the names of the main characters of the epic "Manas" and their role in life and fate of the Kyrgyz people;
- to name the names of the great Manaschi and their role and place in the life of the Kyrgyz people;
- to name the names of the researchers of the epic "Manas»;
- to quote from the poetics of the epic "Manas»;
- to distinguish the plot of the Manas epic trilogy»;
- to distinguish between religious and mystical, empirical and rational methods of treatment traditional medicine of the Kyrgyz people based on the epic "Manas".

**Possess to:**

- ability of solving social and professional problems using the main provisions of the humanities (philosophy).;
- skills of analyzing, setting problems, and choosing the best way to solve them;
- different forms of text presentation (report, state (description);
- to tell, (narration); to compare, to summarize, to summarize (definition, explanation);
- to substantiate, to prove, to refute (argumentation, reasoning);
- skills of presenting an independent point of view, analysis and logical thinking, public speech, conducting discussions and round tables;
- skills of analysis and logical thinking.

**The total labor intensity of mastering the discipline is 2 credits.**

## ANNOTATED PROGRAM CONTENT

### Academic disciplines

## ***"Geography of Kyrgyzstan"***

**The purpose of the discipline:** creating accurate and correct ideas about the subject "Geography of the Kyrgyz Republic", and its essence, to form the foundations of the geographical worldview of students.

### **Objectives of the discipline:**

- Review of literature by geography Republic.
- Geographical location and borders of the Kyrgyz Republic.
- The relationship of natural features with the mountainous terrain and the intracontinental location region.
- History of geographical research of Kyrgyzstan.
- Complex physical and geographical studies and their national economic significance.

**Content of the discipline.** Climatic conditions. Main types of landscapes of Kyrgyzstan. Water resources and soil-vegetation cover. Non-ferrous metallurgy, mechanical engineering and metalworking, construction in the Kyrgyz industry. The main branches of agriculture and their location. Animal husbandry. Agriculture. Transport complex and tourism development of the Kyrgyz Republic.

### **As a result of mastering discipline "Geography of Kyrgyzstan", the student should know:**

- regularities of natural formation of the republic condition, history
- formation of the territory, the structure of the relief, about the features of the climate formation
- patterns of formation and distribution of rivers, lakes, underground waters, and glaciers;
- water reserves, the structure of their modern use; features of the formation of soil and vegetation cover;
- distribution of land resources, their current use and ecological state;
- animal world, its current ecological state, protection;
- patterns of landscape distribution;
- protected areas of Kyrgyzstan;
- natural and socio-economic prerequisites for the socio-economic development of the Kyrgyz Republic;
- population and labor resources, social policy aimed at improving the standard of living population, migration processes;
- history of the Kyrgyz Republic's economy formation;
- the main changes in the location of industry in the regions, the geography of fuel and energy industries, color metallurgy, mechanical engineering, food, light industry, production of building materials;
- economic and geographical problems of the republic's agricultural development;
- main branches of agriculture, features of their location, problems and prospects for the development of agricultural sectors in the republic;
- the importance of transport at the national economy, changes in geography, state and prospects of their development;
- recreational resources, location of tourism industries, problems of resort and tourism development in Kyrgyzstan;
- main foreign economic relations, prospects for the development of foreign economic relations;

-economic and geographical regions of the Kyrgyz Republic, internal differences, specialization of districts.

**be able to:**

- to work with the map and analyze it; analyze and evaluate it socially-
- economic consequences of new phenomena in science, technology and technology, professional sphere;
- to analyze particular and general problems of rational use of natural conditions and resources, manage environmental management under the guidance of specialists and qualified researchers;
- to collect and analyze information from various sources to solve professional and social problems;
- to analyze patterns of formation of natural resources, economy and population of the Kyrgyz Republic;
- to analyze and forecast the development of territorial socio-economic systems of different levels, territorial organization of society, distribution of productive forces under the guidance of specialists and qualified researchers.

**Possess to:**

- methods of working with geographical maps;
- a holistic system of scientific knowledge about the world around us, be able to navigate the values of life;
- skills and techniques, necessary using of the following tools: integrated geographical analysis; modern research methods for collecting and primary processing of the material;
- integrated system of scientific knowledge about nature, natural conditions, population and economy of the Kyrgyz Republic;
- information about the current geological state of nature and natural components of the republic's territory;
- information on the current state of development and location of industries, agriculture, transport and tourism;
- information on the republic's foreign economic relations and its priority areas;
- information about natural conditions, resources, population, and the economic state of the republic's regions.

**The total labor intensity of mastering the discipline is 2 credits.**

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **1. "The Kyrgyz language and literature" (for beginners))**

The purpose of this lesson: innovation learning the Kyrgyz language is not only aimed at providing substantive information, but also for the implementation of interesting two-way communication; the development of a clear and effective speech in the Kyrgyz language; and the development of skills necessary for a proper, convincing speech, cultural communication in different situations that occur in real life.

Course objective:

- determination of the means of constructing the studied language material;
- study of the subject of text materials used as a means of teaching the language, which is the basis for the study of language materials;



definition;

- use of communication services of the language, creation of actions - creation of opportunities for the preparation of documents and the direction and request for correction of various texts, proposals.

Program content Kyrgyz language and literature lesson. Goals and objectives. Kyrgyz is the official language of the Kyrgyz Republic. Ethnomedicine is a branch of medicine that studies the features of the prevention and treatment of diseases. History of the Kyrgyz language. The place of the literary language and dialects. Medical examples in oral folk works. The epic "Manas" is an example of ethno-social memory and a treasure trove of traditional medicine. Rules, norms, patterns of word formation. Medical examples in the traditions, customs, and rituals of the Kyrgyz people. Totem, Shaman, and others B. Remnants of faith. Word types: simple, complex words. Lullaby health benefits, harm. Information about the Kyrgyz vocabulary. Circumcision, medical scientific views. Explain the direct and transitive meanings of the words. The influence of Kyrgyz music on health. The meaning of lyrical songs. Establishment of a high ideological and artistic level of the epics of the Kyrgyz people. Active vocabulary. Health-related prohibitions. Passive vocabulary. The way of life of nomadic peoples, the interpretation of their culture. Polysemy of the word. National cuisine, food hygiene. Homonyms and their differences from polysemantic words. Ways to enrich your vocabulary. National games as an object of medical research. Professional vocabulary. National clothing and age psychology. The place of medical terminology in the general vocabulary. Yurt-the dwelling of nomads. Phraseological units. Proverbs related to health. The place of phraseological units in medical communication. As a result of mastering the subject "Kyrgyz language and literature", the student must know:

Biography:

- learns to speak depending on the situation;
- the ability to formulate factual and conceptual questions to the text is growing;

Assimilation:

forms correct speech and writing through language exercises; assimilates ethno-cultural vocabulary;

Apply:

master a special vocabulary; through the analysis of works, a worldview is formed.

The total amount of work is 3 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **2. "Kyrgyz language and literature" (for continuing groups))**

The purpose of the lesson: to expand the horizons of students, studying the basics of linguistic and philological sciences, and to achieve a deep assimilation of the culture of speech of our people; to deepen school knowledge, to inform them about modern news in the field of the Kyrgyz language and to instill interest in the artistic word; to instill respect for the art of the word of our people, to instill in artistic texts such noble qualities and character traits as the life history of famous people, folk traditions, customs. Kyrgyz Republic, development of national consciousness; fluency in oral and written activities through further study of the Kyrgyz language in accordance with life situations.

Course objective:

- determination of the means of constructing the studied language materials; determination of the subject of text materials used as a means of teaching the language, which is the basis for the study of language materials;
- creation of the possibility of preparing business documents using the language communication services, orientation and request for correction of various texts and sentences.

#### Program content

General information about the concept of Ethnomedicine. The main sections of linguistics. The place of language in the medical field. History, types of Kyrgyz folk medicine. The epic "Manas" and traditional medicine. The problem of literary language and dialect. Orthoepic norms of the Kyrgyz literary language. The meaning of the spelling norms of the Kyrgyz language.

The influence of Kyrgyz music on health. Work on punctuation norms. The way of life of nomadic peoples, the interpretation of their culture. Rules for working with spelling dictionaries. Examples of health-related Kyrgyz traditions, customs, and rituals. Health benefits and harms of the cradle, scientific analysis. Circumcision, health effects. To convey the customs, traditions, songs, proverbs and sayings of the Kyrgyz people, the culture that has developed over the centuries. The meaning of lyrical songs, their impact on health. Analysis of the philosophy related to health. Listening is a huge culture.

Ancient and Middle history of the Kyrgyz in the TWENTIETH Century Balasagyn and M. Get acquainted with the works of such major representatives as Kashgari. The concept of prohibitions. Examples related to health. The benefits of hospitality, the harm. The place of eloquence in medicine. Verbal, non-verbal means. The specifics of non-verbal means in medicine. Knowledge of the seven Fathers is mandatory. The style of work and the features of its genetic disorders. Water is a source of health. Office work, rules of writing. Medicinal plants, classification. The procedure for conducting personal affairs. Medicinal plants growing in Kyrgyzstan, the nature of application. Statement, explanatory note, rules of writing. Fauna, species. Write a description. Kyrgyzstan is a mountainous country. The impact of mountain caves on health. Types of working paper. Working with aromatherapy. Rules for processing official documents. The development of Kyrgyz literature in historical social and cultural conditions in 1925-1929. To note his great contribution to the creation of the Kyrgyz national script, to the formation of its orthography, to the Kyrgyz Soviet literature. Analysis of the works of the Kyrgyz people reflecting difficult times. The poet's poetry differs from the poetry of other poets in its depth, scale, artistic basis, and imagery. Medical science: yesterday, today, tomorrow. A feature of the scientific style.

As a result of mastering the subject "Kyrgyz language and literature", the student should know: he learns to speak depending on the situation; develops the ability to formulate factual and conceptual questions to the text;

assimilation: through language exercises, forms correct speech and writing; assimilates ethno-cultural vocabulary;

usage: develops a specialized vocabulary; through the analysis of works, a worldview is formed.

The total amount of work is 3 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Russian language»**

**The purpose of the discipline:** Humanization of education in medical universities, improving the speech culture of future doctors, familiarizing students with the theoretical foundations of speech culture and technology, forming speech culture as one of the aspects of forming the language competence of a future doctor.

#### **Objectives of the discipline:**

- formation of students' general cultural and professional competencies;
- students' mastery of the basic concepts of speech culture: correctness and communicative qualities of speech, competent speech;
- mastering students' of speech techniques in various speech and etiquette situations;
- introducing students with various styles of the Russian literary language, the sphere of their functioning, features and capabilities;
- introducing students with the possibilities of expanding the vocabulary and phraseological stock of speech, using a variety of morphological forms and syntactic constructions;
- acquaintance of students with different kinds of dictionaries, reference books, encyclopedias, etc.;
- to develop of students the ability to converse on various subjects, the formation of skills action word skills to build public speaking in educational, scientific and business fields communication, telephone conversations, etc.;
- to introduce students with ethical standards of communication in professional activities and business etiquette;
- the formation of skills to listen and be "gifted reader";
- understanding of quality oral and written their own and others' speech (correctness, accuracy, brevity, logic, imagery, expressiveness, compliance with the situation, etc.);
- mastering it by application received data theoretical issues knowledge based on the process of professional activity, as well as in the process of intercultural communication;
- the acquisition of skills in scientific literature;
- the formation of skills to create secondary scientific texts, annotations, summaries, overviews on the basis of course and diploma works of graduates;
- the formation of skills to understand the special medical texts with different accuracy and depth of penetration in their content, i.e., to own all the kinds of reading (studying, study, home theater room search),
- the formation of skills to transform scientific text, reservation, deploy, and reduce; mastering learners read with full understanding of the content and use of special

vocabularies;

- the formation of skills fully and accurately understand the content of the text based on information processing (lexical, grammatical, translation, analysis);
  - formation of informational reading – understanding the main content of the read (90%);
  - formation of skills to determine the total content by headline, highlight the main idea, to choose the main facts, omitting minor;
  - mastering of viewing, reading is to get a General idea of the subject, the range of issues raised in the text;
  - mastering of search reading with selective understanding necessary information;
  - formation of skills to find specific text and select the desired information;
  - the formation of skills to understand and adequately interpret original texts of any subject, including vocational guidance, with protestor and conceptual meaning;
  - the formation of skills to perceive sociocultural and emotional peculiarities of the speaker's speech;
  - formation of skills to interpret well - known utterances and hidden meanings;
  - formation of skills to achieve any communication goals in a situation of prepared and unprepared monologue and dialogic communication, including public, demonstrating the ability to implement speech behavior tactics characteristic of the communication organizer who seeks to influence the listener.
  - the formation of skills to show knowledge of the linguistic system demonstrating the skills to use linguistic units and structural relations needed in the design of written speech communication (various securities business);
  - mastering the competent registration statements, points of view, being part of original texts or their fragments, based on their stylistically highlighted in use; - the acquisition of skills abstracted and annotated professionally oriented texts taking into account different degrees of semantic compression.
- Content of the discipline. Start to control. Russian is the language of the profession. Language as a means of communication. Main functions of the language. Language and speech. Speech as a process of using a language. Nonverbal means of communication (gestures, facial expressions). The role of communication and speech culture in the social, professional and spiritual activities of a physician. The use of greetings and goodbyes, as well as the use of pronouns. *You* and *you* when addressing the other person. Language norms as the main category of speech culture.
- Orphoepical norms. Normative pronunciation (laws of reduction, accommodation, assimilation, the law at the end of the word). Formulas of speech etiquette in certain situations.

The concept of epenthesis, dieresis, and metathesis. Use phrases when meeting and saying goodbye to a doctor and patient. Accentological norms. Stress as the most important element of speech. Meaning of accents. Facts of determining the topic of conversation with unfamiliar people. Stress as a means of distinguishing words. Semantic differentiation function of stress. Rules for topics that are not recommended. Formative function of stress. Main and secondary stress in complex words. A compliment. Variable stress. Conversation with strangers, rules for not recommended topics. Situations in which a compliment is unacceptable. Spelling standards and principles. Spelling of prefixes by consonant. Languages and their synonymous variants. *S*, *and* in the root after the Russian prefixes. Expressing sympathy and comfort in accordance with the patient's complaints. Spelling *o*, *e* after hissing. A compliment is an expression of approval, respect, recognition, or admiration. The spelling of the particles is NOT and NEITHER. Spelling of H, NN in adjectives and participles. Spelling system complex ones nouns and adjectives. Spelling of adverbs. About prohibitions in communication situations. Lexical norms. Compliance with lexical norms as the most important condition for speech accuracy and correctness. Types of speech support. Synonyms, antonyms, homonyms, polysemous words, and paronyms. Phraseological units, foreign words. Emotional reactions. Polysemy, tautology, pleonasm, lexical compatibility of a word. Phone etiquette. Morphological features standards. Gender non-declinable nouns of a foreign language origin. Gender substantive issues nouns, abbreviations and compound nouns. Fluctuations in the case forms of nouns. Features of the formation of forms of feminine nouns in the same category. Features in the use of the forms of P. P. units. numbers. Use of forms of adjectives (short adjectives and adjectives in the form of a comparative degree). Similar forms of adjectives and passive participles. Case forms of pronouns. Addition *H* to the forms of personal pronouns. Differences using of interrogative pronouns *how* many, *which*. Use of negative and indefinite pronouns. Possessive pronoun *svoi* -samo . Rules for conflict-free behavior. Norms for the use of complex and compound numerals. Descriptive turns in combinations of compound quantitative numerals by 2, 3, 4 with nouns. Declension of numerals *40*, *90*, *100*; *thousand*, *million*, *billion*; *one and a half* – *one and a half*. Complex words with the form *two* -, *two* -. Use of collective numerals (*two-ten*; *both*, *both*, *pair*). Verb norms. Verbs that do not form the forms of the 1st person units. ch. Alternation of *o/a* to distinguish the forms of sov. / ness. types of verbs. Verbs *put* / *put*. Verbs on-*xia*. Functional and stylistic characteristics of verb forms. Use of adverbs and participles in speech. Adverbial parts on-*I*, *-ti*, with the particle *-xia*, with the suffix-*lice*. Prevention of conflict situations. Rules for overcoming stressful conditions. Types of texts. A word combination. Types of subordinate communication. Formation of noun phrases. Mixing of similar words and words of the same root in case forms. Variants of the norms of case endings in phrases with geographical names. Errors in choosing the case form in words that are close but identical in meaning. Service words. Nominal prepositions + nouns in R. P., D. P. Cases of profanity management (incorrect word connection). Options for matching the predicate with

the subject. Predicate in the form of a single number. Plural forms of verbs as predicates. Forms of apologies and responses to comments. Compatibility of minor terms in the sentence. Violations agreement of minor members of the offer. Norms for the use of adverbial phrases in the role of circumstances. Errors in the use of *independent* adverbial turns. Form options related to management. Using the direct complement in R. P., D. P., V. P. Errors in when using complex sentences. Rules for building complex sentences: the location of the main and subordinate parts; The exact use of conjunctions and conjunctive words that are close in meaning. Respect for sentence boundaries, avoid unnecessary complexity, and divide a complex sentence into simple ones. Compliance with logical relationships. Putting a dash in a simple sentence. Punctuation marks for homogeneous sentences. Punctuation marks for participial and adverbial turns. Request as an element of speech ethics. Separating introductory words and phrases. Putting a dash in simple sentences. Not categorical in communication. Techniques for mitigating negative ratings in communication. Various forms of expressing consent. Official-business style. Stylistic features of official business speech. Structure and content of official documents. Use of nominal prepositions with nouns in r. p. and d. p. Cliched forms. Scientific style. Characteristics of the scientific style. General features of the scientific style. Morphological and syntactic features of scientific medical texts. Scientific text as a structure. Genres of scientific style of speech (abstract, abstract, review, review). Learning to write an abstract: introduction, relevance, problematics. Main part, conclusion, bibliography.

As a result of mastering the discipline "Russian language", the student must know:

- language as a sign system and social phenomenon;
- theoretical foundations of speech culture and techniques;
- styles of the Russian literary language, the scope of their functioning, features and opportunities;
- opportunities for expanding the vocabulary and phraseological stock of speech, using a variety of morphological forms and syntactic constructions;
- methods of working with various dictionaries, reference books, encyclopedias, etc.;
- ethical standards of communication in the professional activities, business etiquette;
- basic concepts and regularities of the world historical process, for the respectful and careful attitude to the heritage and traditions, the assessment policy of the state, for the formation of citizenship;
- the possibility of speech activity, which can affect the evaluation of the morpho functional, physiological States and pathological processes in the human body for the solution of professional tasks;
- culture of educational, scientific and business communication (oral and written forms);
- methods of writing a report, abstract, abstract, review.
- Preparation of business documents of various genres (receipt, power of attorney, resume).

be able to:

- conduct a conversation on various topics; influence the word, build public speeches in the educational, scientific and business spheres of communication, telephone conversations, etc.;

- listen to your interlocutor and be a "talented reader»;
- evaluate the qualities of your own and other people's oral and written speech (correctness, accuracy, brevity, logic, imagery, expressiveness, relevance to the situation, etc.);
- create secondary scientific texts, annotations, resumes, and reviews based on graduate coursework and theses;
- fully and accurately understand the content of the text based on its information processing (lexical, grammatical, translation analysis);
- determine the general content by heading, highlight the main idea, select the main facts, omitting secondary ones;
- view a special text and select the information you are interested in; understand and adequately interpret original texts of any subject, including professional orientation, that have subtext and conceptual meanings;
- adequately perceive the socio-cultural and emotional features of the speaker's speech;
- interpret famous sayings and hidden meanings; to achieve any communication goals in a situation prepared and unprepared monologist and Dialogic communication, including public, demonstrating the ability to implement the tactics of verbal behavior, characteristic of the organizer of communication that seeks to influence the listener;
- to show knowledge of the linguistic system demonstrating the skills to use linguistic units and structural relations needed in the design of written speech communication (registration various business documents);
- create secondary scientific texts, abstracts, summaries, reviews based on scientific papers; understand special medical texts with different depth and content accuracy of penetration into their content, i.e. possess all types of reading (study, introductory, viewing, search).);
- transform a scientific text, abstract it, expand it, and shorten it; own:
- application of the obtained theoretical knowledge in the process of professional activity, as well as in the process of cross-cultural communication;
- the main concepts of speech culture: correctness and communicative qualities of speech, competent speech;
- speech techniques in various speech and label situations;
- technologies of language communication (monologues, dialogues, polylogues);
- competent design of utterances, points of view that are part of the original texts or their fragments, taking into account their stylistically highlighted use;
- introductory reading – with an understanding of the main content of the read (90%);
- view reading – get a general idea of the topic, the range of issues that are covered in the text;
- learning reading – with a full understanding of the content and the use of special dictionaries;
- skills in working with scientific literature;
- skills to summarize and annotate professionally oriented texts with varying degrees of semantic compression.

The total labor intensity of mastering the discipline is 6 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic discipline**

#### **" Foreign language»**

The purpose of the discipline: professionally-oriented teaching of a foreign language to future doctors, formation of the basics of foreign language competence necessary for professional cross-cultural communication mastering, first of all, written forms of communication in a foreign language as a means of informational activity and further self-education.

Objectives of the discipline: formation of language and speech skills that allow you to use a foreign language to obtain professionally relevant information using different types of reading; formation of language and speech skills that allow you to participate in written and oral professional communication in a foreign language;

Content of the discipline: Introductory and correctional course. Specifics of the articulation of sounds, intonation and rhythm of neutral speech in the studied language, the main features of the full pronunciation style characteristic of the field of professional communication, reading transcription. Lexical minimum in the amount of 4000 educational lexical units of general and terminological nature. Basic rules of morphology, the main components of the sentence (the core of the sentence, minor members of the sentence).

The concept of vocabulary differentiation by application areas. The concept of free and stable word combinations. The concept of the main ways of word formation.

Grammatical skills that ensure communication without distortion of meaning in written and speech communication of a professional nature. The main lexica grammatic features of scientific and professional speech styles. Speaking. Dialogic and monologue speech in the main communicative situations of scientific and professional communication. Fundamentals of public monologue utterance. Listening skills. Fundamentals of Medicine: Teaching reading and translating medical texts.

Basic types of reading. Basic principles and goals of various types of reading: viewing, familiarization, search, studying; principles of working with the text in the specialty in accordance with the purpose of information search. Basics of annotation and referencing. Culture, traditions, medical education, health care system in the countries of the language being studied, rules of speech etiquette, taking into account socio-cultural and cross-cultural features of the language and speech. Medical equipment education in Kyrgyzstan. Lexical and grammatical support of the topic. Basic grammatical constructions that are characteristic of the oral style of communication in a foreign language. Medical education abroad. Lexical and



grammatical support of the topic. Basic grammatical constructions that are characteristic of the oral style of communication in a foreign language.

As a result of mastering the discipline "Foreign language", the student should know:

- a minimum of lexical and grammatical material for the correct design of their thoughts and conduct;
- the history, culture, traditions, and political system of the country of the language being studied.
- the system of medical education and services in the country of the language being studied.

be able to:

- clearly and expressively intonationally read aloud a text containing mostly learned lexical material;
- to understand native speakers ' speech;
- to conduct a conversation in the language being studied within the limits of the completed speech material;
- to understand and convey the content of an unfamiliar text you read;
- to understand and transmit the content of the text you listened to;
- to express a value judgment about the information extracted;
- to express your own opinion about the text you read or listened to, either verbally or in writing.

possess: skills:

- presentation in written form of the content of the material read in the form of annotations, summaries, abstracts;
- a situational conversation;
- preparation and presentation of reports and reports.

The total labor intensity of mastering the discipline is 4 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Latin language»**

Goal disciplines: Professionally-oriented training of future medical specialists in the Latin language and basic medical terminology of basics terminological information competencies, necessary for professional activity.

Objective of the discipline: Formation of the basics of language and speech competence for the rapid and competent use of international nomenclature, clinical and pharmaceutical names, in particular:

1. Teaching students the elements of Latin grammar necessary for understanding and correct use of terms in Latin.
2. Teaching students the basics of medical terminology in its three subsystems: anatomical, pharmaceutical, and clinical information.
3. Developing students ' skills in writing recipes quickly and correctly in Latin
4. Formation of students ' ability to quickly and competently translate recipes from

from Russian to Latin and vice versa.

5. Formation of students' skills in working with scientific literature and preparing students for scientific research.

research papers.

6. Improving the level of literacy in oral and written speech of students.

Content of the discipline: Introduction. A brief history of the Latin language. Alphabet.

Phonetics. A noun. The name is an adjective. Consistent definition.

Structure of three-word and multi-word anatomical terms. Nouns of the third

declension. Masculine gender. Feminine nouns of the third declension.

Neuter nouns of the third declension. Nominatives Plurals of nouns and

adjectives. Genitives plurals of nouns and adjectives. Structure of the pharmaceutical

term. Frequency segments in trivial names medicinal preparations Verb. Prescription

phrases with verbs and prepositions. Recipe and its structure. Chemical pharmaceutical

nomenclature. Acids and oxides. Salt. Word formation in terminology. Clinical

terminology. Part 1. Clinical terminology. Part 2 Clinical terminology. Part 3. Clinical

terminology. Part 4.

As a result of mastering the discipline "Latin language", the student must:

Facts:

- the functions, rules and the style of the language;

- Latin alphabet, pronunciation rules, and the emphasis

- elements of Latin grammar that is essential to understanding and education of the medical terms

- lexical minimum in the volume of 900

- principles of creating an international items are in Latin;

the main honey-forge and pharmacology terminology in Latin language;

- requirements for the design of the Latin part of a prescription;

- methods and means of education Ant's, farm's and wedge's terms -900 lexical units and t/e level will program first memory as the active terminologists reserve,

- 50 Latin proverbs and aphorisms about health and medicine.

- required lexical and grammatical material for correct understanding of the information received; translations and meanings of medical terms (anatomical, pharmaceutical, and clinical)

Be able to:

- express your own opinion on the information received, based on knowledge

- of lexical and grammatical material; find the necessary information about terminological units in bibliographic sources.

- to analyze scientific and journalistic literature for professional purposes; present and edit subject material;

- translate without a dictionary from Latin into Russian language of the anatomical, pharmaceutical and clinical terms, and recipes,

- to determine the General meaning of clinical terms, based on the knowledge of the Greek x of terminologists,

- forming clinical terms with the given meanings,

- competently execute the Latin part of a prescription

-connect in the composition of drugs frequency segments that carry specific information about the cure is to work with reference books

Possess:

- the skills of competent presentation of their point of view in oral and written form,
- the basics of writing essays and reports
- basic knowledge of public speech; skills in reading and writing Latin clinical, analytical and farm-x terms and recipes and translating them from Latin to Russian and vice versa.
- skills in analyzing anatomical, pharmaceutical, and clinical terminology

The total labor intensity of mastering the discipline is 4 credits.

**P. 2 Mathematical and natural science cycle**  
**ANNOTATED PROGRAM CONTENT**  
**Academic disciplines**  
**"Mathematics"**

The purpose of the discipline is to train a highly professional specialist who has mathematical knowledge, skills and abilities to apply mathematics as a tool for logical analysis, numerical calculations and estimates, and the construction of mathematical models of physio-chemical, biological and medical content.

Objectives of the discipline: to teach students to perform differential and integral calculus of functions describing biological objects and to solve differential equations describing biomedical processes.

Content of the discipline: Derivative of a function. The differential of a function and its properties application in approximate calculations. Function limit. Some remarkable limits. Theory of integrals. Indefinite integral. Definite integral. Application of the indefinite integral to solving biomedical problems. Geometric and physical applications of a definite integral. Theory of differential equations. First-and second-order differential equations. Composing and solving differential equations using examples of medico-biological and biophysical problems. Applying a certain integral to the solution medical and biological tasks. Problems leading to differential equations. Wave equation and Laplace equation. Application of differential calculus for function research and plotting.

As a result of mastering the discipline "Mathematics", the student should know:

- mathematical methods for solving intellectual problems and their application in medicine;
- basic mathematical structures,
- probability and statistics,
- mathematical models, algorithms, and programming languages,
- standard professional activity software,
- basic concepts and methods of information security.

be able to:

- perform calculations based on the results of the experiment,

-perform elementary statistical processing of experimental data;

-use information computer systems in medicine and healthcare.

own:

-methods for determining various physical characteristics of biological objects;

-practical skills in using individual samples of medical and diagnostic equipment.

The total labor intensity of mastering the discipline is 1 credit.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Informatics"**

The purpose of the discipline: to form students' general ideas about the possibilities of using information and communication technologies that provide broad opportunities for processing medical information, to master the techniques of working with modern standard application software packages.

Objectives of the discipline:

-training students the basics work by computer, modern ones software programs by other means system level and applied destinations, with Microsoft Office tools for processing various types of information on your computer,

-mastering it by methods statistical information processing options medico-biological information.

Content of the discipline: Basic concepts of computer science. Software and hardware of a personal computer (PC). Working with the MS

WINDOWS operating system and its applications. MS WORD text editor.

Power Point presentation creation program. MS EXCEL spreadsheets. Calculation of medico biological models in MS Excel. Statistical processing of biomedical information in MS Excel. Descriptive statistics. MS ACCESS database and DBMS.

Working with tables and forms. Entering data. Work on the Internet. Medical resources and search engines.

As a result of mastering the discipline "Computer Science", the student must:

To know:

-theoretical foundations of computer science,

-content of basic concepts and terms; procedure for collecting, grouping, and processing data in computer programs;

-techniques for storing, searching, processing, converting, and distributing information in healthcare;

-principles of using information computer systems in clinical and medical-preventive activities; basic approaches to formalization and structuring of various types of medical data used to form decisions during the treatment and diagnostic process;

-types, structure, and characteristics of medical information systems;

-principles of automating the management of healthcare institutions using modern computer technologies.

- be able to: perform text and graphic processing of documents using standard software tools;
  - perform statistical processing of experimental data;
  - use modern tools networks The Internet for search professional information during independent training and advanced training in certain sections of medical knowledge;
  - use computer medical and technological systems in the course of professional activity.
- own:
- terminology related to modern computer technologies applied to solving problems in medicine and healthcare;
  - basic technologies of information transformation: text, tabular, graphic editors; search for information on the Internet;
  - basic principles of statistical data processing;
  - general methods of creating and working with databases;
  - the main methods of working in medical information systems used in the medical and diagnostic process;
  - primary skills of using medical information systems to implement the main functions of a pediatrician.

The total labor intensity of mastering the discipline is 4 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Physics"**

The purpose of the discipline: To form students' knowledge, skills and abilities necessary for successful mastering of general cultural and professional competencies in the field of physics and mathematics. To form systematic knowledge among medical students about the physical properties and physical processes occurring in biological objects, including in the human body, necessary for mastering other academic disciplines and developing professional medical qualities, revealing its integrative links with other disciplines that provide a comprehensive approach. training of a specialist of this profile, with the formation of a dialectical worldview among students based on physical laws and teach them to recognize the physiological states of the human body through physical phenomena; providing in-depth knowledge of the features of the manifestation of physical laws in the biosystem; understanding the device and operation of medical equipment.

Objectives of the discipline:

- study of the biophysical and physio-chemical bases of the processes of vital activity of the human body;
- study of biophysical bases of damaging and therapeutic effects; physical and chemical environmental factors on the body;
- application of physical laws to explain the processes occurring in the human body;
- receiving views about modern physical persons methods prevention, diagnosis, and treatment of diseases.

Content of the discipline: The importance of physics for medicine. Medical biophysics. Classification of medical equipment. Methods of Introscope. Biophysical bases of clinical laboratory diagnostics. Molecular biophysics. Dynamic mobility of

macromolecules during functioning. Intramolecular changes.

Methods of investigation of biological membranes. Permeability and transport of substances in biological membranes. Electrical membrane potentials. Electrical characteristics of ion channels of an excitable cell. Electrochemical gradients.

Biophysics of tissues and organs. Biomechanics. Determination of the elastic modulus of various biological tissues. Biomechanics of the human musculoskeletal system. Bioacoustics. Physical properties the basics impact audio files, infrasound systems ultrasonic waves on the human body. Rheological properties of blood. Physical bases of hemodynamics. Physical principles of using sound waves in medicine. Ultrasound and its use in medicine. Self-oscillating processes. Sound research in medicine. Physical mechanisms of signal transformation in human sense organs. Mechanisms of work of visual cells. Electrical properties of tissues and organs. Impact electromagnetic fields on body person. Electrocardiography. Electroencephalography. Endoscope, its design and purpose. The Earth's magnetic field and its impact on humans. Biopics. Biophysics of reception. Bioluminescence. Radiation biophysics. Study of the effect of UHF fields on tissues and organs. Human exposure to radiation. Application of laser radiation in medicine. Radiation sources. Methods for measuring radioactivity.

Physical basis of methods used in the diagnosis and treatment of diseases of the nervous system. Biophysical foundations of sensory systems. Stages of registration of medical and biological information. Application of biophysical methods in the diagnosis and treatment of diseases of the nervous system.

As a result of mastering the discipline "Physics", the student should know:

- basic laws of physics, physical phenomena and patterns underlying the processes occurring in the human body;
- characteristics and biophysical mechanisms of influence of physical factors on the body;
- physical bases of functioning of medical equipment, device and purpose.

be able to:

- to use basic measuring instruments;
- to investigate the physical properties of substances;
- to work on physical medical equipment;
- to perform the simplest statistical processing of measurement results.

own:

- methods for determining various physical characteristics of biological objects;
- practical skills in using individual samples of medical and diagnostic equipment.

The total labor intensity of mastering the discipline is 4 credits.

**Block of medical and biological disciplines:**

## **ANNOTATED PROGRAM CONTENT**

### **Academic discipline**

#### **Chemistry**

The purpose of training:

Formation of students' holistic physico-chemical, natural science approach to the study of the human body, as well as substantiation of chemical and physico-chemical aspects of the most important biochemical processes and various types of equilibria occurring in a living organism.

Learning objectives:

- The student will be able to apply the basic laws of physical and colloidal chemistry to characterize living organisms and describe biochemical processes occurring in the body, as well as to solve situational problems.
- The student will be able to give a quantitative description of the concentration of solutions and their colligative properties, as well as the acidity of solutions of acids and bases, buffer solutions, and explain the mechanism of their action.
- The student will be able to explain the influence of the structure of the main classes of natural organic compounds and biopolymers on their chemical properties.
- The student will be able to explain the relationship between the chemical composition, structure, properties and biological activity of substances, including organic components of living organisms and medicines;
- The student will have an incentive to study professional literature and use an electronic database.

Content of the discipline: Introduction to bio-organic, biophysical and bio-organic chemistry. The subject, tasks and methods of bio-organic, biophysical and bio-organic chemistry, its place in the system of natural sciences and its significance for the development of medicine. Basic laws, regulations, and concepts of chemistry. Safety instructions and rules for working in chemical laboratories. Processing the results of observations and measurements. Basic methods for expressing solution concentrations. Elements of chemical thermodynamics and bioenergetics. Types of thermodynamic processes systems of processes. Internal energy. Work and heat are two forms of energy transfer.

Hess's law. Enthalpy. Energy flows in the body: catabolic and anabolic processes. Spontaneous and non-spontaneous processes. The concept of free energy. Gibbs energy. Entropy. Combined expression for the first and second principles of thermodynamics. Chemical equilibrium. Chemical equilibrium constant. Principles of chemical equilibrium displacement; equations of the isotherm of a chemical reaction. Stationary state of the body. Homeostasis. Physical and chemical properties fundamentals of the kinetics of biochemical reactions. Classification of reactions used for kinetics: homogeneous and heterogeneous reactions; isolated and simultaneous (parallel, conjugate, sequential, chain). Rate constant of a chemical reaction. Kinetic equations of first- and zero-order reactions.

Activation energy. Energy profile of the reaction. The Arrhenius equation. Catalysis. Enzymatic kinetics. Molecular activity. Structure of enzymes and mechanism

of action. The Michaelis-Menten equation. The doctrine of solutions. Classification of solutions.

Methods for expressing solutions. Physical and chemical properties of water that cause it a unique role. The concept of an ideal solution. Mechanism of the dissolution process.

Colligative properties of aqueous solutions. The main types of equilibria and processes in life. Proteolytic equilibria and processes. Buffer systems. Their classification and mechanism of action. The Henderson-Hasselbach equation. Buffer solution capacity and factors determining it. Buffer action is the main mechanism of proteolytic homeostasis of the body. Blood buffer systems:

bicarbonate, phosphate, hemoglobin, protein. Mechanism of action of buffers blood. Buffer capacity and acid-base balance. Complex connections.

Werner's coordination theory and its development by the Chugaev school. Introduction to bioorganic chemistry. History. Subject and tasks. Classification and nomenclature of organic substances connections. Multi-functional ones connections. Poly- and hetero functionality. Features manifestations acid-base products properties (ampholytes). Cyclization and chelation. Polyatomic alcohols: ethylene glycol, glycerin, inositol. Diatomic phenols: hydroquinone, resorcinol, pyrocatechinic. Dibasic carboxylic acids: oxalic, malonic, succinic, glutaric, fumaric. Carbonic acid and its derivatives (urethanes, acid ureides, urea). Hetero functional systems connections. Biologically important ones heterocyclic compounds. Heterocycles. Pyrrole, indole, pyridine, quinoline. Nicotinamide, pyridoxal, and is nicotinic acid derivatives. 8 hydroxyquinoline derivatives are antibacterial agents of complexing action. Heterocycles with multiple heteroatoms. Barbituric acid and its derivatives. Hydro xpurines. Lactim-lactam tautomerism. Biotin. Thiamine. Peptides and proteins. Carbohydrates. Disaccharides. Nucleic acids. Lipids. As a result of mastering the discipline "Chemistry", the student should know:

- the basic laws and prospects for the development of chemical sciences in the application to medical and biological problems

- general laws of chemical reactions in solutions, fundamentals of chemical thermodynamics and kinetics; classification and nomenclature of organic compounds, the most important classes of organic compounds, structure, methods of preparation, physical and chemical properties, basic theoretical concepts in organic chemistry, mutual transformations of classes of organic compounds physico-chemical methods of analysis in medicine. Rules of safety and working in chemical laboratories with reagents and devices.

Be able to:

- to analyze it received data experimental data Results and to do relevant findings

- apply theoretical knowledge about the structure, changes in the composition and reactivity of reacting substances to predict the features of reactions, composition, structure and properties of products; use the Periodic Table; solve problems in organic chemistry, draw up equations of reactions, use reference, review and monographic literature in the field of organic chemistry;



-the basic technologies for converting information are text and table editors, and Internet search. Skills to work safely in a chemical laboratory with chemical utensils, reagents, chemical equipment and electrical appliances

-the basic technologies for converting information are text and table editors, and Internet search. skills of safe work in a chemical laboratory with chemical utensils, reagents, chemical equipment and electrical appliances;

Own:

-skills to express the conclusions reached in an understandable form

-skills of chemical experiment, taking into account the safety rules when using chemical reagents, analyzing the results of experiments and formulating reasonable conclusions; theoretical concepts of organic chemistry, knowledge of the composition, structure and properties of organic substances, representatives of the main classes of organic compounds; skills of safe work with chemical utensils.

-skills in performing calculations based on the results of an experiment

The total labor intensity of mastering the discipline is 5 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"General and clinical biochemistry"**

the purpose of the study: the creation of knowledge, the main chemical processes that underlie the life of a healthy person, familiarity with molecular mechanisms, the violation of which may lead to the development of pathological conditions, the development of the most important methods of laboratory studies of metabolism and the ability to interpret the results of research; to develop a pediatrician, able to use all the achievements of biochemistry for practical work.

Learning objectives:

- study of the structure and functions of simple and complex proteins;
- study of the structure and mechanisms of action of enzymes-biological catalysts;
- study of the biological role of vitamins necessary for normal growth and development of the body;
- study of the mechanisms of influence of hormones on the body's metabolism and physiological functions;
- study of biological oxidation processes and energy generation;
- study of carbohydrate, lipid, and amino acid metabolism processes in the body;
- study of the chemical composition of human organs and tissues, biochemical processes occurring in specialized tissues;
- to study the peculiarities of carbohydrate metabolism in children;
- to study the features of lipid metabolism in children;
- to study the peculiarities of protein and amino acid metabolism in children;
  
- to study of the molecular basis of physiological functions of the human body, mechanisms of pathogenesis of diseases, as well as treatment and prevention;

–ability to apply the results of biochemical studies to diagnose diseases and monitor the effectiveness of treatment.

Topic content:

Introduction. Subject and tasks of biochemistry. Structure and functions of proteins. Physical and chemical properties of proteins. Methods of separation and quantitative determination of proteins.

Classification of simple and complex proteins, their structure and biological functions.

Complex proteins: phosphoproteins, lipoproteins, glycoproteins, nucleoproteins and their compounds, boroll in the human body. Enzymes are biological catalysts

of a protein nature. Physio-chemical properties of enzymes. Chemical structure, active forms, the role of water-soluble vitamins in metabolism, mechanisms

of absorption and excretion from the body. Features of the structure and mechanisms of action of fat-soluble vitamins. Influence on the body's metabolism and

development. Biochemistry of hormones. Structure, synthesis, mechanism of action, target cells, and biological effects of pancreatic and adrenal hormones. Male and female

sex hormones, structure and boroll. Bioenergetics. Biological oxidation and

tissue respiration. Mechanism of oxidative phosphorylation according to Mitchell.

Carbohydrate metabolism. Anaerobic and aerobic ways of using glucose in the cell

Exchange of fructose and galactose. Shuttle systems. Mechanism of oxidative

decarboxylation of pyruvate. The Krebs cycle, its value. The pentose-phosphate pathway

of glucose oxidation and its significance. Gluconeogenesis. Regulation and pathology of

carbohydrate metabolism. Lipid metabolism. Biosynthesis of triglycerides,

phospholipids, and VFA. Metabolism of ketone bodies. Cholesterol

biosynthesis. Regulation and pathology of lipid metabolism. Exchange of proteins and

amino acids. Intermediate exchange of amino acids.

Decontamination of ammonia in tissues. Specific ways of exchange of individual AMCs.

Biosynthesis of nucleic acids. Matrix biosynthesis of nucleic acids. Broadcast,

stages of broadcasting. Biochemistry of urine and water-salt metabolism. Biochemistry of

shelter. Biochemistry of the liver. Biochemistry of connective and bone

tissue. Biochemistry of muscle and nerve tissue. Interrelation of metabolism.

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

Know:

–Subject and tasks of biochemistry. The importance of biochemistry for medicine and the training of a pediatrician.

–The main stages of development of biochemical science. The role of Russian and foreign scientists in the creation and development of biochemistry.

–Fundamentals of the structural organization of the most important biological molecules, its relation to function.

–The main provisions of enzymology. The concept of enzymes, coenzymes, and cofactors. Kinetics of enzymatic reactions.

–to Influence of temperature, pH, substrate and enzyme concentrations on the rate of enzymatic reaction.

–Activators and inhibitors of enzymes. Types of inhibition.

- The main provisions of the doctrine of vitamins and their significance in the biochemistry of nutrition.
  - Bioenergetics and biological oxidation, energy exchange.
  - Biochemical bases of metabolism regulation. The role of hormones and the nervous system in regulatory processes.
  - Reception and mechanisms of hormone signal transmission to target cells (role of secondary mediators-c-AMP, c-GMF).
  - Basic processes of lipid metabolism. Regulation and pathology of lipid metabolism.
  - Basic processes of amino acid metabolism. Regulation and pathology of metabolism.
  - The main features of the metabolism of individual organs and tissues. The relationship of metabolism with the function of organs and tissues.
  - Biochemical bases of metabolism regulation. The role of vitamins, hormones, and the nervous system in regulatory processes.
  - Molecular bases of the biosynthesis of nucleic acids and proteins. Principles of regulation of these processes. Medicinal products as regulators of the biosynthesis of nucleic acids and proteins.
  - The concept of the stages of realization of genetic information: replication, transcription, translation.
  - The concept of molecular pathology. Mechanisms of occurrence of "molecular diseases", principles of their diagnosis and treatment.
  - Practical application of biochemistry in practice for a pediatrician.
- Be able to:
- to Work independently with educational and scientific literature.
  - Independently perform the simplest biochemical experiment and give a critical assessment.
  - Work with devices for performing biochemical studies: photo electro colorimeter, refractometer, polarimeter, spectrophotometer, pH meter, electrophoresis apparatus, chromatography methods, etc.
  - to Determine the activity of enzymes in biological objects.
  - to Determine the amount of protein fractions in blood plasma and protein preparations.
  - to Determine the content of vitamins in products of plant and animal origin.
  - to Determine the content of some metabolic components in biological fluids.
- Own:
- in practice, use the acquired knowledge of biochemistry in the practice of a pediatrician; apply the results of biochemical studies to diagnose diseases and monitor the effectiveness of treatment.

The total labor intensity of mastering the discipline is 7 credits.

### **C. 3 PROFESSIONAL CYCLE**

## **ANNOTATED PROGRAM CONTENT**

## **Academic disciplines**

### **"Medical biology, genetics, parasitology»**

The aim of the discipline is to develop students' biological thinking, holistic natural science thinking, understanding of the essence of life, individual development, the relationship between organisms and the environment, the relationship between health and the environment.

Objectives of the discipline:

- Develop basic knowledge and general concepts in modern biology;
- to study general patterns of environmental factors' effect on human health;
- to study the metabolism, individual development and forms of reproduction organisms;
- to study the evolutionary process and anthropogenesis;
- to study parasitism and the basics of medical parasitology;
- to study the basic laws of heredity and variability;
- to determine the biosocial nature of a person;
- to teach competent perception of practical problems of biology and education of ecological culture.

Content of the discipline. The emergence of life on Earth. The flow of information, energy and substances in the cell. Forms of reproduction of organisms. Ontogenesis. The pre-embryonic period. General patterns of embryonic development. Evolution of the organic world. Anthropogenesis. Environmental factors and their impact on human health. Ecological systems. Features of human ecology. Subject and tasks of genetics. Genetic system of the body. Genotype and phenotype. Inheritance of attributes. Interaction of allelic and non-allelic genes. Hereditary properties blood. Patterns of inheritance at the cellular level. Patterns of inheritance at the molecular level. Modifications and mutations. Genomic, chromosomal, and gene mechanisms of mutations. The main directions of human genetics. Human genetics and eugenics. Introduction to medical parasitology. Fundamentals of medical protozoology. The Simplest type. Flagellates class. Infusoria Class. The Simplest type. Class Sporozoa. The Sarcodina class. Fundamentals Of Helminthology. The flatworm type. Class Flukes. The flatworm type. Tapeworms class. The roundworm type. Class actually roundworms. Type Arthropods. Subtype Chelicerata. Class Arachnids. The ticks squad. Family Ixodidae, Argasidae, and acarimorphs. The insects class. Squad of lice, fleas. Order Diptera. Blood-sucking insects. Family of mosquitoes, mosquitoes.

As a result of mastering the discipline "Medical Biology, Genetics, parasitology" the student must know:

- the subject, tasks and methods of studying biology;
- theories about the origin of life on Earth;
- evolutionary factors; reproduction and its forms; types, forms, periods of ontogenesis;
- pre-embryonic period;

- factors of growth and development; subject and objectives of the science of ecology;
- ecological types of people;
- physical factors of environmental pollution; chemical factors of environmental pollution;
- biological factors of environmental pollution; anthropogenesis and its stages;
- driving forces of anthropogenesis;
- subject and objectives of genetics;
- laws of heredity; forms of interaction between allelic and non-allelic genes;
- inheritance of human blood types;
- features of the human karyotype; gene and its properties;
- mutations and their role;
- subject and objectives of medical parasitology;
- the role of vector-borne diseases;
- parasitism as a biological phenomenon;
- influence of the parasite on the host; influence of the host on the parasite;
- morphological adaptation of parasites;
- parasite life cycles;
- parasite control measures;
- the doctrine of natural focal diseases.

be able to:

- to identify cell and tissue components;
- to identify egg types;
- distinguish the stages of gametogenesis;
- to determine the dominant factor among a set of factors;
- to recognize environmental types of people;
- to create a family tree of a person;
- to determine the inheritance of blood groups;
- to exclude paternity schemes;
- to determine human sexual chromatin;
- to solve problems related to attribute inheritance;
- to identify parasitic protozoa;
- to identify the stages of fluke development;
- to identify the characteristics of tapeworms;
- to distinguish tick stages;
- to fight against vectors of infections and infestations;
- to conduct sanitary and educational work own:
- microscopy techniques; human chromosome analysis skills;
- the methods of studying human heredity (genealogical, twin);
- the methods of diagnosing pathogens of parasitic diseases;
- the methodology for compiling and analyzing pedigrees;
- skills in controlling parasites and preventing infection;
- the methodology for compiling reports, essays, and abstracts

The total labor intensity of mastering the discipline is 6 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Microbiology, virology and Immunology»**

The purpose of the discipline: to have a clear understanding of the pathogenicity of microorganisms and its implementation in specific conditions of occurrence of various classes of microorganisms in the Earth's biosphere. infectious diseases disease, about Immunity how it state the microorganism in which the infectious process and immunopathological conditions develop, about drugs that provide specific treatment and prevention of infectious diseases, about the role of science in solving the problem of reducing and eliminating infectious diseases.

Objectives of the discipline:

- formation of students ' general ideas about the structure and functioning of microbes as living systems, their role in ecology and methods of decontamination, including the basics of disinfection and sterilization techniques;
- have an understanding of the patterns of interaction of the human body with the world of microbes, including modern ideas about the immune response to infectious agents (antigens);
- to study the principles and methods of interpretation of the obtained results in microbiological, molecular-biological and immunological studies of biological fluids, microbe-containing materials and pure cultures of microbes;
- to teach students how to carry out preventive measures to prevent bacterial, fungal, parasitic and viral diseases;
- to study basic directions treatment options infectious diseases disease a person (bacterial, fungal, parasitic, viral);
- formation of students ' skills in working with scientific literature;
- to acquaint students with the principles of organization of work in the microbiological laboratory, with measures on labor protection and safety.

Content of the discipline: Subject and tasks of medical microbiology, virology and immunology, significance in the practical activity of a doctor. Device and equipment of the bacteriological laboratory. Research methods in microbiology. Microscopes, operating principle. Principles of taxonomy and nomenclature of bacteria. Structure a bacterial cell. Functions of various structural elements of a bacterial cell. Physiology and biochemistry of bacteria. Carbohydrate and protein metabolism. Nutrition of bacteria, types and mechanism. Nutrient media, purpose and classification. Growth and reproduction of bacteria. Bacterial respiration, types and mechanism. Microbial enzymes, their classification, meaning. Morphology, classification, and nature of viruses. Reproduction of viruses. Methods of cultivation. Genetics of microbes and viruses. Variability of microbes.

Mutations, mutagens, their classification. Morphology mushrooms.

Microbiological and molecular-biological bases of chemotherapy. Antibiotics, sources and methods of preparation, mechanism of action, classification. Distribution and role of microbes in the environment. Microflora of air, water, and soil. Microflora of the human body. The value of conditionally pathogenic microflora. The concept of infection and the infectious process. Basic protection mechanisms. The concept of

the body's immune system. Central and peripheral organs of the immune system. Immunity: types and forms. Non-specific factors of the body's defense. Specific forms of immune response: humoral and cellular; immunological information system memory, immunological tolerance. Antigens, their properties, characteristics. Practical significance. Antibodies. Characteristics, structure, and functions. Regulation of the immune response. Diagnostic reactions and methods. Immunobiological preparations: immunosera, immunoglobulins. Vaccines. Classification, meaning. Methods of production and application. Allergies. Hypersensitivity of types I, II, III, and IV. The concept of clinical immunology. Immunopathology. Immunological insufficiency. Autoimmune diseases. Pathogens of purulent inflammatory processes. Staphylococci, streptococci. Morphology, cultural, virulent, and antigenic properties. Epidemiological features. Pathogens of meningococcal and gonococcal infections, not gonorrheal urethritis. Morphology, cultural, virulent, and antigenic properties. Epidemiological features. Pathogens of diphtheria, whooping cough, paracoccus. Morphology, cultural, virulent, and antigenic properties. Epidemiological features. Pathogens of tuberculosis, leprosy. Morphology, cultural resources, virulent ones, antigenic properties.

Epidemiological features. Pathogens of intestinal infections. E. coli. Pathogens of typhoid fever, paratyphoid A and B. Morphology, cultural, virulent, antigenic properties. Epidemiological features. Pathogens of salmonellosis - food toxic infections and dysentery. Pathogens of cholera. Morphology, cultural, virulent, and antigenic properties. Pathogens of gas gangrene, tetanus, botulism. Morphology, cultural, virulent, and antigenic properties. Pathogens of zoonotic infections: plague and tularemia, anthrax, brucellosis. Morphology, cultural, virulent, and antigenic properties. Pathogens of syphilis and recurrent typhus, leptospirosis. Morphology, cultural, virulent, and antigenic properties. Causative agents of typhus and Ku-fever. Morphology, cultural, virulent, and antigenic properties. Pathogens of mycoses and candidiasis. Morphology, cultural, virulent, and antigenic properties. Influenza virus, acute respiratory infections. Morphology, antigenic structure. Cultivation, methods of indication and identification. Influenza virus, acute respiratory infections. Morphology, antigenic structure. Enteroviruses, polio pathogens, Coxsackie, ECHO. Viral hepatitis. HIV. Morphology, antigenic structure. Cultivation, indication methods and identifications. Arboviruses, oncogenic viruses. Morphology, antigenic structure. Measles and rubella viruses. Morphology, antigenic structure. Measles and rubella viruses. Morphology, antigenic structure. Oncogenic viruses. Rabies virus. Morphology, antigenic structure. Cultivation, methods of indication and identification. As a result of mastering the discipline "Microbiology, virology and Immunology" the student must know:  
—The main stages of microbiology development. Connection of science with other disciplines, tasks and methods of research, the principle of systematics of microorganisms.

- The structure and shape of the bacterial cell with the function of various formations, their chemical composition, physiology, biochemistry of bacteria, features of nutrition, respiration, growth, reproduction.
- Distribution and role of microbes in the environment. Influence of environmental factors on microorganisms.
- Morphology, ultrastructure, classification and nature of viruses. Cultivation, antigens, production and application of phages.
- Sources and methods of obtaining antibiotics, their classification by structure, spectrum and mechanism of action. On the causes of drug resistance formation, complications of antibiotic therapy, methods for determining the sensitivity of microbes to antibiotics.
- The concept of the infectious process. Pathogenicity and virulence, toxicity of microbes. On the role of opportunistic microflora in human pathology, on nosocomial infections.
- Immunity, its types, mechanisms and factors: immunocompetent cells, their interaction in cellular and humoral immunity. Antigens, their properties, types. Antibodies, characteristics various classes immunoglobulins of interaction between antigens and antibodies.
- Allergy of immediate and delayed types, forms of manifestation, mechanisms of occurrence and preventive measures.
- Immunobiological preparations: diagnostic and therapeutic serums; vaccines. Principles of their production and application.
- Morphology, basic physiological properties of pathogens: bacterial (drip, intestinal, zoonotic), rickettsia, viral, fungal, protozoal infections. Have an understanding of the pathogenesis, main clinical manifestations, methods of laboratory diagnostics, preventive measures, and treatment principles. be able to:
  - Have skills compliance issues rules sanitary and hygienic anti-epidemic regime and safety measures in bacteriological laboratories.
  - Be able to take material for bacteriological and virologic studies (sputum, pus, nasal and pharyngeal contents, bowel movements, urine, blood).
  - Have skills in reading the results of microbiological, virologic, and serological laboratory tests.
  - Have skills in decontamination of infected material, antiseptic treatment of hands of laboratory workers contaminated with the test material, cultures of pathogenic microorganisms.
  - Have the skills to prepare microscopic preparations from pure cultures of microbes, from pathological material (pus, sputum, blood). Be able to color



preparations with simple and complex methods (according to Gram, Ziel-Nelsen, Gins, Neisser, Romanovsky-Giemsa).

–Have skills in differentiating microorganisms by morphological characteristics during microscopy.

–Have the skills of bacteriological work: to isolate pure cultures of aerobes and anaerobes, to be able to identify isolated cultures by morphological, tinctorial, cultural, biochemical, and antigenic properties. Be able to determine phage sensitivity, phenotyping and determine the sensitivity of bacterial cultures to antibiotics.

–Be able to set, account for, and evaluate the results of serological reactions: agglutination, indirect (load) agglutination, precipitation (in vitro and gel), complement binding, viral hemagglutination and inhibition of hemagglutination, virus neutralization in cell cultures and by color sample.

Own:

–Methods of preparation and coloring of micro-preparations by simple and complex methods; as well as by immersion microscopy.

–Skills of seeding on solid and liquid culture media to obtain pure cultures of aerobic and anaerobic bacteria.

–Skills of pure culture isolation and identification of pathogenic and opportunistic microorganisms.

–Ability to analyze the microbiological purity and sanitary-bacteriological state of water, soil, and air; to determine the total microbial contamination and sanitary-indicative microorganisms of water, air, hand washes, and objects.

–Perform work under aseptic conditions: disinfect and sterilize laboratory utensils, instruments, etc.

–Methods for determining the sensitivity of bacteria to antibiotics: decipher the antibiotic chart and determine the minimum-suppressive concentration of antibiotics.

–Use basic reactions immunity level for diagnostics services infectious diseases.

–Provide explanations on the use of immunobiological drugs.

The total labor intensity of mastering the discipline is 9 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Normal anatomy"**

The purpose of the discipline: to provide students with information to master the knowledge of clinical anatomy of the human body to the extent necessary to continue their studies at the clinical departments of the faculty "Pediatrics" of a medical university and further professional activity.

Objectives of the discipline:

- formation of knowledge about the General principles of the layered structure of the human body

anatomy internal organs, muscle-fascial lies, cellular spaces, neurovascular bundles, bones and joints, weaknesses and hernias of the abdomen, on the collateral circulation in violation of the patency of the main

blood vessels, the areas of sensory and motor innervation of the large nerve trunks, topographic anatomy of specific areas.

- on the basis of the acquired knowledge, give an anatomical justification for the main clinical signs and symptoms.

symptoms and syndromes, the choice of rational accesses and surgical interventions, to prevent possible intraoperative errors and complications.

- develop knowledge for clinical and anatomical justification and correct implementation of nursing, medical diagnostic and therapeutic measures

Content of the discipline: Anatomy as a science. General osteology. Torso bones: vertebrae, ribs, and sternum. Upper limb bones: bones of the shoulder girdle and free upper limb. Lower limb bones: bones of the pelvis and free lower limb. General synecology. Joints of the trunk bones. Joints of the shoulder girdle bones. Connecting the bones of the free upper limb. Connections of the pelvic bones. The pelvis as a whole. Pelvic dimensions. Age-specific features. Joints of the lower bone limbs. Skull. Bones of the brain skull. Bones of the facial skull. Development of the facial skull and its anomalies. The skull as a whole. Connections of the skull bones. Temporomandibular joint. Introduction to myology. Muscles and fascia of the head. Neck muscles and fascia. Chest muscles and fascia. The aperture. Muscles and fascia of the back. Abdominal muscles and fascia. Weak spots in the abdominal wall. Muscles and fascia of the shoulder girdle and shoulder.

Muscles and fascia of the forearm and hand. Pelvic girdle and hip muscles and fascia. Muscles and fascia of the lower leg and foot. Heart. Structure, blood supply, and innervation. Conducting information of system. Pericardium. Large vessels of the heart. Circulatory circles. Fetal blood circulation. Regional lymph nodes. The aortic arch and its branches. Common carotid artery.

External carotid artery and its branches. Internal carotid artery and its branches.

Subclavian artery and its branches. Veins of the head and neck. Regional lymph nodes of the head and neck. The thoracic aorta and its branches are visceral and parietal. Veins of the thoracic cavity. Regional lymph nodes of the thoracic cavity. Abdominal aorta, visceral and parietal branches. Veins of the abdominal cavity. Regional services lymph nodes of the abdominal cavity. Pelvic vessels (arteries, veins). Regional pelvic lymph nodes. Axillary and brachial arteries and veins, their branches. Arteries and veins of the forearm and hand. Superficial and deep palmar arterial arches.

Regional lymph nodes. Lower limb arteries (femoral and popliteal arteries). Lower leg and foot arteries. Veins of the lower extremity. Regional services lymph nodes of the lower extremity. Overview of the peripheral nervous system.

Ganglia and roots. Spinal nerves and their formation. Front and rear branches.

Cervical plexus, branches. Brachial plexus, branches. Formation of the lumbar plexus, branches. Sacral plexus, short and long branches. General anatomy

of cranial nerves. Motor cranial nerves. III, IV, VI, XI, and XII pairs. Mixed

nerves. VII, IX, X pairs of cranial nerves. Mixed nerves. V pair of cranial nerves.

Branches, areas of innervation. Vegetative nodes along the trigeminal nerve.

Sensitive nerves. I, II and VIII pairs of cranial nerves. Introduction to splanchnology. Anatomy of the digestive system. Anatomy of the respiratory system. Anatomy of the urinary system. Anatomy of male and female genitalia. Anatomy of the central nervous system. Anatomy of the sensory organs. Parasympathetic and sympathetic divisions of the autonomic nervous system. Age characteristics of children.

As a result of mastering the discipline "Normal Anatomy", the student should know:

- the structure of organs, their position in the human body and their relationship with other organs

in the body; the relationship between the structure and function of organs;

- anatomical and physiological, age-sex and individual features of the structure and development of a healthy person;

- topography of internal organs and their anatomical and topographic relationships, the projection of internal organs on the surface of the body;

be able to:

- show on the corpse, preparations, tables, models, and others

- for clarity, organs, their parts, and other anatomical structures;

- on the human body, palpate (palpate) and determine the position of individual organs, bone protrusions;

- project organs, large vessels and nerves onto the surface of the body, find points of palpation of blood vessels (pulse);

- demonstrate organs, their parts, and other anatomical structures on radiographs;

- use knowledge of topographical anatomy and sclerotomy of organs in diagnosis and treatment

own:

- the technique of correct positioning of the bones of the axial skeleton, chest, and free part of the skeleton, which is necessary when describing and evaluating their condition during

X-ray and radiographic studies;

- the technique of demonstrating the biomechanics of the joints of the human body in a normal way in

accordance with the available axes of rotation, necessary for the correct

assessment of the completeness of their movements during diagnosis, as well as their correct

documentation;

- appliance arrangement of internal organs and parts of the norm with respect to

"I" to the "patient" for the proper evaluation of the results of physical methods

of examination (inspection, palpation, percussion, and homotope syncopial bodies), and

the methods of x-ray and endoscopic examinations, computed tomography (CT),

magnetic resonance imaging (MRI), ultrasonography (us);

- anatomical terminology, as well as eponyms required for the academic discipline "Human Anatomy".

The total labor intensity of mastering the discipline is 9 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Clinical and topographical anatomy"**

Purpose of the discipline: mastering the discipline: anatomical and surgical training of students to provide basic knowledge and skills necessary for subsequent classes in clinical departments and in independent medical activities to achieve the set learning goals. Objectives of the discipline: the study of topographic anatomy consists primarily in providing a layered description of areas. Areas in topographic anatomy are the parts of the body that are separated from each other by natural or artificial means drawn (conditional) lines (for example, the side area of the face, the front area of the thigh). Natural boundaries are skin folds (for example, inguinal folds), bony protrusions (for example, iliac crest, clavicle). Topographic anatomy synthesizes anatomical knowledge, while normal anatomy is primarily an analytical science that deals with the study of individual systems and the internal structure of individual organs.

Content of the discipline: Topographic anatomy of the thorax, chest wall, etc. their clinical significance, topography of the diaphragm. Topographic anatomy of the thoracic cavity and its organs. Features of topographic anatomy of the lung and pleura in children. Topographic anatomy of the pleura. Topographic anatomy of the pericardium, heart, aortic arch and its branches. Topographic anatomy of the upper and lower vena cava, brachiocephalic veins. Age characteristics of children. Topographic anatomy of the vessels of the thoracic and abdominal cavity. Age characteristics of children. Topographic anatomy of the vessels of the upper and lower extremities. Topographic anatomy of the anterior abdominal wall, borders, external landmarks. Dividing it into regions. Layered topography of the anterior abdominal wall. Peritoneal formations in the upper floor of the abdominal cavity. Topographic anatomy of the stomach, liver, gallbladder, and pancreas. Peritoneal formations in the lower floor of the abdominal cavity. Topographic anatomy of the small and large intestine. Age characteristics of children. Topographic anatomy of the lumbar region. Topographic anatomy of organs retroperitoneal space. Age-specific features. Topographic anatomy of the bladder, ureter, prostate, and urethra. Age-specific features. Topography of the cerebral part of the head. Age-specific features. Topographic anatomy of the visual organ. Age-specific features. Topographic anatomy of the outer, middle, and inner ear. Age-specific features. Topographic anatomy of the spinal cord and pathways. Age-specific features. Topographic anatomy of the organs of the hematopoietic system. Age-specific features. Features of topographical and anatomical formation of fascial-muscular cases of the upper limb. Topographic anatomy of the upper arm and shoulder. Topographical information anatomy of the forearm and hand. Features of topographic and anatomical formation of fascial-muscular cases of the lower limb. Topographic anatomy of the lower limb.

Clinical anatomy of internal female genital organs. Age-specific features.

Clinical anatomy of the breast. Clinical anatomy of the male genital organs. Age-specific features. Clinical anatomy of the pituitary gland.

As a result of mastering the discipline "Clinical and topographic Anatomy", the student should know::

- the basic concepts of topographic anatomy;
  - the principle of layered structure of areas and the ability to use this knowledge in surgical interventions;
  - general provisions on the structure of fascicular structures, topography of blood vessels, structure and pathways of lymph outflow;
  - topography of fascicular spaces, principles of opening and drainage of purulent cavities, possible ways of pus congestion;
  - topography of "weak points" of the abdominal walls and topographical and anatomical justification of hernia formation;
  - based on this knowledge, present diagnostic methods and methods for treating hernias;
  - topography of internal organs (holotype, sclerotomy, syntropy) and topographic and anatomical justification for the choice of examination and diagnostic methods, access to organs;
  - topography of neurovascular formations and the use of this knowledge in access to main vessels and nerve trunks;
  - the main sources of collateral blood circulation in various areas of the human body in order to predict the consequences of thrombosis or ligation of the main vessels at various levels and methods for eliminating their consequences;
  - zones of sensory and motor innervation, elements of topical diagnostics of peripheral nerve diseases.
- be able to:
- right use anatomical using the following tools: for preparation of cadaveric material;
  - correctly hold the scalpel and tweezers (in a certain position) during incisions;
  - choose the direction of incisions in the head, neck, torso, upper and lower extremities;
  - to do longitudinal lines and cross sections cuts bone with a saw canned and fresh bones;
  - determine the compact and spongy substance of the bones;
  - make cross cuts of the limbs and individual sections of the trunk;
  - provide justification for different accesses if necessary obtain an isolated drug;
- 
- determine the differences between arterial and venous trunks and nerve trunks; use knowledge of topographic anatomy to understand the pathogenesis of pathological processes, their localization, distribution and manifestation in the form of symptoms and syndromes, substantiate the diagnosis, choose and conduct treatment and prevention of diseases;

- use external landmarks to determine the boundaries of areas of the human body, to build projections of internal organs and neurovascular bundles, during various medical manipulations and surgical access to organs, to diagnose diseases;
  - work independently with educational, scientific, regulatory and reference literature own:
  - skills in working with anatomical instruments;
  - skills in determining (measuring) human anthropometric parameters;
  - skills in sketching schematic images of generally accepted concepts;
  - in the course of topographic anatomy:
  - cross-sections of the trunk and limbs, dura mater sinuses, neck fascia, neck triangles, abdominal weaknesses, inguinal and femoral canal, Bryusova's Krenlein scheme.
- The total labor intensity of mastering the discipline is 3 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Histology, cytology, embryology"**

The purpose of training is to form students' scientific ideas about the microscopic functional morphology and development of human cellular, tissue and organ systems, including oral organs, which provide the basis for studying clinical disciplines and contribute to the formation of medical thinking.

Learning objectives:

- study of general and specific structural and functional properties of cells of all body tissues and patterns of their embryonic and postembryonic development;
  - study of history functional characteristics of the main body systems, patterns of their embryonic development, as well as functional, age-related and protective-adaptive changes in organs and their structural elements;
  - study of basic histological international Latin terminology;
  - formation of the ability to microscopies histological preparations using a light microscope
- Program content The subject and tasks of histology, its significance for medicine. Stages of histology development.

Histology as a science and academic discipline. Methods of manufacturing preparations for light microscopy. The essence and methods of fixing micro objects. Methods seals. Microtomy. Freezing method. The essence and methods of coloring micro-preparations and their conclusion in balsam, resins, gelatin. Types of micro-medicines.

Microscopy techniques in light microscopes. Cytology as a branch of histology, its significance for medicine. Cell theory, the main provisions of cell theory at the present stage of science development. General plan of the eukaryotic cell structure. The cell nucleus. The main components of the kernel. The nuclear envelope, its structure and functions.

Nuclear envelope membranes, perinuclear space, nuclear pores, internal the fibrous layer. Euchromatin and heterochromatin. Sexual chromatin. Mitosis, phases

of mitosis.

Fundamentals of general embryology. Tasks of embryology. Comparative vertebrate embryology as a basis for understanding human embryonic development. Comparative embryology. Cytology. General embryology. The doctrine of fabrics. Epithelial tissue. Classification of fabrics. The concept of physiological and reparative tissue regeneration. Epithelial tissues. General characteristics of epithelial tissues. Blood and lymph. The concept of mesenchyma. Mesenchyme derivatives. Blood as a tissue, its functions. Blood plasma. The doctrine of hematopoiesis. Sources and course of blood development as a tissue. Embryonic and postembryonic hematopoiesis. Actually-connective tissues. General morpho functional characteristics of connective tissue. Cartilage tissue. Bone tissue. Muscle tissue. General characteristics and classification. Smooth muscle tissue. Striated skeletal muscle tissue. Development, structure, function, vascularization, innervation. The structure of muscle fibers. Muscle tissue of the heart. Development, structural features. Types of cardiomyocytes. Ultramicroscopic structure of a typical cardiomyocyte. Nerve tissue. The concept of nervous tissue. The concept of neurosecretion. Neuroglia. Macroglia and microglia. Structure, classification, and functional significance. Nerve fibers and nerve endings. Myelin-free nerve fibers: structure, location, properties. Myelin (pulp) nerve fibers. The concept of an axial cylinder and mesaxon. Nerve endings. General characteristics. Classification. General histology. The doctrine of fabrics. Private histology. Development of the nervous system in embryogenesis. Central the nervous system. The brain. The concept of cyto-and myeloarchitectonics of the cerebral cortex. Reticular formation, its structure and functional significance. The cerebellum. Structure, function. The spinal cord. General characteristics of the structure. The brain stem. Structure and neural composition. Peripheral nervous system. General characteristics of the structure of the central and peripheral parts of the parasympathetic and sympathetic systems. Sensory organs. The concept of analyzers. Classification of sensory organs. The organ of smell. Structure and cellular composition of the olfactory lining: receptor, maintenance, and basal cells. Organs of hearing and balance. Embryonic development. The building. Histophysiology of sound perception. Age-related changes. The organ of taste. General characteristics. The endocrine system. General characteristics and classification of endocrine system organs. Central and peripheral parts of the endocrine system. The cardiovascular system. General principles of structure, tissue composition, embryonic development. Dependence of the vascular structure on hemodynamic conditions. Arteries. The veins. Lymphatic vessels. Endocardium and the heart valves. Myocardium, working, conducting and secretory cardiomyocytes. Features of blood supply and regeneration. Conducting system of the heart, its morpho functional characteristics. Epicardium and pericardium. Innervation of the heart.

Age-related changes in the heart. Organs of hematopoiesis and immune defense. General characteristics of the hematopoietic system and immune defense. The digestive system. General characteristics of the digestive system. Development and structure of the tooth. General plan of the structure, fabric composition. Development of teeth. Age-related changes. The digestive tube. Pharynx and esophagus. Stomach. The small intestine. The large intestine. Characteristics of different departments. Liver. The pancreas. The pancreas. General characteristics. Respiratory system. Characteristics of the respiratory system. The skin and its components derivatives. Tissue composition, development. Regeneration. The epidermis. The dermis. Features of the structure of the dermis in the skin of various parts of the body. Age-related features of the skin and its glands. Excretory system. Characteristics of the urinary organ system. Nephron - as a morpho functional unit of the kidney, its structure. Age-related kidney changes. The urinary tract. The structure of the wall of the renal calyx, pelvis, ureters and bladder. The male reproductive system. The female reproductive system. Human embryology. Periodization of development. Extra-embryonic organs. Factors of affecting the development: genetic, maternal, external (radiation, alcohol, smoking, drugs, infection, chemical and medicinal substances, pesticides, etc.). As a result of mastering the discipline "Histology, cytology, embryology", the student should know:

- basic laws of development and vital activity of an organism based on the structural organization of cells, tissues and organs;
- history functional features of tissue elements, physical bases of functioning of medical equipment, device and purpose of medical equipment;
- general laws of the structure and functioning of organs and systems of the body;
- scientific and medical information about the structure and development of organs and systems of the body.

Be able to:

- use physical, chemical and biological equipment;
- work with microscopes.
- use educational, scientific, popular science literature, and the Internet for professional activities.
- analyze it, describe morphological features features being studied microscopic preparations and electronic micrographs;
- use educational, scientific, and popular science literature;

Own:

- skills of microscopy of histological preparations
- skills in working with scientific literature and the Internet.
- medico-morphological conceptual framework

The total labor intensity of mastering the discipline is 8 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Normal physiology»**



The purpose of the discipline: To form students' system knowledge about the vital activity of the whole organism and its systems, about the basic laws of their functioning and mechanisms of their regulation in interaction with the external environment, about the physiological foundations of clinical and physiological diagnostics and when studying the integrative activity of the body.

Objectives of the discipline:

- Formation of ideas about the morpho functional unity of the human body and the mechanisms of regulation of its various systems.
- Formation of ideas about the body as a single functional system that preserves homeostasis in changing environmental conditions
- Students' mastering of methods and methods of studying various body systems.
- Application of the acquired knowledge and skills in the study of medical and biological and general professional disciplines.

Content of the discipline: Subject and tasks of physiology. Physiological research methods. Mechanisms of homeostasis maintenance. Properties and functions of various proteins. Bio membranes, properties and functions. Mechanisms of substance transport. Excitability. Measurement measures. Characteristics of arousal. Bioelectric potentials in various cells (muscle, nerve). Functions and properties of skin, bone and nerve tissue. Physiological properties of the myocardium. Functions of the heart and blood vessels. The main parameters of hemodynamics – blood pressure, peripheral vascular resistance, linear and volumetric blood flow rates. Features of the cardiovascular system in children. Functions of the airways and lungs.

Mechanisms of inhalation and exhalation. Lung volumes and capacities. Features of respiratory organs in children. The main processes occurring in the gastrointestinal tract (secretion, motility, absorption, incretion, excretion). Features of gastrointestinal tract activity in children. Composition, functions, and physical-chemical properties of blood. Age-related features of blood parameters in children.

Kidney and nephron functions. Mechanisms of urination. Humoral regulation functions. Physiology of nerves and synapses. Functions of the central nervous system. Classification, functions, and properties of neurons and glial cells. Reflexes (classification, functions), reflex arc. Feedbacks, types. Characteristics of somatic and autonomic nervous systems. Gas exchange in lungs and tissues. Digestion in the mouth and stomach. Digestion in the small and large intestines. Physiological basis of hunger and satiety. Features of digestion in children. Anticoagulant blood system.

Musculoskeletal system. Functions of joints, ligaments and tendons, and bones.

Mechanisms of muscle contraction and relaxation. Hypothalamic-pituitary endocrine system. Principles of regulation of endocrine glands' activity. Hormones of peripheral endocrine glands. Human reproductive function. Visual, auditory, and somite visceral analyzers.

As a result of mastering the discipline "Normal Physiology", the student should know:

- physiological bases of vital activity of cells, organs, tissues and the whole organism in the conditions of its interaction with the environment of existence;
  - physiological functions of the body at various levels of organization, mechanisms of their regulation and self-regulation;
  - basic indicators, characteristics of normal condition physiological functions of the body and its systems, especially in children;
  - physiological foundations of a healthy lifestyle;
- be able to:
- physiological studies of the human body;
  - give a physiological interpretation of the indicators obtained as a result of the study of individual functions of a healthy body, especially in children;
  - assess the normal state of body functions and their reserve capabilities; possess:
- a systematic approach to the assessment of physiological functions and their characteristic indicators.
- The total labor intensity of mastering the discipline is 9 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Pathological physiology, clinical pathological physiology"**

The purpose of the discipline: to study the main patterns and mechanisms of disease development and human recovery. Formation of scientific knowledge about general laws and specific mechanisms of occurrence, development and outcomes of pathological processes, individual diseases and pathological conditions, and their principles identifications, therapies and prevention measures. Teach student's name of carry out pathophysiological analysis of professional tasks of the doctor, as well as model situations; to form methodological and methodical bases of clinical thinking and rational action of the doctor.

Objectives of the discipline:

- introduce students to the following concepts: general nosology, etiology and pathogenesis.
- to study the main typical pathological processes, such as local circulatory disorders (ischemia, hyperemia, stasis), typical metabolic disorders, etc.
- pay attention to the issues of modeling and experimental therapy of the most common pathological processes of some major diseases.
- mastering the theoretical foundations of general and private pathophysiology;
- introduction to experimental methods for studying pathological processes, their capabilities, limitations, and prospects;
- mastering the skills to solve situational problems and tests, interpret data from clinical and laboratory research methods;
- acquisition of skills to use the acquired knowledge to substantiate the principles of pathogenetic therapy of the most common diseases.

Content of the discipline: Subject, tasks, methods and sections of pathophysiology. Pathophysiology of the cell. Gene mutations. Chromosomal aberrations. Causes and mechanisms of development of congenital malformations. Etiology and pathogenesis of regional circulatory disorders. Reactivity and resistance. Immunopathology. Allergies. Infectious process. Etiology and mechanisms of inflammation development. Proliferation and regeneration. Principles of inflammation therapy. Fever. Hyperthermia. Hypothermia. Protein and energy deficiency. Gout. Fasting. Obesity. Mechanisms of development of atherosclerosis. Principles of therapy and prevention. Hypo- and hyperglycemia. Principles of therapy. Hypohydration. Hyperhydration. Edema. Types of hypoxia. Stages of carcinogenesis. Antitumor protection of the body. Principles of prevention and therapy. Etiology and pathogenesis of extreme conditions. Pathophysiology of obstructive and restrictive respiratory disorders. Pathophysiology of coronary insufficiency. Arterial hypo- and hypertension. Pathophysiology of heart failure. Maldigestion and malabsorption syndrome. Pancreatitis. Pathophysiological characteristics of jaundice. Pathophysiology of liver failure. Etiopathogenesis of portal hypertension syndrome. Pathophysiology of the kidneys. Pathophysiology of nephrotic and nephritic syndrome. Study of the mechanisms of development of acute renal failure and CRF syndromes. Pathophysiology of uremia syndrome. Etiopathogenesis of diseases of the musculoskeletal system. Osteoporosis. Etiopathogenesis of arthrosis and arthritis. Etiopathogenesis of brain edema development. Etiopathogenesis of neuroses. Pathophysiology of anemic syndrome. Pathophysiology of the white blood system. Pathophysiology of endocrine disorders. Etiopathogenesis of pelvic inflammatory diseases. Pathophysiological characteristics of menstrual cycle disorders. Pathophysiological characteristics of disorders of generative and capulatory function in men leading to infertility.

As a result of mastering the discipline "Pathological physiology, clinical pathological physiology", the student should know:

- basic concepts of general nosology;
- the role and significance of causes, conditions and reactive properties of the body in the occurrence, development and completion (outcome) of diseases;
- causes and mechanisms of typical pathological processes and reactions, their manifestations and significance for the body in the development of various diseases;
- causes, mechanisms and most important manifestations of typical disorders of organs and systems of the body;
- significance of the experimental method in the study of pathological processes: its capabilities, limitations, and prospects;
- importance of pathological physiology for the preventive direction of Kyrgyz healthcare and clinical medicine;

- relationship of pathophysiology to other biomedical and medical disciplines;
- human functional systems, their regulation and self-regulation in interaction with the external environment, features in children;
- basic laws of development and vital activity of the body and principles of development of pathological processes;
- definition of the pathological process in the development of various nosologies;
- Morpho functional properties patterns processes adaptations by human activity, especially of children;
- etiology, mechanisms of development and principles of diagnosis of pathological processes and conditions.

be able to:

- apply the acquired knowledge in the study of clinical disciplines and in subsequent treatment and prevention activities;
- analyze issues of general pathology and correctly evaluate current theoretical concepts and trends in medicine;
- plan and implement (in compliance with the relevant rules) experiments on animals, process and analyze the results of experiments, correctly understand the significance of the experiment for studying clinical forms of pathology;
- record mechanograms and respiration in acute animal experiments;
- master cytological methods for determining sex chromatin and its interpretation;
- determine the main types of hypoxia based on blood gas analysis data;
- plot of temperature curves and determine the types of febrile reactions;
- be able to interpret the main ones diagnostic services, allergic samples;
- be able to correctly interpret the results of the experiment and conduct etiopathogenetic analysis;
- apply knowledge about the structure and functions of organs and systems of the human body in the provision of medical care;
- analyze the significance of morpho functional changes in organs and tissues in the development of typical pathological processes.

own:

- a conceptual module and algorithms that allow differentiating the normal parameters of the constants of the internal environment of the body;
  - skills in differentiating the causes and conditions of occurrence of typical pathological processes;
  - skills differentiations reasons and conditions occurrence of pathological processes and diseases, assessment of risks of colonization, complications and relapses, especially in children;
  - a conceptual module and algorithms that allow differentiating normal indicators of constants of the internal environment of the body, especially for children;
- The total labor intensity of mastering the discipline is 9 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

## **"Pathological anatomy, clinical pathanatomy»**

Training goal:

- Study of the structural foundations of diseases, their etiology, pathogenesis and morphogenesis in order to use the acquired knowledge in training at clinical departments for training a general practitioner. Learning objectives: Learning:
- stereotypical pathological processes, as a whole which ones morphological manifestations of a particular disease are determined;
- etiology, pathogenesis and morphology of diseases at different stages of their development (morphogenesis), structural foundations of recovery, complications, outcomes and individual consequences of diseases;
- morphology and mechanisms of adaptation and compensation processes in response to pathogenic factors and changing environmental conditions;
- changes in diseases that occur both in connection with changing human living conditions and treatment (path morphosis), and as a result of therapeutic and diagnostic manipulations (pathology of therapy);
- pathoanatomic service, its tasks in the health care system and organizational and practical forms of solving these problems.

Content of the discipline:

Introduction to pathological anatomy. An autopsy. Stromal-vascular dystrophy. Mixed dystrophy. Death. Necrosis. heart attack. Circulatory disorders-I. Plethora of blood. Bleeding. Anemia. Lymphatic circulation disorders. Violations of the content of tissue fluid. Circulatory disorders-II. Thrombosis. Embolism. Shock. General pathology of inflammation. Exudative inflammation. Productive inflammation. Compensatory and adaptive systems of processes. General pathology tumors. Organ-specific epithelial tumors. Mesenchymal tumors. Tumors of melanin-forming tissue. Tumors in children. Prenatal pathology. Perinatal pathology. Introduction to nosology. Immunopathological processes. Atherosclerosis. Coronary heart disease. Hypertension. Rheumatic diseases. Acquired heart defects. Diseases of the respiratory system. Endocrine diseases system. Diseases of the digestive system. Liver diseases. Kidney diseases. Intestinal infections. Tuberculosis. Particularly dangerous infections. Children's bacterial infections. Children's viral infections. Acute respiratory viral infections. Sepsis. Placental pathology. Precancerous diseases and tumors of the uterus, ovaries, and breast.

As a result of mastering the discipline "Pathological anatomy, clinical pathological anatomy", the student should know:

- Content, tasks, objects and methods of research of pathological anatomy, its place in medical science and health care practice. Historical development of pathological anatomy. Tasks, purpose, and methods of autopsy.
- Definition, mechanisms, causes, pathogenesis, classification, morphological manifestations, outcomes of dystrophies.
- Definition, cause, classification, signs of death, necrosis, apoptosis.
- Classification, reasons, morphology violations blood circulation system, lymphatic circulation and tissue fluid content.

- The essence, biological and medical significance of adaptation and compensation. Definition, essence, morphogenesis, causes, morphology of regeneration, hypertrophy, hyperplasia, atrophy.
  - Definition, biological essence, etiology, pathogenesis, morphology, classification, outcomes of inflammation
  - Definition, distribution, classification, etiology, morphogenesis, histogenesis, morphology and properties of tumors
  - Causes, mechanisms of development, morphological characteristics
  - pathological processes of the prenatal period.
  - Perinatal care pathology, its reasons, pathogenesis, morphological information a characteristic.
  - Etiology, pathogenesis, morphological information feature description atherosclerosis, hypertension and coronary heart disease.
  - Etiology, pathogenesis, and pathological anatomy of rheumatic diseases, heart defects, cardiomyopathies, and vasculitis.
  - Etiology, pathogenesis, classification and pathological anatomy of acute inflammatory and chronic non-specific lung diseases.
  - Etiology, pathogenesis, classification and pathological anatomy of endocrine system diseases.
  - Etiology, pathogenesis, pathological anatomy, and classification of gastritis, peptic ulcer disease, and appendicitis.
  - Etiology, pathogenesis, morphological characteristics and classification of glomerulopathies, tubulopathies, nephrosclerosis, kidney stone disease and pyelonephritis.
  - Etiology, pathogenesis, morphological characteristics and classification of hepatitis, hepatitis and cirrhosis of the liver.
  - Biological and social factors in the development of infectious diseases. Signs and classification of infectious diseases.
  - Etiology, pathogenesis, classification, pathological anatomy and pathomorphosis of primary, hematogenic and secondary tuberculosis.
  - Etiology, pathogenesis, classification and morphological characteristics of typhoid fever, dysentery and salmonellosis.
  - Features of highly dangerous infections, etiology, pathogenesis, morphology of highly dangerous infections. Features of autopsy and burial of corpses of those who died from particularly dangerous infections.
  - Differences between sepsis and other infectious diseases. Etiology, pathogenesis, classification and pathologic anatomy and pathomorphosis of sepsis.
- Be able to:
- Work on light source biological under the microscope, right to read electro organs.
  - Diagnose signs of biological death, macroscopic and microscopic manifestations of necrosis
  - Macroscopically and histologically diagnose signs of blood and lymph circulation disorders.
  - To diagnose macroscopic and histological manifestations of dystrophies.
  - Diagnose macro - and microscopic signs of inflammation.

- To diagnose macroscopic and histological signs of compensatory processes.
- Diagnose macroscopic and microscopic signs of tumors.
- To diagnose morphological changes that occur in prenatal and perinatal pathology.
- To diagnose macroscopic and histological manifestations of atherosclerosis, hypertension and coronary heart disease.
- Diagnose macro-and micro-signs of lung diseases.
- To diagnose macroscopic and histological manifestations of endocrine system diseases.
- To diagnose macroscopic and histological characteristics of gastritis, peptic ulcer disease and appendicitis.
- Diagnose macroscopic and histological signs of hepatitis, hepatitis, and cirrhosis of the liver.
- Diagnose macroscopic and microscopic characteristics of kidney diseases.
- Diagnose macro-and micro-manifestations of tuberculosis.
- Diagnose macroscopic and histological signs of intestinal infections.
- Diagnose macroscopic and microscopic characteristics of particularly dangerous infections.
- Diagnose macroscopic and histological signs of sepsis.
- Diagnose macroscopic and microscopic manifestations of childhood infections.
- Diagnose macroscopic and microscopic signs of acute respiratory viral infections.
- Conduct a differential diagnosis of various general pathological processes and diseases, decipher the mechanism of their development, and evaluate their functional significance.
- Compare clinical data and morphological manifestations of pathological processes and diseases.
- Be able to draw up a protocol (written description) and give an oral description of the objects being studied (macro-and micro-preparations).
- Be able to work with additional and scientific literature and write an abstract.

Own:

- Skills of macroscopic diagnostics of pathological processes.
- Skills in drawing up a written description (protocol) of changes in organs during pathological processes and diseases.
- Skills of working on a light biological microscope.
- The main methods for determining the criteria for histological diagnosis of pathological processes.
- Basic skills of macroscopic and microscopic diagnostics of various human diseases
- Skills in comparing clinical manifestations and morphological changes in pathological processes and diseases

The total labor intensity of mastering the discipline is 9 credits.

## ANNOTATED PROGRAM CONTENT

### Academic disciplines

## **"Basic pharmacology»**

Goal disciplines preparation a specialist, who has pharmacological thinking, knowledge, skills and abilities that can be applied in professional activities in the context of innovative development of society.

Objectives of the discipline:

- to acquaint students with the basic laws of pharmacokinetics and pharmacodynamics of drugs;
- to teach students analyze the action of drugs based on the totality of their pharmacological effects, mechanisms and localization of action, and pharmacokinetic parameters;
- to develop students ' ability to assess the possibilities of choosing and using medicines based on their understanding of their properties for effective and safe prevention, pharmacotherapy and diagnostics of diseases of individual systems of the human body;
- to teach students to recognize possible side effects and toxicological manifestations in the use of medicines and to carry out their treatment;
- to develop students ' skills necessary for solving individual research and applied tasks in the field of pharmacology, taking into account ethical, deontological aspects, and basic information security requirements;
- teach students the methodology of mastering knowledge in pharmacology using the following methods: scientific, help page literatures, official ones statistical reviews, Internet resources, and evidence-based principles.
- to develop students ' skills of a healthy lifestyle, work organization, safety regulations and monitoring compliance with environmental safety.

Content of the discipline: Introduction. History of pharmacology. Subject and tasks of pharmacology, connection with medical and biological sciences. General pharmacology.

Cholinergic agents. Adrenergic agents. Means for anesthesia.

Analgesic agents. Sleeping pills, anticonvulsants. Psychotropic drugs. Drugs that affect the function of the respiratory system. Tools that affect the functions of government agencies digestion.

Cardiotonic systems tools.

Antiarrhythmic drugs. Antianginal agents and hypolipidemic agents. Antihypertensive drugs. Diuretics, uterine remedies. Uricosuria drugs. Drugs that affect the blood system. Anti-inflammatory drugs.

Anti-allergic tools.

Antibiotics. Antiprotozoal tools. Antifungal agents tools. Anthelmintic agents tools. Antiseptic products

isinfectants. Anti-tuberculosis, anti-spirochete drugs. Antiviral agents.

As a result of mastering the discipline "Basic Pharmacology", the student must:

To know:

- classification and main characteristics of medicinal products, pharmacodynamics and pharmacokinetics, indications and contraindications for the use of medicinal products; side effects;



- general principles of prescribing and composing prescription prescriptions for medicines;
  - be able to:
    - analyze the effect of drugs based on the totality of their pharmacological properties and the possibility of their use for therapeutic purposes;
    - write prescriptions for medicines, use various dosage forms in the treatment of certain pathological conditions, based on the characteristics of their pharmacodynamics and pharmacokinetics;
    - apply basic antibacterial, antiviral and biological drugs;
    - evaluate possible manifestations of drug overdose and ways to eliminate them;
  - own:
    - skills in the use of medicines in the treatment, rehabilitation and prevention of various diseases and pathological conditions
- The total labor intensity of mastering the discipline is 7 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Clinical Pharmacology"**

Discipline objective: To develop sustainable knowledge, clinical thinking and competencies in the rational use of medicines, based on the methodology of personalized medicine, the combination of the clinical value and safety of drugs and the principles of evidence-based medicine.

Objectives of the discipline: To teach students:

- principles and methods for selecting the most effective and safe drugs for personalized drug therapy in mono – or combination therapy, taking into account the main parameters of clinical pharmacokinetics and pharmacodynamics, dosage regimen, methods for monitoring efficacy and safety;
- selection of appropriate drugs, taking into account age-related aspects, physiological conditions, changes in the functions of the elimination organs, correction of the dosage regimen and methods for monitoring efficacy and safety;
- analysis and evaluation of the effects of drug interactions with their combined use, the influence of food, alcohol, and smoking;
- develop skills in pharmacovigilance, prediction, prevention, detection and correction of adverse drug reactions and compliance with the requirements of the legal framework in the field of drug treatment in the Russian Federation.

In the Kyrgyz Republic;

- to a competent person analysis the results of significant ones randomized, controlled drug trials, the use and ability to apply the principles of evidence-based medicine.

Content of the discipline: Introduction to clinical pharmacology. Subject and tasks. Principles of rational use of medicines. Clinical significance of drug interaction. Side effects of medications. Classification. Monitoring and evaluation of drug safety. Variability of drug action in children and the elderly. Variability of drug action in pregnant and lactating women. Main parameters of clinical pharmacokinetics and

pharmacodynamics of drugs. Clinical significance the main pharmacokinetic and pharmacodynamic parameters in the rational administration of drugs. The concept of Personal medicines. Basic principles, stages and criteria of rational choice of medicines. Side effects of medications. Classification. Monitoring and evaluation of drug safety. Clinical and pharmacological approaches to the choice of medicines for sleep disorders and anxiety states. Clinical and pharmacological approaches to the choice of medicines for pain syndrome of various genesis. Clinical and pharmacological approaches to the choice of medicines for inflammatory diseases. Clinical and pharmacological approaches to selection medications for iron deficiency anemia. Clinical and pharmacological approaches to the choice of medicines for diabetes mellitus. Clinical and pharmacological approaches to the choice of medicines for bronchial obstructive syndrome. Clinical and pharmacological approaches to the choice of medicines for arterial hypertension. Clinical and pharmacological aspects approaches to the choice of medicines for coronary heart disease. Clinical and pharmacological approaches to the choice of medicines for chronic heart failure. Clinical and pharmacological approaches to the choice of medicines used for the treatment of thyroid diseases. Clinical and pharmacological approaches to the choice of medicines used for gastroduodenal ulcers. Types of clinical trial designs. Formulation of a clinical question. Components of a correctly formulated clinical question (PICO). Common principles of rational use of antibacterial agents. General principles of perioperative antibiotic prophylaxis. Clinical and pharmacological approaches to the choice of medicines used in obstetric pathology and oral contraceptives. Clinical trials of medicinal products, phases. Drug promotion: Aggressive marketing of pharmaceutical companies. Clinical and pharmacological approaches to the choice of antimicrobial agents used in the treatment of bacterial infections. children's clinic-pharmacological properties approaches to the choice of antibacterial agents used for the treatment of urinary tract infections. Clinical and pharmacological approaches to the selection of antibacterial agents used for the treatment of surgical infections. Clinical and pharmacological approaches to the choice of medicines used for the treatment of helminthiasis. Clinical and pharmacological approaches to the choice of drugs used for the treatment of protozoal diseases. Clinical and pharmacological approaches to the choice of antiviral agents for the treatment of hepatitis, herpetic, cytomegalovirus, and retroviral infections. As a result of mastering the discipline "Clinical Pharmacology", the student should know:

- The main symptoms and syndromes of the most common diseases of the organs and systems of the child's body, depending on the periods of development.
- Group affiliation and pharmacodynamics of the main drug groups;
- Characteristics of the main pharmacokinetic parameters of drugs, their dynamics, dosage regimen in various pathologies, as well as in newborns, children and the elderly, during pregnancy and lactation, depending on the nature of the disease and

functional state the patient's body, the presence of bad habits (smoking, alcoholism, drug addiction);

- Basic principles of drug-therapeutic treatment (especially in the case of Drugs with a narrow therapeutic index).

- Features of dosage of medicinal products taking into account chronobiology and chrono pharmacology; including features of absorption, metabolism, drug elimination, manifestations of pharmacological effects;

- Methods for evaluating the clinical efficacy and safety of the main drug groups;

- Main adverse drug reactions, their detection, classification and registration. Methods of prevention and correction of adverse drug reactions;

- The main types of drug interaction (pharmaceutical, pharmacokinetic and pharmacodynamic), drugs-inducers and drugs - inhibitors of liver enzyme systems;

- Relationship pharmacokinetics and pharmacodynamics, clinical efficacy and safety of drugs in patients with various stages of damage to the main functional systems.

- Phases of clinical research of new drugs: pharmacological studies in healthy volunteers, placebo-controlled studies in patients with a specific disease, randomized controlled trials in large groups, post-registration studies.

- Principles of clinical and pharmacological approaches to the selection of groups of drugs used for pharmacotherapy of major diseases of internal organs, taking into account the level of "Evidence-based medicine".

- Means of choice for relief of the main symptom complexes in emergency situations. be able to:

- Follow the rules of medical ethics and deontology; solve a set of problems related to the relationship between the doctor and the patient.

- Analyze it Results researches pharmacokinetics and pharmacodynamics of medicinal products.

- Conduct adequate selection and prescribe the most effective, safe and affordable medicines.

- Choose the necessary set of routine (survey, examination) and special laboratory and functional methods of research on systems for assessing the pharmacodynamic effects of drugs and interpret the data obtained; choose methods for adequate monitoring of the effectiveness and safety of treatment and predict the risk of adverse reactions.

- Collect a pharmacological and allergological history.

- Determine the optimal dosage regimen; choose the dosage form of the drug, dose, route, frequency and duration of drug administration.

- Know the specifics of choosing drugs depending on the duration of pregnancy, lactation, at premature babies and newborns; conducting pharmacological tests to assess individual sensitivity of drugs.

- Identify undesirable drug reactions when prescribing the most common drugs, classify, register and suggest ways to prevent and correct them.

- Use scientific literature, personal data a form, reliable and objective sources of information, electronic databases, and Internet resources.

- Conduct an expert assessment of the correctness of the choice, effectiveness and safety of drug use in a particular patient.

- Present information about the impact of medicines on quality of life parameters. own:
  - choose a P-group (personal) of medicines, depending on the diagnosis and purpose of treatment;
  - Choose a P-drug based on its effectiveness, safety, acceptability, and cost.
  - choose the dosage form, route of administration, dosage regimens of the drug in a specific clinical situation;
  - predict and determine the risk of drug side effects;
  - conduct combined drug administration;
  - compliance with the rules of medical ethics and deontology;
  - inform the patient about the planned drug therapy;
  - explain to patients the method and time of taking the drug or their combination.
  - evaluate the effectiveness and safety of drug therapy.
- The total labor intensity of mastering the discipline is 2 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Dentistry with children's dentistry"**

Objectives:

Tasks:

Program content:

A student of the Faculty of Pediatrics should know:

- the main features of the anatomical structure of teeth and jaws in childhood;
- features of the clinical manifestation of major dental diseases and diseases and injuries of the maxillofacial region in children and adolescents;
- influence hereditary problems factors and factors external environments

existing methods of diagnosis, treatment of major dental diseases and diseases and injuries of the maxillofacial region in children, methods of their prevention and ways of rehabilitation of the child. be able to:

- examine children with diseases of the teeth, oral organs and maxillofacial region;
- perform diagnostics and differential diagnostics for diseases of the teeth, oral mucosa and periodontal system in children;
- conduct examinations of children of different age groups;
- establish psychological and verbal contact with healthy and sick children;
- establish emotional and psychological contact with the child and his parents;
- diagnose acute dental diseases and provide first aid for them;
- diagnose injuries and injuries to the face and jaws, provide first aid for them;
- be able to feed the baby when face and jaws are damaged;
- evaluate the child's neuropsychic development, physical and intellectual development, and general condition;

- explain the specifics of the clinical course of various inflammatory diseases and injuries of the maxillofacial region, based on anatomical and physiological features of the child's body;
  - observe sanitary standards, use personal protective equipment correctly;
  - assess the child's condition based on the examination data and the results of additional research methods, taking into account the diagnosis;
  - to carry out differential diagnostics of various inflammatory diseases among themselves and with other diseases;
  - determine the place of treatment of the child (polyclinic, hospital) and the amount of surgical care;
  - prescribe and use age-appropriate medications;
  - prescribe vitamin therapy, immunomodulatory therapy and medications that stimulate non-specific protection of the child's body;
  - read overview radiographs of jawbones, orthopantomograms, panoramic and intraoral radiographs, contrast radiographs;
  - identify children with severe dental anomalies and deformities and refer them to a dentist, pediatric surgeon, and orthodontist for specialized care and admission to a dispensary;
  - be able to issue a referral for hospitalization of the child in a specialized institution. own:
  - skills in completing medical documentation;
  - skills of providing emergency care in emergency situations (fainting, collapse, shock) at a children's outpatient appointment;
  - methods of external examination of the CHLO, trunk, limbs, palpation of the CHLO, methods of bimanual palpation of the TMJ, clinical examination of joint function (opening of the mouth, displacement of the lower jaw, sound symptoms of disorders, etc.);
  - methods of examination of the oral cavity in children (condition of the mucous membrane, alveolar processes, tongue, soft and hard palate, position of teeth, palpation examination of soft tissues, jaw and facial bones for signs of inflammation or tumor growth (the presence of pigmented spots on the skin, vascular pattern, symptoms of compression, infusion, etc.);
  - methods of external examination of the face and neck for the detection of congenital malformations of CHLO.
  - resolve the issue of hospitalization of the child and issue a referral to a specialized institution.
- The total labor intensity of mastering the discipline "Dentistry with pediatric dentistry" is 2 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Ophthalmology"**

Objective:

Acquisition of theoretical knowledge, skills and practical skills necessary for a general practitioner to provide ophthalmological care to adults and children with visual organ pathology.

Tasks:

- Teach students basic research methods in ophthalmology. Master the method of determining the functions of the visual organ.
- To acquaint students with common diseases of the anterior and posterior segments of the eyeball, with the principles of their diagnosis and drug treatment.
- Introduce you to indications for surgical treatment of cataracts and glaucoma.
- Teach students to provide emergency care for acute glaucoma attacks, acute vascular disorders of the visual organ, and introduce them with methods of early diagnosis and treatment of glaucoma.
- To study the clinical picture of damage to the visual organ, to teach how to determine the urgency of referral to an ophthalmologist, to provide first aid for blunt, penetrating wounds, and eye burns.
- Be able to diagnose congenital anomalies body's name vision disorders, retinoblastoma, and visual disorders with the aim of timely referral to specialists.

Program content:

Clinical features of the visual analyzer. General structure of the visual organ.

Structure and functions of the fibrous membrane (cornea, sclera), vascular membrane (iris, ciliary body, retina. Anatomy of the adnexal apparatus, physiological features. Visual-nervous pathways. The structure of the orbit, oculomotor muscles.

Anatomy and physiology of the eyelids. Connective membrane of the eye. Anatomy and physiology of lacrimal organs. Blood supply to the eyeball and its appendages. Nerves eyes and eye sockets. Visual analyzer functions. Central vision. Visual acuity.

Color perception. The concept of visual acuity. Angle of view. Methods for determining visual acuity (objective and subjective methods). The Snellen formula. Determination of visual acuity below 0.1. Determination of visual acuity in children. Color perception.

Three-component system theory colored vision.

Diagnostics of color perception.

Peripheral vision. Field of view. Light perception. Field of view and methods for its determination (control method, campimetry, types of perimetry). Physiological scotomas. Pathological changes in the visual field (concentric narrowing of the visual field, classification by cattle, types of hemianopsias). Light sensitivity research.

Twilight vision disorders. Optical system of the eye. Physical and clinical refraction. The concept of astigmatism, classification. Accommodation, accommodation mechanism. Pathology of the optical system of the eye – hypermetropia, myopia, astigmatism, presbyopia.

Clinic of emmetropia, hypermetropia, and myopia. Research methods in ophthalmology.

External inspection. Method of side lighting, research of passing subjects with light.

Ophthalmoscopy. Biomicroscopy. Gonioscopy. Diascleral translucency. Study of intraocular pressure. Study of corneal sensitivity. Fluorescence

angiography. OCT. Ultrasound of the eye. Binocular vision. Strabismus. Edema of the eyelids, barley, abscess of the eyelids, blepharitis, chalazion: etiology, clinic, treatment. Exogenous infectious conjunctivitis, allergic conjunctivitis,

dystrophic changes of the conjunctiva. Sclerites, episcleritis (clinic, etiology, treatment). Acute dacryoadenitis. Constriction, eversion, strictures of the lacrimal point. Dacryocystitis of adults and newborns: etiology, clinic, treatment. Phlegmon of the lacrimal sac: etiology, clinic, treatment. Diseases of the cornea. Red eye syndrome. Keratomycosis. Tuberculosis, herpetic, syphilitic, neuroparalytic, beriberi keratitis. Diseases of the vascular tract. Features in children. Clinic of iritis and iridocyclitis. Clinic of peripheral uveitis. Clinic of choroiditis (focal and disseminated). Diseases of the orbit and vitreous body. Congenital cataracts: clinical forms, treatment principles, terms of surgical intervention. Glaucoma. Classification, clinic, and treatment principles. Diseases of the retina. White eye syndrome. Retinal diseases in cardiovascular diseases

- vascular pathology. Diabetic retinopathy. Changes in the fundus of the eye in rheumatism. Eye injury. Contusions, penetrating wounds. Orbit damage, appendages of the eye. Burns to the eye. General and local treatment of eye diseases. Methods of administration of ocular drugs and features of their pharmacodynamics. Medicinal products used in ophthalmology and their classification. Parasitic diseases of the eyelids. Blepharitis. Computer visual syndrome. Dry eye syndrome. Allergic diseases of the eyelids. AIDS and the eye. Tuberculosis of the eyes. AIDS-definition, prevalence, etiology, and pathogenesis. Characteristic eye lesions in HIV infection. The main clinical forms of eye damage in tuberculosis.

As a result of mastering the discipline "Ophthalmology", the student should know:

- diseases associated with the adverse effects of climatic and social factors, socially significant diseases, the history of studying diseases.
- concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of the disease, nosology, principles of classification of diseases, basic concepts of general nosology in ophthalmology
- diagnostic methods, diagnostic capabilities of methods of direct examination of an ophthalmic patient, modern methods of clinical, laboratory, and instrumental examination of patients;
- diagnostic methods, diagnostic capabilities of methods of direct examination of an ophthalmic patient, modern methods of clinical, laboratory, and instrumental examination of patients;
- criteria for the diagnosis of various eye diseases;
- classification and basic specifications medicinal products pharmacodynamics and pharmacokinetics, indications and contraindications to the use of drugs, side effects;
- criteria for the diagnosis of eye diseases;
- features of the organization and scope of work of an outpatient doctor, modern diagnostic capabilities of the polyclinic service, methods of emergency measures, indications for planned hospitalization of patients;
- principles of first aid and subsequent medical tactics in emergency ophthalmic conditions.

be able to:

- analyze socially significant processes in society and the causes of socially significant diseases, identify these diseases, and determine measures to reduce them.
- use educational, scientific, popular science literature, and the Internet for professional activities;

- work with magnifying equipment (microscopes, optical and simple magnifiers);
- determine the patient's status:
- collect anamnesis, interview the patient and / or his relatives, conduct a physical examination of the patient
- assess the patient's condition to make a decision about the need for medical care;
- outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result;
- conduct an examination and examination of the visual organ
- apply basic antibacterial, antiviral and biological drugs;
- interpret the Results of most common ones methods functional diagnostics;
- formulate a clinical diagnosis;
- formulate indications for the chosen treatment method, taking into account etiotropic and pathogenetic agents, justify pharmacotherapy in a particular patient with major pathological syndromes and urgent conditions, determine the route of administration, regimen and dose of drugs, evaluate the effectiveness and safety of the treatment;
- choose an individual type of care for the patient's treatment in accordance with the situation: primary care, ambulance, hospitalization;
- use methods of primary and secondary prevention (based on evidence-based medicine) in medical activities.

own:

- skills of practical work to reduce social diseases, and factors of the social environment that affect the development of eye diseases.
- medical and anatomical conceptual apparatus;
- fundamentals of medical diagnostic and therapeutic measures for first aid in emergency and life-threatening conditions
- methods of general clinical examination;
- by interpretation results laboratory tests, instrumental services methods diagnostics services;
- provide first aid for emergency ophthalmological conditions in accordance with modern requirements for the quality of medical care and make a decision on the subsequent medical tactics:
- skills in the use of medicines in the treatment, rehabilitation and prevention of eye diseases;
- an algorithm for making a preliminary diagnosis and then referring the patient to the appropriate specialist.

The total labor intensity of mastering the discipline is 3 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

### **"Otorhinolaryngology»**



The aim of the discipline is to form a student's clinical thinking in the field of ENT diseases by teaching the skills of diagnosis, differential diagnosis, and therapeutic and preventive measures.

Objectives of the discipline:

- to study the etiology, pathogenesis and pathomorphological changes in ENT diseases;
- teach the mechanisms of development and manifestation of the pathological process in ENT diseases;
- develop practical skills in the diagnosis of ENT diseases, as well as teach first aid methods;
- to study the issues of carrying out preventive measures aimed at preventing the occurrence and spread of ENT diseases.

Content of the discipline: Introduction and history of the otorhinolaryngological service in the Kyrgyz Republic. Rhinogenic and otogenic intracranial complications. Neoplasms of ENT organs. Emergency conditions in the practice of an ENT doctor. Clinical anatomy, physiology and research methods of the nose, paranasal sinuses and pharynx. Clinical anatomy, physiology and research methods of the external and middle ear. Clinical anatomy, physiology of the inner ear, research methods of auditory and vestibular analyzers. Clinical anatomy, physiology and methods of laryngeal examination, trachea, bronchi, and esophagus. Features in children. Diseases of the external nose. Boils of the nose. Acute diseases of the nasal cavity and paranasal sinuses. Chronic rhinitis and sinusitis. Allergic diseases of the nasal cavity and paranasal sinuses.

Acute pharyngeal diseases. Angina - classification, diagnosis, and treatment.

Paratonsillar abscess, parapharyngitis. Pharyngeal abscess. Chronic tonsillitis, classification, diagnosis, treatment. Chronic pharyngitis. Hypertrophy of palatine and nasopharyngeal tonsils, symptoms and treatment. Acute inflammatory diseases external and middle ear. Erysipelas of the auricle. Inflammation of the external ear canal, furuncle. Acute otitis media. Mastoiditis. Chronic inflammatory diseases Diseases average the ear.

Mesotimpanitis. Epithympanitis. Differential diagnosis and complications. Diseases of the larynx, trachea, bronchi and esophagus. Acute and chronic laryngitis, diphtheria, paresis and paralysis of the larynx. Bleeding, foreign bodies, injuries and burns of ENT organs. Pharyngeal, laryngeal and tracheal stenosis, acute steno sing laryngotracheitis. Non-purulent diseases of the ear. Catarrh of the middle ear. Meniere's disease. Otosclerosis. Neuritis of the auditory nerve.

As a result of mastering the discipline "Otorhinolaryngology", the student should know:

- etiopathogenetic, clinical picture, diagnosis,
- differential diagnosis, treatment of diseases of the nose and paranasal sinuses; development of rhinogenic orbital and intracranial complications;
- features of surgical treatment of diseases of the nose and paranasal sinuses; principles of anterior and posterior nasal tamponade and patient care;

- diagnostic methods and principles of treatment of foreign bodies of the respiratory tract;
- methods of conservative and surgical treatment of laryngeal stenosis,
- diagnostic methods and principles of treatment of diseases of the auricle and external ear canal, acute and chronic purulent ear diseases;
- etiology, pathogenesis, clinical picture, methods of diagnosis, treatment and prevention intracranial diseases complications diseases otorhinolaryngological organs;
- principles of differential diagnosis of meningitis.

be able to:

- investigate the function of nasal breathing,
- olfactory function of the nose;
- investigate hearing acuity with whispered speech, auditory function with tuning forks;
- read the auditory passport and audiogram;
- investigate vestibular function by rotating on a Barany chair;
- detect signs of disease and damage to otorhinolaryngological organs on radiographs of the nasal bones, paranasal sinuses, and temporal bones.

own:

- methods of using a frontal reflector, otoscopy;
- methods of performing pharyngoscopy, anterior and posterior rhinoscopy, and examination of the vestibule of the nose;
- the technique of performing anterior nasal tamponade; the technique of performing conicotomy.

The total labor intensity of mastering the discipline is 3 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Propaedeutics of internal diseases"**

The purpose of the subject of propaedeutics of internal diseases at the Faculty of Pediatrics is to teach students clinical methods of examination of the patient, and the basis of the identified symptoms and signs, to build the main clinical syndromes.

Objectives of the discipline:

- teach students the main clinical methods of examination of a therapeutic patient;
- introduce them to the main laboratory and instrumental methods of examination;
- identify the main clinical and laboratory-instrumental symptoms;
- to build the main clinical syndromes based on the identified clinical and laboratory-instrumental signs;
- to acquaint students with the basics of medical ethics and deontology.

Content of the discipline: Subject and tasks of propaedeutics of internal diseases. The concept of symptoms and syndromes. Methods of examination of the patient. Internal medicine and its place among other medical disciplines. History of diagnostic development. Mastering the skills of questioning: general information, patient life history. Physical examination methods examination of the respiratory system: examination, palpation of the chest. Percussion and auscultation of the lungs in adults are

normal. Palpation of the heart area. Heart percussion. The borders of the heart in adults are normal. Auscultation of the heart. Order and heart auscultation points. Arterial hypertension syndrome. Valvular heart failure syndrome. Acute heart failure syndrome. Dysphagia syndrome. Gastrointestinal bleeding syndrome. Methods of pancreatic research. Physical methods of examination of the liver and gallbladder (palpation, percussion). Liver failure syndrome. Nephrotic syndrome. Methods of research of hematopoietic organs. Hemorrhagic syndrome.

Methods of endocrine system research. Thyroid hypofunction syndrome glands. Methods of studying the musculoskeletal system. Syndrome of inflammatory joint damage. Chart of the medical history. Bronchial obstruction syndrome. Syndrome of increased airiness of the lung tissue. Syndrome of compaction of lung tissue. Tobacco smoking and its impact on the main causes of respiratory diseases. Inquiry, general examination of patients with diseases of the cardiovascular system. Basic methods of vascular research. Inspection, palpation, percussion of the heart area in patients with diseases of the cardiovascular system. Heart rhythm disorder syndrome. Syndrome of inflammation of the heart muscle. Valvular heart failure syndrome. Acute and chronic coronary insufficiency syndrome. Chronic heart failure syndrome. Superficial and deep palpation of the abdomen. Percussion and abdominal auscultation in normal adults and patients with digestive diseases. Laboratory and instrumental services methods of researches government agencies digestion. Organic and functional dyspepsia syndrome. Peptic ulcer syndrome. Malabsorption and maldegystia syndrome. Syndrome of external secretory pancreatic insufficiency. Jaundice syndrome. Cholestasis syndrome. Portal hypertension syndrome. Syndrome of gallbladder inflammation and biliary dyskinesia. Nephritic syndrome. Acute and chronic renal failure syndrome. Anemia syndrome. Hyperglycemia and hypoglycemia syndromes. Hyperthyroidism syndrome. Degenerative syndrome-dystrophic changes in the joints. Curating patients and writing a medical history. Evaluation of research results. Mastering practical skills in the study of the musculoskeletal system. Anthropometry. Determination of height, weight, and BMI calculation in healthy individuals and patients. Waist and hip circumference. Thermometry. Estimation of the temperature curve. Indicators of sputum and pleural fluid analysis in diseases of the respiratory system. Study of the function of external respiration. Spirometry. Peak flowmetry. Pneumotachometry. Methods of radiation diagnostics respiratory system. Endoscopic methods of examination of respiratory organs.

Echocardiography (ultrasound of the heart). Phonocardiography. Daily ECG monitoring. Basic clinical and laboratory methods of examination in diseases of the digestive system. Methods for diagnosing *Helicobacter pylori* infection. Ph-metric of the stomach. Coprology. Endoscopic and radiological studies of the gastrointestinal tract and their significance in diseases of the digestive system. Renal edema, causes, clinical and laboratory signs. Diagnostic equipment meaning functional areas, instrumental services methods surveys of urinary system

Additional methods for the study of hemorrhagic syndrome. Determination of blood sugar and urine by express method. Assessment of glycemic profile indicators.

Oral glucose tolerance test. Glycosylated hemoglobin.

Pituitary dysfunction syndrome (diabetes insipidus, acromegaly, gigantism, hypopituitarism).

As a result of mastering the discipline "Propaedeutics of internal diseases", the student should know:

- chemical and biological essence of the processes occurring in a living organism at the molecular and cellular levels.
- moral and ethical norms, rules and principles of professional medical behavior.
- symptoms and syndromes of diseases of internal organs.
- principles and methods of using educational, scientific, popular science literature, the Internet for professional activities

Be able to:

- use educational, scientific, popular science literature, and the Internet for professional activities
- identify the leading syndrome of diseases.
- be guided in the current labor regulations, apply the norms of labor legislation.
- apply the acquired knowledge of biomedical and clinical sciences in various types of professional and social activities.

Own:

- on practice use received data knowledge humanities, natural sciences, biomedical and clinical sciences in various types of professional and social activities.
- principles of medical deontology and medical ethics.
- skills of characteristic construction of symptoms and syndromes diseases of internal organs.
- methods of maintaining medical accounting records in medical organizations.

The total labor intensity of mastering the discipline is

**8 credits.**

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Internal diseases»**

### **ON FACULTY THERAPY**

for 4th year students of the Faculty of Pediatrics

The object is to study the most common diseases of internal organs and develop students' skills of independent clinical thinking, namely: planning laboratory and instrumental examination, interpreting the results obtained and developing a plan for therapeutic and preventive measures.

Tasks:

1. Strengthening and expanding the skills of examining a therapeutic patient.
2. Study of etiopathogenesis, clinical and functional laboratory signs of the most common diseases of internal organs in their typical manifestation.
3. Mastering basic principles of treatment and prevention of therapeutic diseases.
4. Training of forecasting and determination of working capacity.

5. Study of a number of urgent conditions, methods of their assessment, rapid and timely assessment of the state of emergency. effective diagnosis and determination of patient management tactics.

Topic content:

Etiology. Risk factors, classification of pneumonia, clinic morphological characteristics of periods of inflammation, the nature of the course. Diagnostics. Treatment.

Forecast. Prevention. Comprehensive assessment of patients with COPD. Clinical symptomatology of bronchial asthma. Bronchiectatic disease. The concept of coronary artery disease diseases hearts (KBS). Atherosclerosis. The concept about hyperlipoproteinemia. CHD risk factors and their significance. Classification of CBS. Periods of myocardial infarction. Diagnostic criteria: clinical, laboratory, and instrumental. Principles of treatment. Hypertensive heart. Classification. Clinical picture of myocarditis. Classification of heart failure.

The concept of systolic and diastolic heart failure. Clinic of acute and chronic left ventricular and right ventricular failure. Indications for treatment with cardiac glycosides, diuretics, ACE inhibitors, nitrates and beta blockers. Mitral valve insufficiency. Mitral stenosis. Significance of instrumental examination data (ECG, echocardiography, radiography) in diagnostics. Complications. Forecast. Indications for surgical treatment. Aortic valve insufficiency. Stenosis of the aortic orifice. Definition of rheumatoid arthritis. Classification. Laboratory and radiological changes. Criteria for diagnosis. Current and forecast. Treatment. Definition of SLE. Etiopathogenesis. Classification. Clinical picture of organ and system damage. Laboratory changes. Treatment: immunosuppressive therapy, pulse therapy with corticosteroids, cytostatics. Opportunities to achieve remission. Prognosis and prevention. Gastroesophageal reflux disease: definition, etiopathogenesis. Esophageal and extraesophageal manifestations. Diagnostic methods.

Treatment. Prevention. Definition-chronic gastritis. Etiology. Pathogenesis. Classification. Evaluation of the results of the study of gastric contents.

Etiology of cancer. Multifactorial pathogenesis. Clinic, dependence on the location of the ulcer. Diagnosis. Treatment. Antihelicobacter therapy. Tactics of peptic ulcer treatment depending on the location, state of secretion, age, and complications. Features of the diet. Absolute and relative readings for surgical treatment. Prevention. Chronic cholecystitis and cholangitis.

JVP. Primary and secondary dyskinesia. Clinical manifestations. Variants of dyskinesia (hyper- and hypotonic). Clinical information and laboratory and instrumental diagnostics. Treatment. Chronic enterocolitis. Chronic pancreatitis. Chronic hepatitis. Cirrhosis of the liver. Kidney diseases. Acute and chronic glomerulonephritis. As a result of mastering the discipline "Propaedeutics of internal diseases", the student should know:

1. Etiology, pathogenesis, classification, clinical picture, laboratory analysis, etc.- instrumental diagnostics and complications. treatment, prevention, and prognosis

1.1. Respiratory diseases: COPD, pneumonia, bronchial asthma, bronchiectatic disease;

- 1.2. Diseases of the circulatory system: atherosclerosis and hyperlipidemia, coronary heart disease (primary circulatory arrest, angina pectoris, acute myocardial infarction), hypertension, infectious myocarditis, infectious endocarditis, mitral and aortic malformations, heart failure;
- 1.3. Connective tissue diseases: rheumatoid arthritis, systemic lupus erythematosus;
- 1.4. Diseases of the gastrointestinal tract: GERD, chronic gastritis, chronic enterocolitis, chronic cholecystitis, cholangitis, biliary dyskinesia, peptic ulcer of the stomach and duodenum, chronic hepatitis, cirrhosis of the liver;
- 1.5 Diseases of government agencies urinary tract disorders: acute and chronic glomerulonephritis;
2. Etiology, pathogenesis, clinic, diagnostic methods, and emergency care for the following conditions: bronchial asthma attack, hypertensive crisis, cardiac asthma, primary circulatory arrest.
3. Electrocardiogram is normal, with atrial and ventricular hypertrophy, with coronary heart disease; primary cardiac arrest due to ventricular fibrillation.

The student must be able to:

- based on complaints, anamnesis, and physical examination, identify the patient with the disease studied on the topic;
- make a plan for laboratory and instrumental examination to confirm the intended diagnosis and interpret the results obtained;
- formulate it expanded clinical diagnosis, guided by modern classification of diseases;
- make a detailed diagnosis for a specific patient, namely, the etiology, mechanism of development of the disease, complications;
- to substantiate the clinical diagnosis in a particular patient with an assessment of the results of the examination and identify diagnostic criteria;
- prescribe adequate individual therapy;
- determine the prognosis of the disease in a particular patient;
- identify secondary prevention measures;
- recognize the clinical manifestations of certain emergency conditions (hypertensive crisis, heart surgery asthma, primary stop circulatory disorders, an attack of bronchial asthma);
- decipher the ECG in normal conditions, with atrial and ventricular hypertrophy, coronary heart disease, ventricular fibrillation.

The student must be proficient in:

- methods of general clinical examination (anamnesis collection, examination, palpation, percussion, auscultation) with the assessment of epidemiological data.
- skills in identifying various symptoms, syndromes, and pathological conditions in common diseases in adults.
- methods of conducting medical examinations in adults with the most common diseases of internal organs.
- skills of making a diagnosis based on the results of biochemical studies
- skills in identifying various symptoms, syndromes and pathological conditions in the most common diseases of internal diseases.
- methods of providing emergency care to patients with pathology of the respiratory and cardiovascular systems: resuscitation measures in case of clinical death, mouth-to-mouth, mouth-to-nose artificial respiration, methods of cleaning the upper respiratory

tract, first aid for the following emergency conditions of AMI, hypertensive crises, severe attack of bronchial asthma, cardiac asthma, pulmonary edema and other conditions.  
–principles of providing first aid in the event of emergency and life-threatening situations  
The total labor intensity of mastering the discipline is 4 a loan.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"General military training"**

The purpose of the discipline: Training of reserve medical service officers from among students (men)

Objectives of the discipline: To know the basic provisions of combined arms and combat regulations

Of the Armed Forces of the Kyrgyz Republic and correctly apply them in accordance with their wartime purpose

Topic content:

Introduction to the military specialty. Military personnel and relations between them.

Military discipline. Rights and obligations of the head of the medical center of the regiment (brigade).

Topographic maps. Preparing the map for use. Basic rules for maintaining a working group maps. Organization, weapons, and combat equipment of the platoon. Organization, weapons, and combat equipment of the company. Organization, weapons, and combat equipment of the battalion. Basics of managing units and subunits in combat. Organization of the military rear. Defense of a motorized rifle regiment (brigade). Offensive of the motorized rifle regiment (brigade). Movement of a motorized rifle regiment (brigade).

As a result of mastering the discipline "General military training", the student should know:

–main provisions of general military charters.

–rights and obligations of the chief of the medical service of the regiment (brigade) be able to:

–apply the requirements of general military regulations in the performance of their official duties.

–assess the tactical and logistical situation in the interests of medical support for units and subunits in combat

Possess: regular weapons in service with the Armed Forces of the Kyrgyz

Republic. Forms and methods of conducting combat operations of units and subunits

Total labor intensity: 90 hours

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Organization and tactics of the medical service"**

The purpose of the discipline: Training students as medical service officers who know the impact of conditions of combat training and military life on the health of personnel in order to develop and implement effective therapeutic and preventive measures in the troops. (medical and evacuation services, sanitary and hygienic facilities and anti-

epidemic measures) and other special events.

Objectives of the discipline: Training of officers of the medical service of the Armed Forces of the Kyrgyz Republic who have knowledge of the basics of military medicine, providing medical care to the wounded and wounded in combat conditions, providing medical care in case of mass admission of the wounded, when the enemy uses weapons of mass destruction.

Topic content:

Organization of medical evacuation measures. Fundamentals of organization of sanitary-hygienic and anti-epidemic measures in the army. Organization Basics provision of medical property for parts and connections. Sanitary losses of troops.

Medical intelligence. Fundamentals of medical service management. Medical service of the brigade. Medical service of the division. Medical units and institutions

As a result of mastering the discipline "Organization and tactics of medical service", the student should know:

- organizational and staff structure of military medical institutions.
- types of infections, methods of their spread, methods of localization and elimination of epidemic foci.

be able to:

- organize the work of medical personnel of military medical institutions for the reception of the wounded and sick, their medical triage,
- providing all types of medical care, pre-evacuation preparation, evacuation and their treatment.
- organize the work of subordinate medical personnel to identify people at risk of infection, as well as those with chronic forms of infectious diseases.

Own:

- rules for medical triage,
- methods of providing medical care to the wounded and affected.
- skills of localization and elimination of epidemic foci, carrying out preventive vaccinations, emergency and specific prevention

Total labor intensity: 120 hours

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Military toxicology and medical protection"**

Purpose of the discipline: improvement of the system of scientifically based organizational and medical measures, means and methods that allow to prevent or weaken the effects of highly toxic substances and military-professional poisons, as well as to preserve the life, health and professional performance of affected military personnel and civilian personnel.

Objectives of the discipline:

- Study of toxicity of substances, assessment of the risk of their impact on the health of military personnel and civilian personnel of the Armed Forces of the Kyrgyz Republic;
- identification of features of toxicokinetic and toxicodynamic of highly toxic substances and military-professional poisons;



- study of the pathogenesis and clinical manifestations of toxic processes; assessment of the functional state of persons exposed to excessive doses of highly toxic substances and military-professional poisons;
- introduction into practice of medical and other means of prevention and treatment of chemical lesions, means and methods of preserving combat and working capacity, preventing and minimizing the harmful effects of chemical exposure;
- implementation of regulatory documents aimed at ensuring the chemical safety of military personnel and civilian personnel in the event of a threat of emergency situations, both in peacetime and in wartime

Topic content: General characteristics of chemical weapons. Medico-tactical characteristics of foci of chemical damage. Toxic and highly toxic substances with neurotoxic effects. Toxic and highly toxic substances of cytotoxic origin actions. Toxic substances and highly toxic products substances psychotomimetic actions. Toxic substances and highly toxic products irritating substances. Toxic and highly toxic substances of general toxic action. Toxic and highly toxic substances of pulmonotoxic action.

Highly toxic substances used for technical purposes. Field oxygen equipment and artificial ventilation devices. Weapons of mass destruction. Medical and tactical characteristics of foci of nuclear weapons use. Technical means of individual and collective protection. Medical protective equipment, used for radiation damage and in foci of chemical damage.

Means and methods of radiation exploration. Means and methods of chemical exploration.

Tools and methods of special processing. Fundamentals of chemical situation assessment.

As a result of mastering the discipline " Military toxicology and medical protection» the student should know:

- Pathogenesis, clinic, and prevention of damage caused by chemical warfare agents and highly toxic substances.
- Procedure the use of medical forces and means intended to provide medical assistance to military personnel from toxic and highly toxic substances.

Be able to:

- Organize the provision of first medical, pre-medical, and first medical care to military personnel who are affected by toxic and highly toxic substances.
- Organize sanitary-hygienic and anti-epidemic measures in the affected areas.

Own:

- Methods for assessing the current medical and tactical situation.
- Methods of organizing and conducting radiation and chemical exploration and control

Total labor intensity: 100 hours

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Extreme medicine»**

|Objects of the discipline:

- formation of students ' system knowledge that is necessary for organizing the work of the disaster medical service and the civil medical service defenses public health services

By liquidations consequences of peacetime and wartime emergencies and medical evacuation measures;

- formation of skills to apply theoretical knowledge in providing first aid to the affected population and rescuers in peacetime and wartime emergencies;

- formation of the ability to organize the provision of medical care in emergency situations in conditions of mass admission of the affected.

Objectives of the discipline:

- training of medical personnel, creation of management bodies, medical formations, institutions, maintaining them in constant readiness, material and technical support;

- maintaining the health of the population, timely and effective provision of all types of medical care to save the lives of the affected, reducing disability and unjustified ones Irrevocable losses, decline psychoneurological and emotional impact of disasters on the population, ensuring sanitary well-being in the emergency area; conducting forensic medical examination, etc.;

- maintaining the health of the personnel of medical units, planning the development of forces and means of health care and maintaining them in constant readiness to work in disaster zones, to eliminate the consequences of emergencies

Topic content:

Civil defense in emergency situations. The role and tasks of civil protection in modern conditions. State Civil Protection System of the Kyrgyz Republic

The Republic. Tasks and organizational structure of the civil protection medical service. Assessment of the situation in emergency situations caused by radiation accidents. Assessment of the situation in emergency situations caused by chemical and other accidents. Organization of medical support for the population in the event of liquidation consequences of accidents, catastrophes, and natural disasters. Organization of sanitary-hygienic and anti-epidemic measures in the affected areas. Measures to improve the sustainability of health care facilities in emergency situations. Organization of medical measures in case of threat of enemy attack. Organization and measures of first medical, pre-medical and first medical aid in the affected areas. Medical and sanitary support for the elimination of the consequences of radiation accidents. Medical and sanitary support in the following cases: elimination of consequences of chemical accidents. Medical and sanitary support during the elimination of the consequences of natural emergencies (earthquakes, floods). Medical and sanitary support during the elimination of the consequences of natural emergencies (snow avalanches, mudslide, landslides, forest fires). Medical and sanitary support in response to emergency situations of transport, road transport, explosion and fire hazard.

Supply of medical equipment to formations and institutions of the State Health Service. Protection of the population and territory in emergency situations caused by armed conflicts and terrorist acts. Medical and psychological protection of the population and rescuers in emergencies.

As a result of mastering the discipline " Extreme medicine» the student should know:

- Fundamentals organization of medical support for the population during the elimination of the consequences of accidents, catastrophes and natural disasters.

–Basic basic concepts of the discipline of disaster medicine, natural and man-made emergencies, natural disasters.

–Preparation of health facilities for work in peacetime and wartime emergencies.

Be able to:

–Perform their functional duties when working as part of special health care units.

–Assess and analyze the situation of conditions, participate in the organization and provision of medical-preventive and sanitary-anti-epidemic assistance in the event of emergencies and natural disasters.

Own:

–The algorithm of work of the main medical measures in the provision of first aid in emergency and life-threatening conditions.

–Skills in determining the circumstances of emergencies and natural disasters, skills in providing first aid to victims in emergency situations, including medical evacuation of patients and victims

Total labor intensity: 99hours

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Phthisiology»**

Objective of the discipline: Students acquire the knowledge and skills necessary to perform the functions of a general practitioner in the identification, prevention and treatment of tuberculosis patients within the framework of the National TB Program of the Kyrgyz Republic

Objectives of the discipline:

-to form a deep body of knowledge on the identification and management of tuberculosis patients, primarily for working at the primary level of health care, in the context of a tense epidemiological situation for tuberculosis;

-prepare a specialist who can perform a differential diagnostic search using possible clinical and laboratory, radiological, genetic and molecular tests, etc. methods of diagnosis among the population and risk groups for tuberculosis;

-train preventive measures to prevent transmission of infection in health care facilities at all levels of health care;

-improve the system of general and specialized knowledge( in phthisiology), skills that allow a general practitioner to freely navigate in the diagnosis and treatment of tuberculosis in combination with other common diseases

Content of the discipline: Tuberculosis as an infectious disease. Historical information about tuberculosis. Epidemiology of tuberculosis in the world and the Kyrgyz Republic. Classification of tuberculosis. Pathogen tuberculosis, features. Pathomorphology, the importance of humoral and cellular immunity. Basic methods of TB diagnosis. Laboratory and radiological diagnostics of TB. Tuberculin diagnostics. Specific and non-specific prevention of tuberculosis. Fundamentals of infection control. Basic principles of treatment. Principles of treatment of patients with drug-sensitive and resistant tuberculosis. Characteristics and classification of anti-tuberculosis drugs. TB chemotherapy recommended by WHO. Treatment outcomes. Adverse events of TB chemotherapy. Primary tuberculosis. Pathogenesis, classification. Do local forms of primary tuberculosis. Primary tuberculosis complex.

Tuberculosis of the intrathoracic lymph nodes. Diagnosis, clinic, treatment, and prognosis.

Disseminated pulmonary tuberculosis. Classification. Pathogenesis of military pulmonary tuberculosis. Subacute and chronic course of disseminated TB:

Diagnosis, clinic, treatment, complications, prognosis. Tuberculosis of the central nervous system: as a form of military pulmonary TB and as a complication of the main pulmonary and extrapulmonary forms of TB. Diagnosis, clinic, treatment, complications, prognosis. Secondary tuberculosis. Pathogenesis, classification. Limited forms of secondary pulmonary tuberculosis: focal, pulmonary tuberculosis, infiltrative pulmonary tuberculosis.

Destructive forms of pulmonary tuberculosis: caseous pneumonia, cavernous and fibro-cavernous pulmonary tuberculosis. Diagnosis, clinic, treatment, and prognosis.

Tuberculous pleurisy. Tuberculosis of bones and joints. Tuberculosis of the genitourinary organs.

Diagnosis, clinic, treatment, complications, prognosis. Tuberculosis in patients with diabetes, cancer, mental and other diseases. Detection and treatment.

Tuberculosis in pregnant women. Tactics of conducting chemotherapy. Tuberculosis associated with HIV infection. Epidemiology in the world and the Kyrgyz Republic. Features of detection and treatment of patients with Co-infection.

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

To know:

- organization of mass tuberculin diagnostics among the population, selection of patients for vaccination and revaccination of tuberculosis taking into account mass tuberculin diagnostics, vaccination reactions, post-vaccination complications
- features of diagnosis, treatment, and rehabilitation of tuberculosis patients
- organization of anti-tuberculosis measures among urban and rural populations, depending on the epidemic situation
- structure, tasks and organization of work of an antitubercular dispensary, antitubercular office
- modern strategies to combat tuberculosis, the State program "Tuberculosis".

be able to:

- collect the patient's medical history and life history
- carry out an objective examination, plan a treatment plan using the results of the examination of a patient with tuberculosis respiratory organs and some extrapulmonary forms
- To select individuals for BCG vaccination and revaccination, taking into account the results of mass tuberculin diagnostics, to assess the nature of local vaccination response and possible post-vaccination complications;
- Form high-risk groups for tuberculosis, evaluate the effectiveness of dispensary monitoring of patients;

own:

- methods of clinical and laboratory examination of patients with tuberculosis
- principles of treatment of patients with tuberculosis
- methodology for setting up and recording the results of tuberculin tests.

The total labor intensity of mastering the discipline is 4 credits.

## **BLOCK OF SURGICAL DISEASES**

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Propaedeutic of surgical diseases"**

The purpose of the discipline: is to teach students of the specialty "Medical science" theoretical foundations and practical skills in the main sections of general surgery

Tasks of the discipline:

study of theoretical knowledge in general surgery;

- teaching students the basic practical methods necessary for the examination and treatment of patients with a surgical profile;

- training in first aid for certain emergency conditions – bleeding, injuries, fractures, dislocations, burns, etc.

Content of the discipline: Introduction to the subject. History of surgery. Development of surgery in Kyrgyzstan. Organization of surgical care. Structure of the surgical service. Bleeding and stopping it. Blood transfusion. Wounds, wound infection.

Examination of surgical patients. "Educational medical history of a surgical patient. Operation periods. Pain and pain relief. Injury. Injuries. Dislocations.

Subluxations. Acute surgical infections. Purulent diseases of the skin and subcutaneous tissue. Abscesses and phlegmons. Furuncle, carbuncle. Purulent diseases glandular organs. Purulent-inflammatory diseases of the fingers and hand. Acute purulent diseases of bones and joints. Erysipelas. Surgical sepsis. Chronic surgical infection. Chronic purulent infection. Putrefactive infections. Clinical forms, local symptoms, and diagnosis of putrefactive infection.

Barotherapy (HBO). Gangrene, fistulas, trophic ulcers, bedsores. Disorders of arterial circulation. Acute and chronic disorders of arterial circulation. General principles of clinical and instrumental diagnostics.

Prevention of complications. Disorders of venous circulation. Lymphadenitis.

Lymphangitis. Skin plastic surgery. Biological conditions of tissue transplantation. The concept of aesthetic surgery

As a result of mastering the discipline "Propaedeutics of surgical diseases", the student should know:

- clinical manifestations of major surgical syndromes;

be able to:

–before the operation, treat the hands and the surgical field with surgical manipulations,

–wear a sterile surgical mask,

–put on or change sterile gloves, a sterile dressing gown, independently and with the help of an operating nurse;

own:

–methods of hand treatment in preparation for surgery; putting on sterile clothing before surgery

–methods of preparing the operational field for the operation;

–ways to control the operating lamp and table;

–technique of opening and feeding sterile material during surgery;

–methods of preparation of dressing material for surgery;

–methods of applying bandages of various types and types;

–methods and methods of temporary stopping of bleeding

The total labor intensity of mastering the discipline is 2 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Operative surgery»**

Objective of the discipline: development of methods, rules and production of surgical interventions.

Objectives of the discipline:

–To study the anatomical and physiological justification of the technique of surgical interventions.

–In the course of training, it is also necessary to describe the issues of surgical physiology – the study of body reactions and surgical techniques.

–Provide future surgical practitioners with a solid foundation for making the correct diagnosis and choosing a rational treatment method.

Content of the discipline: General operative surgery, equipment, instruments, anesthesia and operative surgery of the upper and lower extremities. Operative surgery of the brain and facial parts of the head and neck. Operative surgery of the chest and organs of the chest cavity and its organs. Operative surgery of the anterior abdominal wall, abdominal cavity and retroperitoneal organs. Operative surgery of the pelvic and perineal organs.

As a result of mastering the discipline "Operative Surgery", the student should know:

–Anatomy and topography of the head and neck, upper and lower extremities, thoracic and abdominal cavities, retroperitoneal space, pelvis and perineum.

–Blood supply and innervation of the head and neck, upper and lower extremity, thoracic and abdominal cavity, retroperitoneal space, small pelvis and perineum.

–Therapeutic and diagnostic measures.

–Surgical instruments.

–Suture materials.

–Stages and main elements of the operation.

–Surgery for upper and lower limb injuries.

–Amputation, exarticulation of the lower limb.

–Accesses for suppurative diseases of the upper and lower extremity.

–Venipuncture and venesection techniques.

–Conicotomy technique

–Tracheostomy technique

–Clinical anatomy of the chest.

–Puncture of the pleural cavity, pericardium.

–Borders of lungs and heart.

–The technique of thoracotomy, sternotomy.

–Suture technique on the heart and lungs.

–Modern diagnostic methods (ultrasound, thoracoscopy, nuclear magnetic resonance imaging, computed tomography)

- Anatomy and topography of the anterior abdominal wall.
- Anatomy and topography of the abdominal cavity and its organs, peritoneum, peritoneal course.
- Methods of drainage of the abdominal cavity.
- A set of tools for abdominal surgery.
- Types of laparotomy.
- Punctures of the abdominal cavity.
- Opening of the organ cavity (gastrotomy, autonomy, cystotomy).
- Suture materials.
- Intestinal sutures.
- Anatomy and topography of the pelvis and perineum.
- Methods of drainage of pelvic and perineal organs.
- The technique of rectal-uterine depression puncture.
- The technique of bladder puncture.
- The technique of catheterization of the bladder.

be able to:

- Local anesthesia: infiltration and stem.
- Knit surgical knots (simple, marine, surgical).
- Perform primary surgical treatment of wounds.
- Temporary and final stopping of bleeding.
- Collect instruments for the following surgical procedures: Special-purpose instruments of the following groups:
  - for separation of soft tissues.
  - to temporarily stop the bleeding
  - auxiliary services
  - for joining fabrics
- Create a set of special surgical instruments for performing the operation:
  - tracheostomy
  - cranial trepanation
  - resection of the stomach and intestines
  - puncture of the pleural and abdominal cavity
  - appendectomy
  - hemostatic instruments
- Perform venipuncture, venesection.
- Suture a nerve, tendon, or blood vessel.
- Perform joint punctures (shoulder, elbow, hip, knee).
- Make incisions for phlegmons and abscesses.
- Perform operations for panaritias.
- Perform primary surgical treatment of the scalp and determine the depth of the lesion.
- Apply a cosmetic suture.
- Show the points for puncture of the pleural cavity.

- Puncture the pleural cavity.
- Help with pneumothorax.
- Punctuate the abdominal cavity.
- Perform laparocentesis.
- Show the weak points of the anterior abdominal wall.
- Determine the boundaries of the liver and gallbladder.
- Determine the symptoms of peritonitis in abdominal surgery.
- perform catheterization of the bladder.
- The technique of finger examination of the rectum.

own:

- Primary surgical treatment of wounds.
- Temporary stopping of bleeding.
- Local anesthesia according to A.V. Vishnevsky, conducting anesthesia.
- Processing the operational field.
- Tying ligature knots (simple, marine, surgical).
- Suturing the skin (simple, continuous).
- Work with surgical instruments.
- Removal of skin nodal sutures.

The total labor intensity of mastering the discipline is 1 credit.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Oncology»**

Objectives of the discipline:

Forming the base of the Oncology world, to which the graduate of the pediatric faculty should have a clear idea of the organization of cancer care in Kyrgyzstan, to know the clinical picture and methods of diagnostics of the major malignant diseases, tactics pediatrician if you suspect a malignant neoplasm, the epidemiology and cancer prevention, medical ethics and deontology, principles of treatment, providing palliative care, labor and employment the examination of cancer patients.

Objectives of the discipline:

- introduction to the main provisions of theoretical oncology;
- training in diagnostic tactics when a patient is suspected of having a malignant neoplasm;
- learning the main ones nosological condition of forms malignant diseases tumors, opportunities for their prevention and early diagnosis;
- familiarization with the specifics of organizing cancer care for the population Kyrgyzstan and modern principles of treatment of cancer patients.

Content of the discipline: Introductory lesson. Organization of cancer services in Kyrgyzstan.

Accounting documentation. Regularities of development of malignant neoplasms.

Etiology and epidemiology. Ways of prevention of malignant neoplasms.

Deontology in oncology. Thyroid cancer. Clinic, diagnosis and treatment. Cancer



of the tongue, oral mucosa, lower lip, precancerous conditions. Nasopharyngeal cancer. Clinic, diagnosis, and treatment. Cancer of the larynx. Clinic, diagnosis, and treatment. Cancer

of the parotid salivary gland, submandibular salivary gland, and small salivary glands. Clinic, diagnosis, and treatment. Skin cancer. Precancerous diseases. Epidemiology, treatment, and prevention of skin cancer. Melanoma. Epidemiology, treatment, prevention,

prognosis. Lymphomas: Hodgkin's disease, clinic, diagnostic features, treatment.

Non-Hodgkin's lymphoma, clinic, diagnosis, treatment. Bone sarcomas, etiology, clinical manifestations, radiological symptoms, treatment. Soft

tissue sarcomas, etiology, clinical manifestations, diagnostic methods, treatment. Lung cancer.

Precancerous diseases, classification. Lung cancer. Clinic, diagnosis, treatment methods, prognosis. Esophageal cancer, classification, clinical features, diagnosis and

treatment. Precancerous diseases of the stomach. Gastric cancer, etiopathogenesis, classification,

clinic, diagnosis, treatment, prognosis. Colorectal cancer, etiology, clinical manifestations, diagnosis and treatment. Rectal cancer, etiology, clinical

manifestations, diagnosis and treatment. Liver and biliary tract cancer clinical features manifestations, diagnosis, treatment, and prognosis. Pancreatic and Vater's nipple cancer,

clinical manifestations, diagnosis, treatment, prognosis. Precancerous diseases and benign breast tumors. Breast cancer. Clinical

manifestations, diagnostic methods, treatment, prognosis. Trophoblastic disease, etiology, clinic, diagnosis, treatment, prevention. Cervical cancer,

epidemiology, precancerous diseases. Clinic, diagnostics, and treatment methods. Cancer of the uterine body, etiopathogenesis, clinic, diagnosis, treatment. Ovarian cancer, etiology, classification, features of clinical manifestation, diagnosis and

treatment. Kidney cancer, etiology, pathogenesis, clinic, diagnosis, treatment. Bladder cancer, clinic, diagnosis, treatment. Prostate cancer, etiopathogenesis,

clinical features, diagnosis, treatment. Testicular tumors and penile cancer,

clinic, diagnosis, treatment, prognosis. Features of diagnosis, clinic, course and

treatment of malignant neoplasms in children. Common childhood tumors

age. HIV/AIDS and malignant tumors. Etiology, clinical manifestations.

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

To know:

- organization of specialized medical care for patients with cancer in outpatient and inpatient settings;

- questions of diagnostics of tumor diseases (radiation, endoscopic, cytological and morphological, laboratory diagnostic methods);

- methods of treatment options in oncology services; private ones sections oncology services: oncomammology, tumors of the thoracic cavity, tumors of the abdominal cavity

and retroperitoneal space, oncurology, oncogynecology, tumors head and neck tumors, skin, soft tissue and bone tumors, malignant lymphomas.

be able to:

- conduct a general examination and assess the patient's condition;
- interpret the results of clinical and biochemical examination, including tumor markers;
- solve deontological and ethical tasks related to communicating the diagnosis and treatment plan to the patient and relatives, including in the event of an unfavorable prognosis and refusal of treatment;
- fill out medical registration documents for patients with cancer.

own:

- the method of physical examination of the patient;
- breast palpation technique; thyroid palpation technique;
- the method of performing a puncture biopsy, smears - prints of the tumor;
- sputum collection method for testing for atypical cells;
- rules for performing a hemocult test.

The total labor intensity of mastering the discipline is 3 credits.

## **CHILDREN'S DISEASES BLOCK ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Propaedeutic of children's diseases»**

The purpose of the discipline: Formation of competence for managing children with damage to all body systems.

Objectives of the discipline:

- 1. Master practical skills in the methodology of studying all body systems in healthy children and in cases of damage to these systems, using examination, palpation, percussion, auscultation.
- Train students to identify the main symptoms and syndromes of damage to all systems in children.
- 3. Identify laboratory and instrumental signs of lesions of all systems of the child's body.

Content of the discipline: A brief introduction to the subject. Physical development of children from birth to 16-17 years. Functional features of the child's nervous system. Neuropsychiatric development of children. Features of collecting anamnesis in children with nervous system disorders. Semiotics and syndromes of nervous system damage in children. Morphological and functional features of the structure and skin function on children of different ages. Methods of studying the skin and subcutaneous fat in children. Features of the structure of the bone system in children. Methods of bone marrow research-of the muscular system in children. Features of the method of studying the respiratory system in healthy young and older children in connection with their AFO. Collection features anamnesis of the disease in children with damage to the respiratory system. Semiotics of respiratory damage in children. Syndromes of respiratory damage in children: obstruction and respiratory failure syndrome. Methods of

investigation of the cardiovascular system in healthy children of the first year of life in connection with their anatomical and physiological features (AFO). Methodology for the study of CVS in healthy children over one year of age. Functional and instrumental methods of studying CVS in children. Features of ECG in healthy children. Semiotics of damage to the membranes of the heart. Clinical features signs of mayo -, endo - and pericarditis in children. Semiotics of congenital heart defects in children. Hemodynamics, clinical signs. Cardiac arrhythmias in children.

Acute heart failure syndrome. Methods of studying the digestive organs in children in connection with their anatomical and physiological features: examination, palpation, percussion, auscultation. Features of collecting anamnesis in children with digestive disorders. Semiotics and lesion syndromes. Methods of organ research urinary tract disorders in healthy children. Features of collecting anamnesis in children with urinary tract diseases Semiotics and main syndromes of the lesion. Methods of studying the blood system and hematopoietic organs in children. Features of the hemogram in healthy children of various ages. Features of hemograms in children of different ages Physico-chemical properties of blood. Biochemical blood testing. Semiotics and syndromes of blood system damage in children. Anemia syndrome in children. Hemorrhagic syndrome. Leukocytosis and leukopenia syndrome in children. Semiotics enlargement of peripheral lymph nodes. Protecting your medical history. Natural feeding. Lactation. Feeding a newborn. The technique of properly applying the baby to the breast. Benefits of natural feeding (WHO). Complementary foods: the purpose and necessity of introduction. Terms of introduction and complementary food dishes. Solving situational problems for natural feeding. Artificial feeding, definition and classification of artificial milk mixtures. Solving situational problems for artificial feeding. Mixed feeding, definition. As a result of mastering the discipline "Propaedeutic of children's diseases", the student should know:

- chemical and biological essence of the processes occurring in a living organism at the molecular and cellular levels.
  - Moral and ethical norms, rules and principles of professional medical behavior.
  - the scheme of questioning, methods of physical, laboratory and instrumental research; principles of filling out medical documentation.
  - symptoms and syndromes of diseases of internal organs.
  - principles and methods of using educational, scientific, popular science literature, the Internet for professional activities
- be able to:
- use educational, scientific, popular science literature, and the Internet for professional activities
  - identify the leading syndrome of diseases.
  - conduct a survey and collect anamnesis, conduct a physical examination of the patient in all organs and systems (examination, palpation, auscultation).
  - Be guided in the current labor regulations, apply the norms of labor legislation.

-apply the acquired knowledge of biomedical and clinical sciences in various types of professional and social activities.

own:

-on practice use received data knowledge humanities, natural sciences, biomedical and clinical sciences in various types of professional and social activities.

-principles of medical deontology and medical ethics.

-methods of general clinical examination, interpretation of the results of laboratory and instrumental diagnostic methods.

-skills of characteristic construction of symptoms and syndromes in diseases of internal organs.

-methods of maintaining medical accounting records in medical organizations.

The total labor intensity of mastering the discipline is 10 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Children's diseases (Faculty pediatrics)»**

##### **For 3-4 year students of the Faculty of Pediatrics, the**

purpose is to develop competencies in the diagnosis, treatment and prevention of diseases in young children, diseases of the respiratory system, gastrointestinal tract, kidneys and endocrine system.

Tasks:

–To study the etiopathogenesis and clinical manifestations of major diseases of early life, bronchopulmonary, endocrine, digestive, and urinary systems.

–To develop students ' skills in determining the scope and sequence of diagnostic measures for major diseases of the early age, bronchopulmonary, endocrine, digestive, and urinary systems.

–Teach to make a differential diagnostic series for diseases of young children, bronchopulmonary, endocrine, digestive, and urinary systems in children.

–To develop students ' skills in formulating a clinical diagnosis for each nosological form of early childhood diseases, bronchopulmonary, endocrine, digestive, and urinary systems in children.

–Study complications diseases early access age group, bronchopulmonary, endocrine, digestive, and urinary systems in children.

–Master the basic principles of treatment and prevention of early childhood diseases, bronchopulmonary, endocrine, digestive, and urinary systems in children.

–Teach methods of emergency care for early childhood diseases, bronchopulmonary, endocrine, digestive, and urinary systems in children, taking into account the recommendations of the pocket doctor.

Topic content: During the course of this cycle, students are trained in the features of clinical manifestations, diagnosis, treatment and prevention of diseases associated with pathology inherent only in young children (constitutional anomalies, rickets, hypervitaminosis D, spasmophilia), as well as iron deficiency anemia, eating disorders. Diseases of the respiratory system (bronchitis, typical,

atypical pneumonia, bronchial asthma, chronic non-specific lung diseases, hereditary lung diseases in children, such as idiopathic pulmonary hemosiderosis, Cartagener's syndrome, primary pulmonary hypertension. Lung lesions caused by hereditary fermentopathies in children (cystic fibrosis, alpha-1-antitrypsin deficiency).

Pathologies of the gastrointestinal tract in children: gastritis, gastroduodenitis, peptic ulcer of the stomach and duodenum 12. Diseases of the biliary tract. Cholecystitis. Non-specific ulcerative colitis. Pancreatitis. Malabsorption syndrome. Helminthiasis. Taking into account the etiopathogenesis, classification, diagnosis and principles of treatment of these diseases.

Diseases of the endocrine system in children: Diabetes mellitus. Hypothyroidism. Diffuse toxic goiter. Hypoparathyroidism. Hyperparathyroidism. Obesity in children and adolescents. Adrenogenital the syndrome. Chronic the adrenal gland insufficiency. Short stature in children. Hypogonadism in boys and girls. Premature sexual development in boys and girls. Diabetes insipidus. Clinical options, diagnosis, management tactics. Treatment of emergency conditions in pediatric endocrinology.

Diseases of the urinary system in children: Acute glomerulonephritis. Nephritic syndrome. Nephrotic syndrome. Acute kidney injury in children by "PRIFLE". Acute hemodialysis: indications and contraindications for acute kidney injury in children. Chronic kidney disease. Primary and secondary tubulopathies. Urinary tract infections. Clinical manifestations, diagnosis, management tactics, and prevention of these diseases.

Special attention is paid to ethics and deontology when interacting with a sick child, as well as with caregivers.

As a result of mastering the discipline "Propaedeutic of children's diseases", the student must:

To know:

- Etiopathogenesis of early childhood diseases, bronchopulmonary,
- endocrine, digestive, and urinary systems in children.
- Modern international classifications be able to:
- Substantiate the preliminary diagnosis
- Determine the scope and sequence of clinical and instrumental examination methods
- Formulate a clinical diagnosis in accordance with international classifications
- Determine the differential diagnostic series for each disease of the studied pathology.
- Justify and prescribe treatment in accordance with clinical protocols.
- Carry out preventive measures for the studied diseases
- Work with literary sources, electronic sources

- Conduct a survey, examination, physical examination and assess the condition of patients with diseases early access age group, bronchopulmonary, endocrine, digestive, and urinary systems in children.
  - Determine bone changes in rickets
  - Evaluate physical development by the indices "WEIGHT/AGE", "WEIGHT/HEIGHT", "HEIGHT/AGE"
  - Identification of hidden symptoms of spasmophilia
  - Identification of common danger signs.
  - By interpretation results laboratory and instrumental services methods surveys.
  - Registration of the medical history.
  - Provide first aid for convulsive, bronchial obstructive apnea syndromes, shock own:
  - Calculation of doses of antibiotics, anticonvulsants, iron-containing drugs, diuretics, antihypertensive drugs, corticosteroids, and insulin.
  - Identification of common danger signs.
- The total labor intensity of mastering the discipline is 10 credits.

## ANNOTATED PROGRAM CONTENT

### Academic disciplines

#### **"Children's diseases (hospital pediatrics) »**

The aim of the discipline is to develop among graduates of the Faculty of Pediatrics certain competencies necessary in the practical work of a pediatrician in modern conditions, the ability to use the acquired knowledge for timely diagnosis of childhood diseases, restoration and improvement of children's health, and disease prevention.

Objectives of the discipline:

- Deepening knowledge in the diagnosis, differential diagnosis, and treatment of diseases in children.
  - Mastering the basics of medical ethics and deontology.
  - Acquisition of skills in diagnostics and emergency care.
  - Independent work with medical information (educational, scientific, reference and other literature).
- Content of the discipline:

Organization of work of polyclinics (CSM) in the conditions of reformed healthcare. *HSV – structure, functions, organization of work of specialists.*

*Interaction in the work of a family doctor and a pediatrician of a polyclinic.* Ethics and deontology

of the doctor. Organization of services for the children's population. *Sections for working with*

*children's populations. The role of the preventive unit in the work*

*of outpatient polyclinic services.* The main sections of the pediatrician's work with the children

's population: preventive work, medical work, documentation.

Education of the population on healthy lifestyle and raising a healthy child in

the family, instilling hygiene skills, improving the level of medical literacy of parents. Interaction and continuity in the work of a pediatrician and specialists of a multidisciplinary polyclinic using instructions and instructions, orders of the Ministry of Health KR, clinical protocols, WHO recommendations. *Maintaining accounting and accounting records. MHI documentation. Orders.* Basic documentation of the site. Medical passport of the plot: plot plan, demographic indicators, general information characteristics of the supervised area. History of child development (f-112), stage epicrisis, registration of F-063. Unified fill-in form. Control Information Form (CIF). MHI Form 109 / MHI prescription. Additional program of compulsory medical insurance (MHI). ICD-10. *Performance indicators and evaluation of the pediatrician's activity.* Leading indicators of working with children.

Patronage coverage for pregnant women and newborns. Systematic observation. Percentage of coverage of children with preventive vaccinations. Percentage of coverage children are provided with preventive examinations by specialists within the prescribed time frame. Dynamic monitoring of newborns, the first year of life and subsequent age periods. Frequency of breast-feeding in children under six months and up to the age of 1 year. Percentage of recovery of children from risk groups. Raising a healthy child. *Maternal and child health protection. Preventive measures for the protection of the fetus and newborn.* Monitoring the health of a pregnant woman. Organization of prenatal and primary care of newborns. Separating pregnant women into groups risk management, health improvement. Methodology for assessing the risk factors of pregnancy of a woman during patronage work. Main measures for organizing medical supervision of newborns and children of the first year of life. Organization of patronage of a newborn. Principles of dynamic monitoring and rehabilitation of children from risk groups: pathology of the central nervous system, the risk of IUI implementation, with trophic disorders and endocrinopathies, with congenital pathology and deformities, social risk.

*Methods for monitoring and evaluating the nutritional status, level of physical and neuropsychological development of children of the first year of life and older.* Comprehensive assessment of the child's condition. Drawing up an individual vaccination schedule. Observation of BCG dynamics. Organization of consultations for narrow specialists. Organization of medical supervision of children with delayed psychomotor development.

Teaching parents the basics of raising a healthy child in the family, care, rational feeding, hardening, and disease prevention. Monitoring for children with underlying diseases. *Features of preparing children for preschool institutions and schools.* Screening programs for examining children. Plantography. Poor posture. Detection of hearing and vision disorders. Percentage of coverage children under dynamic supervision. Organization of work with children older than 1 year: up to 3 years, older than 3 years, teenagers. Checkups of pediatricians and specialists in accordance with the instructions and instructions of the Ministry of Health of the Kyrgyz Republic. Methods for assessing children's readiness for school. The role

of the medical and pedagogical Commission. Physical education of preschool and school-age children.

Integrated Management Of Childhood Diseases (IVBVD). *Introduction.*

The CPI strategy is a global program of WHO and UNICEF aimed at reducing child mortality, morbidity and disability, and improving the growth and development of children. *Evaluate and classify a sick child between the ages of 2 months and 5 years.* Asking parents about their child's problems. Identification of signs of danger to the child's life. Assessment and classification of cough and shortness of breath. Assessment and classification of diarrhea. Fever assessment. Assessment and classification of ear and throat diseases the child. Assessment and classification of eating disorders and anemia. Assessment of the child's vaccination status. Vaccination modules. Planning of vaccination work, preparing children for vaccination, taking into account background conditions and risk groups.

National vaccination calendar. Registration of children (form 7, 8) to be vaccinated. Prevention of vaccine complications. Report on immune prophylaxis. Report on the use of vaccine preparations. Rules for storing and transporting vaccines. Cold chain. Vector vaccines. Assessment of other issues. *Determine the treatment.* Decide if there is whether a referral to a hospital is necessary. Determine treatment options for patients who do not need to be referred to a hospital. Determine what is urgently needed before being referred to a hospital. Perform urgent treatment before being referred to a hospital.

Send your child to a hospital. Determination of treatment in the assessment and classification of cough and shortness of breath. Definition of treatment in the assessment and classification of diarrhea.

Determination of treatment in the assessment and classification of fever. Definition of treatment in the assessment and classification of ear and throat diseases in a child. Defining treatment during evaluation and classification of eating disorders and anemia. *Treat your child.* Choose the appropriate oral medicine, determine the dosage and schedule of administration. Use the right communication skills. Teach your mother to give oral medicine at home. Treatment regimen for ARI in children. Selection and determination of the dosage of a suitable antibacterial drug.

Dosage of paracetamol for high fever. Indications for giving vitamin A and iron preparations and their dosage. Antibacterial agents administered intramuscularly in the presence of IVBDV. Treatment regimen for diarrhea in children. Plan A. Treatment of diarrhea at home. Oral rehydration salts (ORS) and preparation of these solutions for rehydration. Plan B. Treatment of moderate dehydration. Calculation of the required amount of ORS (liquid) for rehydration therapy. Plan B. Treatment of severe dehydration in children. Training the mother to give the sick child ORS solutions. Treatment of prolonged diarrhea. Treatment of dysentery. Rehydration with nasogastric tube. Organization of an oral rehydration therapy corner. Intravenous treatment for severe dehydration. *Consult your mother.* Mother's advice on how to treat a child at home. Teaching the mother how to treat a local



infection at home. Use of an antibiotic eye ointment. Drying the ear with turunda. Treatment of ulcers of the oral mucosa. Cough relief by safe means. Prevention of hypoglycemia in a child. Recommendations for feeding a child under 4 months of age, from 4 months to 6 months, from 6 months to 1 year, from one year to 2 years, over 2 years.

Complete additional food items. Special recommendations for children with prolonged diarrhea. Assessment of feeding and identification of the feeding problem. Recommendations for developmental care. Indications for repeated treatment of a mother and child to a medical professional. *Management of a sick infant from 1 week to 2 months*. Assessment and classification of diseases in infants aged 1 week to 2 months. Classification of sick infants aged from 1 week to 2 months. Classification of sick infants by bacterial infection. Identification of nutrition problems and low weight in children a child. Evaluate breast-feeding. Checking the infant's vaccination status. Determination of the need for inpatient treatment and antibacterial treatment before referral to a hospital. Teaching the mother the correct position and application to the breast. Mother's advice on home care of the baby. *Follow-up*. Follow-up and examination: for pneumonia, for prolonged diarrhea, for dysentery, for fever, for local bacterial infections, for measles with complications, for inflammatory diseases of the ear, for problems feeding, anemia and low weight (hypotrophy). Follow-up of a sick infant. Monitoring of a sick child.

*Organization of monitoring of children with rickets and deficiency anemia, anomalies of the constitution, nutritional disorders, training of parents in the peculiarities of care, feeding in a family environment*. Organization of food care, regime moments, hardening, treatment and prevention. Hygienic training of parents on the prevention of these conditions. *Principles of monitoring children with mental and physical disabilities, features of working with families, principles of health improvement*. *Decoration children's room disability status*. Organization identifications phenylketonuria among newborns. Indications to medical and genetic counseling. Birth injuries of the spinal cord in children. Principles of diagnosis of congenital malformations and developmental anomalies in children. Malformations in children with intrauterine infections. Principles of health-improving activities. Social adaptation of children, teaching parents to care for the sick and raise children with intellectual and physical disabilities. Rules for registering children with disabilities. *Early diagnosis and monitoring of children with chronic bronchopulmonary pathology (recurrent bronchitis, chronic pneumonia)*. *Special features of working with children, patients with bronchial asthma*. Features of dynamic monitoring of children with chronic bronchopulmonary diseases (recurrent bronchitis, chronic pneumonia). Features of working with children with bronchial asthma, using a set of standard psychological methods for qualitative and quantitative analysis of the main cognitive functions (intellectual performance, memory, attention, learning characteristics) of children with bronchial asthma. Stages of patient management. *Organization of medical care for children with diseases of the cardiovascular system and rheumatological patients*. Observation of children with congenital heart defects. Features of dynamic

monitoring of children with pathology of the cardiovascular system, musculoskeletal system (juvenile rheumatoid arthritis, reactive arthritis, chronic juvenile arthritis, juvenile spondylarthrosis) and systemic connective tissue diseases (SCR UDM, systemic scleroderma). Performance evaluation treatment of patients with systemic connective tissue diseases, monitoring of side effects of basic therapy of systemic connective tissue diseases population plan. Follow-up of children with congenital heart defects before and after surgical correction. Phasing of management of patients with rheumatic fever. Measures to prevent exacerbation of rheumatic fever (seasonal, year-round). General restorative measures and health resort assistance. *Monitoring of children with chronic kidney disease (infection urinary tract diseases, glomerulonephritis, renal dysembryogenesis, chronic kidney disease)*. Dynamic monitoring of children with chronic kidney disease depending on the activity of the pathological process, the course of the disease and the state of kidney function. The role of diet therapy and regime moments. Principles of medical treatment in a polyclinic. Prevention of relapses. Duration of dispensary follow-up. *Observation of children with pathology of the gastrointestinal tract (gastritis, peptic ulcer of the stomach and duodenum 12, dyskinesia biliary tract diseases, pancreatitis, ulcerative colitis, fermentopathies)*, *organization of early diagnosis and rehabilitation of children in a family environment*. The role of diet, diet and exercise in improving the health of children with gastroenterological pathology. Stage-by-stage management of children with this pathology. Anti-relapse treatment. *Helminthiasis in children*. Organization of examination and treatment in a polyclinic. Anti-epidemic and preventive measures. Features of examination and treatment of children with ascariasis, enterobiosis, trichocephalosis, hookworm diseases, teniarinhozi, diphyllorhynchiasis, hymenolepidosis, opisthorchiasis, fascioliasis. *Emergency conditions in childhood*. Diagnostics. Providing care at home and in a polyclinic. Diagnostics and first aid measures for convulsive syndrome, acute abdominal syndrome, anaphylactic shock at home and in a polyclinic. As a result of mastering the discipline " Children's diseases (pediatrics)", the student must:

To know:

- Current data on the prevalence of diseases of the early age, bronchopulmonary, urinary, gastroenterological, and endocrine systems among children in the Kyrgyz Republic.
- Etiology, pathogenesis, classification, clinical picture of early childhood diseases, bronchopulmonary, urinary system, gastroenterology department, endocrine systems.
- Laboratory and instrumental diagnostics of these nosological forms.
- Principles of therapy, indications for surgical treatment of these nosological forms.
- Primary and secondary prevention, rehabilitation, and prognosis of early childhood diseases.
- Methods of emergency care for convulsive syndrome, vitamin D overdose, an attack of acetone vomiting, severe malnutrition, iron poisoning, obstructive syndrome, septic shock, gastrointestinal on bleeding, respiratory system deficiencies, hypertensive crisis and edematous syndrome
- The main medicinal products used for the treatment of these diseases.
- Dispensary monitoring of children with these diseases.
- Moral and ethical norms, rules and principles of professional medical behavior.

be able to:

- Formulate a preliminary diagnosis.
- Determine the scope and sequence of laboratory and instrumental examination methods to confirm the suspected disease.
- Apply for stage-by-stage and discharge epicrisis
- Make a clinical diagnosis in accordance with international classifications of diseases.
- Substantiate indications for nephrobiopsy in children.
- Assessment of blood pressure in children by percentiles. Definition of norm tension, prehypertension, hypertension (1; 2 degrees).
- Determination of diuresis: hourly (ml / kg / h).
- Substantiate indications for acute hemodialysis and chronic programmed hemodialysis in children.
- Justify and prescribe therapy in accordance with clinical protocols.
- Calculate the drugs used for these diseases.
- Give recommendations on care and nutrition to parents of a child with a certain pathology.

own:

- Collection of medical history, physical examination and assessment of the patient's condition with these diseases.
  - Registration of the medical history
  - Interpretation of the results of laboratory and instrumental research methods.
  - Determination of diagnostic criteria for these diseases.
  - Identification of general hazard signs (GPO)
  - Providing first aid for convulsive syndrome, apnea, shock, obstructive syndrome, hyper and hypoglycemic coma.
  - Recommendations for the care and diet of patients.
- The total labor intensity of mastering the discipline is 11 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Obstetrics and pediatric gynecology"**

**The purpose** of mastering the discipline "obstetrics and gynecology" is to train a pediatrician who has certain knowledge in the field of obstetrics and gynecology, taking into account further training and professional activity in the specialty "Pediatrics".

#### **Main objectives of midwifery training:**

- Study etiopathogenetic, morphological features manifestations the main ones obstetric pathological conditions and diseases.
- To study the clinical manifestations of pathological obstetric conditions and diseases.
- Generate it at student's name skills definitions volume and the sequence of diagnostic measures for pathological conditions and diseases in obstetrics.

- Develop the student's skills in making and formulating a clinical diagnosis for each nosology in obstetrics.
- Teach students to make a differential diagnosis between different types of pathological conditions.
- To study the complications of obstetric conditions and diseases, to teach methods of emergency care for them.
- Master the basic principles of treatment and prevention of pathological obstetric conditions and diseases, as well as train in predicting the course of pregnancy and childbirth.
- Teach emergency care methods for obstetric bleeding, eclampsia, shoulder dystocia, home delivery, the threat of uterine or perineal rupture, and septic complications.

#### **The main task of training in gynecology:**

- Strengthen and expand the examination skills of children and adults with pathology of the female genital organs.
- To study etiopathogenesis, morphological manifestations of major gynecological diseases.
- To study the clinical manifestations of gynecological diseases in their typical manifestation, as well as variants of the course and features of the course of diseases depending on age.
- To form the student's skill in determining the scope and sequence of diagnostic measures for gynecological diseases.
- Develop the student's skills in making and formulating a clinical diagnosis for each nosology.
- Teach students to make a differential diagnosis of various variants of the course of diseases.
- Study the complications of diseases,
- Master the basic principles of treatment and prevention of diseases, as well as teach you how to predict and determine the ability to work.
- Teach methods of termination of pregnancy at different stages of pregnancy, methods of contraception and family planning;
- Teach methods of emergency care for "acute abdomen" in gynecology.

#### **Content of the midwifery program.**

Structure of maternity care in the city and in rural areas. Anatomy and topography of the female genital organs in the age aspect. Fertilization and conception. Antenatal development of the fetus. Critical periods. Harmful effects of tobacco smoking, alcoholism, and drug addiction. Female pelvis from an obstetric point of view. The fetus as an object of childbirth. Physiological delivery. Topography of the uterus at birth. Biomechanism of labor in anterior and posterior types of occipital presentation. Assessment of fetal health during pregnancy and childbirth. Stress-free, stress-free test. CTG.

Biophysical profile of the fetus. Pelvic presentation of the fetus. Diagnosis, classification, course and management of labor. Miscarriage of pregnancy. An abortion. Stages of abortion. Course and management of preterm labor.

Rescheduling pregnancy. Anomalies of labor activity. Partogram. Narrow pelvis. General characteristics. Diagnostics. Biomechanism of childbirth. Clinically narrow pelvis. Diagnostics. Obstetric tactics. Anomalies of fetal head insertion. Diagnosis, course, and management of labor. Obstetric injuries. Injuries to the mother and the fetus. Uterine rupture. Classification. Clinic. Treatment. Placenta previa. General characteristics. Reasons. Kinds. Diagnostics. Obstetric tactics. Premature detachment of the normally located placenta. General characteristics. Reasons. Kinds. Diagnostics. Obstetric tactics. Bleeding in the subsequent and early postpartum period. Hypotension, uterine atony. Stages of stopping bleeding. Hemorrhagic shock. Hypertensive disorders during pregnancy. Diagnostics. Classification. Clinic treatment. An attack eclampsia. Phases of eclampsia attack. First aid. Intensive care. Asphyxia of newborns. Resuscitation measures depending on the severity of asphyxia. Delivery operations: cesarean section, obstetric forceps, vacuum extraction of the fetus. Indications, conditions, and techniques of operations. Fruit-growing operations, types, indications, conditions, and techniques.

**Content of the gynecology program:**

Physiology and regulation of the menstrual cycle. Functional diagnostics tests. Violation of the menstrual cycle. Amenorrhea. Dysfunctional uterine bleeding. Juvenile services bleeding. Neuroendocrine systems syndromes: Inflammatory diseases in girls. Inflammatory diseases of the gastrointestinal tract of non-specific etiology. Classification. Diagnostics. Treatment. Features of inflammatory diseases in girls. Inflammatory diseases of the gastrointestinal tract of specific etiology., Classification. Clinic. Diagnostics. Treatment. Chlamydia, mycoplasmas, trichomoniasis, ureaplasmosis, gardnerellosis, candidiasis. Purulent processes in the small pelvis. Sepsis. Septic shock. Background and precancerous diseases of the cervix and uterine body. Uterine fibroids. Endometriosis. Ovarian cysts and cysts. Ectopic pregnancy. Ovarian apoplexy. Family planning. Contraception. Patient supervision. Protecting your medical history.

When studying the discipline obstetrics and gynecology for 4-5 years, the student should know about obstetrics:

- Current views on the prevalence of obstetric pathology in the Kyrgyz Republic. Fundamentals of organization and principles of operation of obstetric institutions, departments of pathology of newborns and premature babies. Borderline conditions in newborns. The terminology used in neonatology. The UNICEF World Program " Child-Friendly Hospital". 11 commandments of successful breastfeeding.
- Etiology, pathogenesis, morphology, classification, clinical picture, laboratory and instrumental diagnostics, differential diagnosis, principles of therapy, indications for surgical treatment, rehabilitation and prognosis in various obstetric pathologies, as well as in neonatological pathological conditions and diseases:
  - miscarriage of pregnancy;
  - pelvic presentation of the fetus;
  - anatomically and clinically narrow pelvis in modern obstetrics;
  - extensor insertions of the fetal head and incorrect fetal positions;

- anomalies of labor activity;
  - hypertensive disorders of pregnancy (gestational hypertension, preeclampsia, eclampsia);
  - obstetric bleeding during pregnancy, in the postpartum and postpartum periods;
  - delivery operations (caesarean section, vacuum extraction of the fetus, obstetric forceps);
  - obstetric maternal injuries;
  - postpartum septic diseases;
  - intrauterine growth delays;
  - intrauterine hypoxia and asphyxia of newborns;
  - birth injuries of newborns;
  - pathological jaundice of newborns;
  - Quantitative and qualitative criteria of the main laboratory and functional research methods in normal and pathological conditions in pregnant women, parturient women, full-term and premature newborns.
  - Features of diagnosis and treatment of major diseases and pathological conditions of newborns:
    - intrauterine growth delays;
    - intrauterine hypoxia and asphyxia of newborns;
    - birth injuries of newborns;
    - pathological jaundice of newborns;
  - Methods of emergency care for obstetric bleeding, eclampsia attack, shoulder dystocia, home delivery, threat of uterine or perineal rupture, septic complications, and emergency conditions of the newborn (hyperthermia, convulsions, cardiac and respiratory arrest).
  - Management of high-risk pregnant women in outpatient practice.
- Focused anamnesis collection and approaches to the patient's examination in outpatient GP settings. Indications for consultation of narrow specialists. Consultation rules.

**Be able to:**

- Formulate a diagnosis in obstetric pathology and make a plan for laboratory and instrumental examination, treatment;
- Evaluate the indicators of an objective examination of a newborn child, obstetric history and medical history data;
- Evaluate the data of examination and physical examination of all organs and systems, physiological and pathological reflexes of the newborn;
- Label diseases with a cipher in accordance with the current international classification of diseases;
- Fill out medical documentation for inpatient and outpatient services for pregnant women, women in labor, women in labor, and newborns;
- Evaluate the data of laboratory and functional research methods.
- Determine the duration of pregnancy and dates of delivery, terms of prenatal and postpartum leave;
- Keep a correct portogram.

- Perform BCM and NPA for bleeding in the postpartum and postpartum period.
- Provide first aid for eclampsia.
- Evaluate the data of a vaginal examination during labor (on a dummy)
- Conduct an examination of the soft birth canal after delivery(on a dummy).
- Determine the integrity of the placenta and evaluate blood loss during childbirth (on a dummy).
- Prevent blood loss during childbirth by actively managing the third period of labor.
- Perform acute tocolytics with the threat of premature birth.
- Perform operations used in the postpartum and postpartum period (separation and isolation of the placenta, manual examination of the postpartum uterus, instrumental examination of the uterus) on a dummy.
- Carry out benefits for pelvic presentation of the fetus on a dummy.
- To appoint treatment to the maternity ward with septic tanks complications (antibiotics, desensitizing agents, and the like).
- Evaluate risk factors for septic infection;
- Identify long-term and immediate complications of postpartum septic complications;
- Determine indications for intensive care, surgical treatment of postpartum septic complications.
- To diagnose morphological changes in various pathological processes occurring in the placenta;
- To determine influence infections mothers on a newborn baby, contraindications to breastfeeding;
- Properly apply the baby to the breast;
- Assess the condition of the newborn using the Apgar and Bollard scales.
- Take care of the umbilical cord residue.

#### **Possess to:**

- Conduct prevention of gonoblenorrhea of the newborn.
- Diagnose hypothermia of the newborn and provide care for mild hypothermia
- Prevent hypothermia.
- Provide primary resuscitation of a newborn with asphyxia before the tracheal intubation stage
- Clean the skin, eyes, nose, and ears.
- Carry out weighing and thermometry of the newborn.
- Measure the circumference of the head, chest, limbs, and body length.
- Calculate nutrition, the degree of intrauterine development delay
- Advise on breastfeeding.
- Render emergency of service to help by emergency services conditions of the newborn (hyperthermia, hypothermia, convulsions, cardiac and respiratory arrest).

#### **A student should know about gynecology:**

- Supervising patients and writing medical histories in gynecology.
- Diagnostics, differential diagnostics and treatment patients with dysfunctional uterine bleeding and endometrial hyperplastic processes.

- Diagnostics and differential diagnosis of amenorrhea. Algorithm of examination and treatment of patients with amenorrhea.
- Neuroendocrine syndromes. Diagnostics and differential diagnostics. Methods of treatment.
- Endometriosis. Therapy for various types of endometriosis.
- Inflammatory diseases of the female genital organs. Symptoms. Diagnostics and differential diagnostics. Treatment.
- Questions of child and adolescent gynecology.
- Diagnosis and treatment of background and precancerous diseases of the cervix and vulva.
- Clinic, diagnosis and differential diagnosis of benign ovarian tumors. Indications for surgical treatment.
- Acute abdomen in gynecology. Ectopic pregnancy. Ovarian apoplexy.
- Principles of diagnosis and treatment of emergency conditions in gynecology.
- Purulent processes in the small pelvis.
- Abortion and its complications.
- Purulent-septic complications in gynecology.
- Incorrect positions of the genitals. Omissions and prolapses of the genitals. Traumatic injuries of the genitals.
- Preoperative preparation and postoperative care.
- Indications for surgical treatment of uterine fibroids and stages of prevaginal fibroids
- amputations and extirpations of the uterus.
- Symptoms and physical examination data for ectopic pregnancy.
- Indications and surgical interventions for tumors of the uterine appendages (cystectomy, peeling of the cyst).
- Data of functional diagnostic tests for ovulatory and anovulatory disorders of the menstrual cycle.
- Hormone tests.
- Methods for the diagnosis of endometriosis.

**be able to:**

- Conduct a survey of gynecological patients
- Diagnose tumors of the uterine appendages.
- Diagnosis of incorrect positions of the genitals, omissions and prolapses of the genitals.

**Possess to:**

- Minor gynecological operations (diagnostic curettage of the uterus, cervical biopsy, uterine probing, removal of a cervical polyp).
- Diagnose background and precancerous diseases of the cervix with the help of colposcopy.
- Puncture of the posterior arch.
- Tubectomy technique.
- Taking smears for cytological and bacterioscopic examination.



-First aid for emergency conditions in gynecology (uterine bleeding, torsion of the cyst leg).

**The total labor intensity of mastering the discipline is 5 credits.**

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Children's infectious diseases"**

The purpose of training: To form the student's clinical thinking in the field of children's infectious diseases by teaching the skills of diagnosis, differential diagnosis, and therapeutic and preventive measures.

Learning objectives:

- to study the pathogenesis and pathomorphological changes in infectious diseases.
- teach the mechanisms of development and manifestation of the epidemic process in infectious diseases.
- develop practical skills in the diagnosis, differential diagnosis and treatment of infectious diseases depending on age, as well as teach emergency care methods.
- to study the organization and implementation of anti-epidemic and preventive measures aimed at preventing the occurrence and spread of infectious diseases. Content of the discipline: Acute intestinal infections caused by immunopathogenic microbes. Acute intestinal infections caused by conditionally pathogenic enterobacteria (UPE). Dehydration in children, diagnosis of the degree of dehydration, the principle of treatment. Etiological structure and features of the course of viral hepatitis in children. Enterovirus infection in children. Acute respiratory viral infections in children. Streptococcal infection in children. Far Eastern scarlet fever. Controlled exanthemas in children. Herpetic diseases infections in children. Modern features of managed drip infections in children. Diphtheria of the oropharynx and respiratory tract. Meningococcal infection in children. Polio. Septic shock and cerebral edema in children with infectious diseases. Primary and secondary encephalitis in children. HIV infection in children, vertical transmission pathway from mother to child. Opportunistic infections in children. Specific and antibacterial therapy in children with infectious diseases. The most common helminthiasis in children (ascariasis, enterobiosis, giardiasis). Post-vaccination complications in children.

As a result of mastering the discipline "Children's infectious diseases", the student should know:

- Properties of the pathogen that determine the features of clinical manifestations of an infectious disease
- Pathogenesis and development of infectious diseases, as well as emergency syndromes
- Classification of clinical forms
- The main symptoms and syndromes characteristic of a particular infectious disease
- Typical forms of the disease
- Complications
- Laboratory and instrumental diagnostic methods
- Differential diagnosis
- Principles of treatment in the hospital and at home
- The need for medical examinations and follow-up features after an infectious disease

Be able to:

- Follow the basic rules of working at the bedside of an infectious patient*
- Collect anamnesis of the disease with an assessment of epidemiological data
- Examine the patient to identify the main clinical signs of the disease that are characteristic of a particular infectious disease Assign a patient's examination plan
- Master the technique of collecting material for laboratory research
- Substantiate the clinical diagnosis, indicating the type, severity, and period of the disease
- Prescribe treatment depending on the etiology, duration of the disease, severity, presence of an emergency syndrome, burdened premorbid background
- Interpret the results of the study of spinal fluid
- Perform serotherapy

Possess to:

- Collection of material from the patient for bacteriological, virological, serological, biological and other studies (blood, feces, urine, vomit, sputum, CSF, mucus from the nose and throat)
- All types of injection manipulations (subcutaneous, intravenous, intravenous)
- Gastric and intestinal lavage techniques
- Methods of rehydration therapy
- Manipulations for emergency care (stopping bleeding, mouth-to-mouth, mouth-to-nose artificial respiration, upper respiratory tract cleaning, indirect heart massage, defibrillation, Heimlich, Safar administration).

The total labor intensity of mastering the discipline is 9 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Propaedeutic of children's surgical diseases»**

#### **For 3rd-year students of the pediatric Faculty**

The purpose is to develop competence for conducting semiotics and diagnostics of surgical pathology and malformations in children.

Tasks:

- To study etiopathogenesis, semiotics and diagnostics of major surgical diseases.
- To study the clinical manifestations of surgical diseases, as well as variants of the course and features of the course of diseases depending on age.
- To formulate the student's skill of the scope and sequence of diagnostic measures for surgical diseases in children.
- Develop the student's skills in making and formulating a preliminary diagnosis for each nosology.

Topic content:

Features of pediatric surgery. Modern research methods in children's surgery. Deontology in pediatric surgery. Anatomical and physiological features of the child's body , body

size, features of the nervous, cardiovascular, respiratory systems, basal metabolism, heat regulation and heat transfer system. X-ray examinations, ultrasound diagnostics, endoscopic research methods, angiography, computed tomography, radioisotope diagnostics in pediatric surgery. Semiotics and diagnostics of inflammatory diseases of the abdominal cavity in children. Classification, etiology and pathogenesis, clinical picture of acute appendicitis and peritonitis in children, examination and palpation of the abdomen, main symptoms. Semiotics and diagnosis of congenital intestinal obstruction in children. Classification, etiology and pathogenesis, principles of diagnosis of surgical treatment. Semiotics and diagnostics of acquired small intestine obstruction in children. Classification, etiology and pathogenesis, clinical picture of acute appendicitis and peritonitis in children, examination and palpation of the abdomen, main symptoms. Semiotics and diagnostics of diseases of the hepatobiliary system in children. Classification, etiology and pathogenesis, features of surgical treatment. Semiotics and diagnostics of diseases manifested by bleeding from the digestive tract in children. Classification, etiology and pathogenesis, types of bleeding, main symptoms, interpretation of laboratory results. Semiotics and diagnostics of purulent-inflammatory diseases of soft tissues and bones in children. Classification, etiology and pathogenesis, principles of diagnosis of purulent surgical infection in children, neonatal necrotic phlegmon, neonatal mastitis, erysipelas, omphalitis, furuncle, carbuncle, lymphadenitis, pancreatitis, hematogenous osteomyelitis, main symptoms, interpretation of laboratory data. Semiotics and diagnostics of acute respiratory failure in children. Semiotics and diagnostics of acute suppurative soft tissue diseases in children. Semiotics and diagnostics of congenital esophageal diseases in children. Semiotics and diagnostics of diseases of the urinary system in children. Classification, etiology and pathogenesis of diseases of the upper and lower urinary tract, main symptoms, examination features, interpretation of laboratory tests, research projects, data source, ultrasound studies in normal and pathological conditions. Semiotics and diagnostics of diseases of the musculoskeletal system in children. Classification, etiology and pathogenesis, features of examination of children with diseases of the musculoskeletal system, interpretation of X-ray data, computed tomography, angiography. Semiotics and diagnosis of traumatic brain injuries in children. Semiotics and diagnostics of oncological diseases in children. Classification, etiology and pathogenesis, features of examination of children with cancer, main symptoms, interpretation of X-ray data, computed tomography, angiography.

As a result of mastering the discipline "Pediatric Surgery", the student should know:

- Modern views about common features of congenital and acquired surgical pathology in children.
  - Etiology, pathogenesis, morphology, classification, clinical picture, laboratory and instrumental diagnostics of surgical pathology in children. Features of pediatric surgery.
  - Quantitative and qualitative criteria of the main laboratory and functional research methods in normal and pathological conditions.
  - Features of diagnosis, taking into account age, complications and comorbid conditions.
- be able to:
- Collecting family history (drawing a family tree) of children with surgical pathologies

- Identification of harmful risk factors in parents of children with surgical pathologies
  - Examination and palpation of the child's abdominal organs
  - Examination and percussion of the chest organs in children
  - Examination and palpation of the urinary system
  - Determination of the child's pulse
  - Blood pressure measurement
  - Be able to build a history of the disease in a child with surgical pathology
- Own:
- Targeted collection of medical history in a child with surgical pathologies
  - Collection of life history and obstetric history in a child with surgical pathology
  - Master the main methods of diagnosing diseases of the abdominal cavity in children
  - Caring for newborn babies
  - Feeding and caring for postoperative children
  - Treatment of the oral mucosa of newborns
- The total labor intensity of mastering the discipline is 2 a loan.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Children's surgery»**

#### **For 4th year students of the Faculty of Pediatrics**

the purpose is to develop competencies in the management of children with surgical pathology.

Tasks:

- To study etiopathogenetic and morphological manifestations of major surgical diseases of childhood
- To study the clinical manifestations of surgical diseases of childhood
- To formulate the student's skill of the scope and sequence of diagnostic measures in the manifestation of surgical diseases of childhood
- Develop the student's skills in setting and formulating a clinical diagnosis of the manifestation of surgical diseases of childhood
- Teach you how to make a differential diagnosis.
- To study the complications of surgical diseases of childhood
- Master the basic principles of treatment and prevention of surgical diseases of childhood
- Teach them how to provide emergency care.

Topic content:

Anatomical and physiological features of the cardiovascular system, nervous system, respiratory system, abdominal organs, basal metabolism, heat regulation and heat transfer system. Features of diagnosis and surgical treatment of acute appendicitis in children. Complications. Peritonitis in children. Primary peritonitis in girls, appendicular peritonitis, etiology, pathogenesis, clinic, main symptoms, differential diagnosis, indications for surgical treatment, complications. Acquired intestinal

obstruction in children. Mechanical and dynamic intestinal obstruction in children. Intestinal intussusception in children. Diseases of the pancreas in children. Pancreatic cyst in children. Acute pancreatitis and pancreatic injuries in children. Doubling of the digestive tract in children (neurocytomas), dolichosigma. Hirschsprung's disease in children. Gastrointestinal bleeding in children. Anomalies of the yolk duct in children. Complete navel fistula, incomplete navel fistula, Meckel diverticulum, yolk duct cyst. Diseases of the anterior abdominal wall in children. "Flabby" syndrome abdominal hernia " in children, ventral hernia, umbilical hernia, hernia of the white line of the abdomen. Anorectal malformations in children. Diseases of the spleen in children. Inherited micro spherocytosis (familial hemolytic anemia of Minkowski-Shoffar), acquired hemolytic anemia, congenital (familial) non-spherocytic hemolytic anemia, thrombocytopenic purpura (Werlhof's disease), etiology, pathogenesis, differential diagnosis, indications for surgical treatment, complications. Cysts and fistulas of the neck in children. Median and lateral cysts in children, etiology, pathogenesis, clinic, differential diagnosis, features of surgical treatment, complications. Acute hematogenous osteomyelitis in children: classification, etiology, pathogenesis, clinic, differential diagnosis, surgical treatment, complications. Features of the course of chronic hematogenous osteomyelitis in children. Features of diagnosis and treatment of surgical sepsis in children. Burns of the esophagus in children. Classification, etiology, pathogenesis, clinic, differential diagnosis, emergency care, indications for surgical treatment, complications. Diaphragmatic hernias in children. Classification, etiology, pathogenesis, clinic, differential diagnosis, features of diagnosis and surgical treatment, complications. Acute bacterial lung destruction in children. Features of the course of bronchiectasis disease in children. Foreign bodies of the respiratory tract in children. Classification, etiology, pathogenesis, clinic, differential diagnosis, emergency care. Malformations of the chest and ribs in children. Features of the course and surgical treatment of echinococcal disease in children. etiology and pathogenesis, clinic, differential diagnosis, features of diagnosis and surgical treatment, complications. Mediastinal tumors and cysts in children. Pericarditis in children. Etiology, pathogenesis, clinic, indications for surgical treatment.

Malformations of blood vessels in children. Malformations of superficial veins in children. Malformations of deep veins (Claudel-Trenone syndrome). Congenital venous aneurysms in children. Anomalies of gonadal differentiation. Gonadal dysgenesis, Shereshevsky Turner syndrome, mixed gonadal dysgenesis. Testicular feminization syndrome. Surgical correction of disorders. Anomalies of gonadal differentiation. Adrenal hyperandrogenism. Hypertrichosis. Virile syndrome. Hirsutism. Diseases and malformations of the genitals in girls. The syndrome Rokitanskogokustner in children.

As a result of mastering the discipline "Pediatric Surgery", the student should know:  
 –Current understanding of the prevalence of surgical diseases in children.

- Etiology, pathogenesis, morphology, classification, clinical picture, laboratory and instrumental diagnostics, principles of therapy, indications for surgical treatment, primary and secondary prevention, rehabilitation and prognosis of surgical diseases in children.
  - Quantitative data and high-quality products criteria the main one laboratory tests functional research methods in normal and pathological conditions.
  - Features of diagnosis and treatment, taking into account age, complications and comorbid conditions.
  - Methods of providing emergency care for surgical diseases in children.
- Be able to:
- Communication and collection of medical history in children with severe surgical diseases
  - Collecting a family history (drawing a family tree)
  - Identification of harmful risk factors for parents of children with surgical diseases
  - Justification of a preliminary, clinical diagnosis in children with surgical diseases
  - Evaluation of indications and contraindications for surgical intervention in children with surgical diseases
  - Study of bones, joints and muscles of the shoulder girdle in children
  - Reading radiographs in children with surgical diseases
  - Build a medical history for children with surgical diseases Master the following skills:
  - Filling out medical records (diaries, translations, step-by-step epicritic) for children with surgical diseases
  - Writing a written-out and transferable epicritic in children with surgical diseases
  - Skin and mucosal examinations
  - (signs of anemia, cyanosis, jaundice, edema, dehydration in children).
  - Documenting the results of the examination in the medical history of children
  - Evaluation of indications and contraindications for surgical intervention in children
  - Examination of the abdomen in children
  - Examination of the chest organs in children
  - Examination of the urinary system in children
  - Research of the musculoskeletal system in children The total labor intensity of mastering the discipline is 6 a loan.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Neonatal surgery" for 5th year students of the Faculty of Pediatrics**

Objectives: to develop competence for the management of newborns with surgical pathology.

Tasks:

- To study the clinical manifestations of surgical diseases of newborns.
- To formulate the student's skill of the scope and sequence of diagnostic measures for surgical diseases of newborns.

- Develop the student's skills in setting and formulating a clinical diagnosis of surgical diseases of newborns.
- Teach you how to make a differential diagnosis.
- To study complications of surgical diseases of newborns.
- Master the basic principles of treatment and prevention of surgical diseases of newborns.
- Teach them how to provide emergency care.
- To study the manifestations of diseases of the urinary system in newborns.
- To study the clinical manifestations of diseases of the urinary system of newborns on their typical manifestation.
- To formulate the student's skill of the scope and sequence of diagnostic measures for diseases of the urinary system in newborns.
- Develop the student's skills in making and formulating a clinical diagnosis for each nosology.
- Teach you how to make a differential diagnosis.
- To study complications of urinary system of newborn diseases.
- Master it basic principles treatment options and prevention measures diseases urinary system of newborns.
- Teach methods of emergency care for congenital newborns malformations.

Topic content:

Anatomical and physiological features of newborns. Features of body size, nervous system, cardiovascular system, respiratory system, basal metabolic system of heat regulation and heat transfer. The importance of growth disproportionation, and the occurrence of pathology in young children. Clinical genetics of surgical children diseases .OMIM classification. Syndromology. The role of hereditary burden in the structure of childhood morbidity and mortality . Congenital malformations as an anatomical organ defect, disruption, deformity, dysplasia.

Surgery of congenital malformations in newborns. Features of the course of acute appendicitis in newborns and infants.

Anatomy physiological features of abdominal organs in children. Necrotizing ulcerative enterocolitis and neonatal peritonitis, classification, etiology, clinic, differential diagnosis, indications for surgical treatment, complications.

Congenital intestinal obstruction. Embryogenesis of the digestive system, classification, etiology, pathogenesis, clinic, differential diagnosis, features of surgical treatment. Embryonic hernia of the umbilical cord of newborns. The main stages of intrauterine intestinal rotation. Megacolon of newborns. Anorectal pathology of newborns. Embryogenesis of the genitourinary system, etiology, pathogenesis, clinic, differential diagnosis, features of surgical treatment. Bleeding from the digestive newborns tract.

Classification, etiology, pathogenesis, clinic, differential diagnosis, indications and features of surgical treatment, complications. Malformations of the upper and lower urinary newborns tract.

Urolithiasis children. Classification, etiology and pathogenesis, clinic, differential

diagnosis, surgical treatment. Pathology of the vaginal process of the peritoneum in newborns. Inguinal hernias, dropsy of testicular membranes, spermatic cord cyst, cryptorchidism. Purulent-inflammatory diseases of the skin and subcutaneous fat newborns. Anatomical and physiological features of the structure of the skin and subcutaneous fat newborns. Features of the course of acute hematogenous osteomyelitis in newborns. Sepsis and septic shock in newborns. Features of the clinical course and treatment.

Diseases and malformations of the esophagus. Agenesis, atresia, doubling, congenital cyst, dilation, congenital stenosis and short esophagus, hiatal hernia, gastro-esophageal reflux, chalazae and achalasia of the esophagus newborns classification.

Acute respiratory failure syndrome caused by surgical diseases of newborns. Hogan's atresia, basal cerebral hernia, Pierre-Robin syndrome. Congenital stenosis of the trachea and bronchi in newborns. Malformations of the newborn lungs. Malformations of the hepatobiliary newborns system. Developmental anomalies and spleen cysts in newborns.

Hydrocephalus newborns. Classification, etiology, pathogenesis, clinic, differential diagnosis, indications and features of surgical treatment, complications. Brain hernias newborns. Spinal hernias newborns. Classification, etiology, pathogenesis, clinic, differential diagnosis, indications and features of surgical treatment, complications. Malformations of the maxillofacial newborns region.

As a result of mastering the discipline "Neonatal Surgery", the student should know:

- Current understanding of the prevalence of congenital malformations and surgical newborns diseases.
- Indications for surgical treatment, primary and secondary prevention, rehabilitation and prognosis of congenital malformations and surgical newborns diseases.
- Quantitative data and high-quality products criteria the main laboratory tests functional research methods of normal and pathological conditions.
- Features of diagnosis and treatment, taking into account age, complications and comorbid conditions.
- Methods of emergency care for congenital newborns malformations.

Be able to:

- Collection anamnesis from parents of newborns with severe congenital malformations and surgical diseases.
- Collecting a family anamnesis (compiling a family tree)
- Identify harmful risk factors in the parents of a newborn with congenital malformations and surgical diseases.
- Substantiate a preliminary, clinical newborns diagnosis with congenital malformations and surgical diseases.
- To evaluate indications and contraindications for surgical intervention of a newborn with congenital malformations and surgical diseases.
- Examination of the bones, joints and muscles of the newborn shoulder girdle.



- Examination of newborns with urological diseases and congenital malformations of the urinary system.
- Features of reading radiographs of a newborn with congenital malformations and surgical diseases.
- Performing diagnostic and therapeutic punctures, abdominal puncture.
- Ability to formalize the medical history of a newborn with congenital malformations and surgical diseases.
- Palpation of the newborn bladder.

Master the following skills:

- work with documentation (diaries, transferable, written-out epicritic) of a newborn with congenital malformations and surgical diseases.
- Registration of discharge and transfer epicritic of a newborn with congenital malformations and surgical diseases
- Examination of the skin and mucous membranes (signs of anemia, cyanosis, jaundice, edema, newborns dehydration).
- Documenting the results of the examination in the newborn medical history.
- Evaluation of indications and contraindications for newborn surgical intervention.
- Examination of the newborn abdomen.
- Examination of the newborn chest.
- Examination of the newborn urinary system.
- Studies of the newborn musculoskeletal system.
- External examination and palpation of the newborn kidneys.
- Performing of newborns excretory urography.
- Catheterization of the newborn bladder.
- Conducting newborns cystography.
- Conducting newborn cystoscopy.
- Retro pneumoperitoneum of newborns.

The total labor intensity of mastering the discipline is 6 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

**Name of the discipline: "Children's traumatology and orthopedics from the military field**

**surgery" for 5th year students of the Faculty of Pediatrics**

Purpose: formation of competencies in the management of children with traumatic injuries.

Tasks:

- To study the etiopathogenetic and morphological manifestations of children traumatic injuries.
- To study the clinical manifestations of children traumatic injuries.
- To formulate the student's skill of the scope and sequence of diagnostic measures for children traumatic injuries.

- Develop the student's skills of making and formulating a clinical diagnosis for each nosology.
- Teach them how to make a differential diagnosis of nosology.
- To study the complications of children traumatic injuries.
- Master the basic principles of treatment and prevention of traumatic injuries.
- Teach the basics of emergency care for traumatic injuries.

Topic content:

Anatomical and physiological features in children. Features of bone fractures upper and lower extremities in children. Child injuries. Importance and organization of child injury prevention. Features of surgical treatment with children traumatic injuries. Minimally invasive methods of treatment. Tactics of surgical treatment of limb bone injuries.

Trauma of the chest and thoracic cavity of children organs. Anatomical and physiological features of the children chest. Fractured ribs, sternum, compression of the chest cavity. Etiopathogenetic, clinical picture, diagnosis and treatment principles. Clinical picture and diagnosis of pneumothorax, hemothorax, lung contusion, traumatic diaphragmatic hernia, open injuries. Surgical treatment of chest and thoracic cavity injuries.

Fractures of the children pelvic bones. Classification. Etiology, pathogenesis, features of the clinical course. Methods of conservative and operative treatment. Birth injuries. Classification, etiology, pathogenesis, diagnostic features, indications for surgical treatment.

Traumatic children brain injuries. Classification. Features of the clinic at the age group. Clinic, diagnostics. Modern survey methods. Indications for surgical treatment. Soft tissue damage in children. Wounds, wound infection. Damage to the ligamentous apparatus, damage to blood vessels, tendons and nerves. Indications for surgical treatment. Long-term compression syndrome with injuries, classification of the syndrome, symptoms, periods, first aid, treatment features .

Traumatic children shock. Terminal condition case of injuries. Classification, etiology, main links of pathogenesis, clinical symptoms, emergency care. Injuries and closed injuries of the abdominal cavity and retroperitoneal children space. Types of injuries, classification, etiology, pathogenesis, indications for surgical treatment.

Thermal damage in military-field conditions. Classification, etiology, pathogenesis, degrees, burn shock, emergency care, treatment features.

Frostbite and freezing in the field. classification etiology, pathogenesis, periods, stages of frostbite, emergency medical care.

As a result of mastering the discipline "Pediatric traumatology and orthopedics with field surgery", the student should know:

- Modern ideas about the prevalence of traumatic injuries.
- Features of traumatic injuries in children. Etiology, pathogenesis, morphology, classification, clinical information the picture, traumatic events damage.

- Research of methods. Features of upper and lower limb bone fractures in children.
- Prevention of child injuries.
- Quantitative and qualitative criteria of the main laboratory and functional research methods of normal and pathological conditions.
- Features of diagnosis and treatment, taking into account age, complications and comorbid conditions.
- Emergency care techniques for traumatic injuries.

Be able to:

- Collect medical history of a child with severe traumatic injuries, systemic diseases, and children congenital skeletal deformities.
- Collect family history (compiling a family tree.)
- Identify harmful risk factors in the parents of a child with traumatic injuries, systemic diseases, and congenital children skeletal deformities.
- Justify it preliminary, clinical diagnosis at the child with traumatic injuries, systemic diseases, and congenital children skeletal deformities.
- To evaluate indications and contraindications for surgical intervention in children with traumatic injuries, systemic diseases, and congenital skeletal deformities in children.
- Read radiographs with children traumatic injuries.
- Perform transport immobilization case of children limb bone fractures.
- Perform therapeutic immobilization in case of children limb fracture.
- Carry out transport immobilization for children spinal fractures
- Perform therapeutic immobilization for spinal fractures in children
- Perform diagnostic and therapeutic punctures of the children abdominal cavity
- Perform infiltrative, local, conduction, and children regional anesthesia
- Conducting vago sympathetic children blockade
- Perform palpation, percussion, determine the pain of the child spine.
- Substantiate the leading syndromes and the degree of injuries received
- Fill in the medical records (diaries, transferable, written-out epicritic) of children with traumatic injuries, systemic diseases, and congenital skeletal deformities in children.

Master the following skills:

- Treatment of the children burn surface.
- Studies of bones, joints and muscles of the children shoulder girdle.
- Examination of the children abdomen.
- Reduction of children dislocations
- Studies of ileosacral joints and pelvis (determination of mobility, soreness, atrophy) of children
- Studies of the shape, function, mobility and soreness of the upper extremities (wrist and elbow joints, finger joints, etc.) of children
- Studies of the shape, function, mobility and soreness of the lower extremities (ankle and knee joints, position, function, patella relief) children
- Studies of the lower limb axis (hallux valgus and varus deformity of the knee joints) children

- Studies of the foot axis (hallux valgus and varus deformity of the feet) children
  - Examination of the skin and mucous membranes (signs of anemia, cyanosis, jaundice, edema, dehydration of children).
  - Interpretation of survey results in the child's medical history.
  - Evaluation of indications and contraindications for surgical intervention of a child.
  - Studies of the spine, spinal mobility, paravertebral muscles, standing and lying on the back (kyphosis, scoliosis, Schober test)
- The total labor intensity of mastering the discipline is 2.3 credits.

### **ANNOTATED PROGRAM CONTENT**

#### **Title of the discipline: "Outpatient pediatric surgery" for 6th grade students course of the Faculty of Pediatrics»**

Objective: To teach students the issues of diagnosis, differential diagnosis, treatment, and prevention of surgical pathology in children in a polyclinic.

Tasks:

- Teach the principles of ethics and deontology when examining children with surgical diseases.
- Develop skills in diagnostics, differential diagnosis, treatment and rehabilitation of children with surgical diseases on an outpatient basis.
- Teach methods of providing emergency care for acute surgical diseases and children emergency conditions.
- To study the issues of medical examinations of children with surgical diseases in family medicine centers.

Topic content:

Organization of outpatient care for children with surgical pathology in the conditions of polyclinics. Algorithm for sorting patients at the reception. Providing assistance in emergency situations. Equipment of the children's surgical office of the polyclinic. Procedure for maintaining basic documentation. Sanitary and hygienic requirements for children surgical treatment of your merchant profile polyclinics. Equipment, surgical instruments. Medications. Duties of a doctor-surgeon in a polyclinic. Rules for maintaining an outpatient record of a patient with surgical pathology. Indications and terms of outpatient operations for children with surgical pathology. Indications and contraindications for outpatient operations in children with surgical pathology. Selection and referral of patients for inpatient and sanatorium-resort treatment. Principles of rehabilitation and medical examination of patients who have undergone surgery.

Features of rehabilitation of children in the postoperative period in the polyclinic for abdominal surgical pathologies. (Acute appendicitis, Meckel's diverticulum, gastroesophageal reflux, pylorospasm, esophagitis, gastritis, duodenitis, gastric and duodenal ulcer, atresia, esophageal stenosis, halasia and achalasia of the cardia, Hirschsprung's disease, etc.) Rehabilitation of children who have undergone surgery for abdominal diseases.

Features of medical examination and rehabilitation of children with surgical diseases of the mediastinal organs. Mediastinal tumors and cysts in children. Pericarditis in children.

Medical examination and rehabilitation of children in the postoperative period in a polyclinic for surgical pathologies of the chest organs. (Pierre-Robin syndrome, congenital lobar emphysema, asphyxiated infringement of the diaphragmatic hernia).

Features of rehabilitation of children with surgical diseases of the hepatobiliary system. Features of medical examination and rehabilitation of children with surgical diseases of the genitourinary system. (premature puberty, delayed puberty, congenital adrenogenital syndrome, gonadal dysgenesis, uterine and vaginal malformations, hermaphroditism) Features of diagnosis and emergency surgical care in a polyclinic. Features of medical examination and rehabilitation of children with surgical diseases of soft tissues. Staphyloiderma and streptoderma in newborns, pseudofurunculosis of the Finger, mastitis of newborns, panaritria, paronychia, paraproctitis, necrotic phlegmon newborns, lymphadenitis, Aden phlegmon features of diagnosis and emergency surgical care. Medical examination and rehabilitation of children with surgical diseases of the osteoarticular system. Features of management of patients with osteomyelitis. Features of congenital malformations and rehabilitation of children with surgical diseases of the spleen. Inherited micro spherocytosis (familial hemolytic anemia of Minkowski-Shoffar), acquired hemolytic anemia, congenital (familial) non-spherocytic hemolytic anemia, thrombocytopenic purpura ( Werlhof's disease).

Features of rehabilitation of children with gastro-esophageal burns. Classification, etiology, pathogenesis, clinic, differential diagnosis, emergency care, indications for surgical treatment, complications.

Features of rehabilitation of children with surgical diseases of the vascular system. Malformations of blood and lymphatic vessels in children, malformations of superficial veins. Arteriovenous malformations in children clinic diagnostic signs, treatment, medical examination. Fundamentals of rehabilitation of children with neurosurgical pathology. Congenital malformations of the central nervous system: craniocerebral hernias. Spinal hernias in newborns. Hydrocephalus, medical examination.

As a result of mastering the discipline "Outpatient pediatric surgery", the student should know:

- Current views on the prevalence of pediatric surgical pathology in the Kyrgyz Republic.
- Etiology, pathogenesis, morphology, classification, clinical picture, laboratory and instrumental diagnostics, differential diagnosis, principles of therapy, indications for surgical treatment, primary and secondary prevention, rehabilitation and prognosis of pediatric surgical diseases in polyclinic settings.
- Organization of outpatient care for children with surgical pathology in a polyclinic. Equipment of the children's surgical office of the polyclinic. Procedure for maintaining basic documentation.

- Quantitative and qualitative criteria of the main laboratory and functional research methods in normal and pathological conditions.
- Features of diagnosis and treatment, taking into account age, complications and comorbid conditions. Methods of providing emergency care for children's surgical diseases in a polyclinic.
- Management of children with surgical pathology in outpatient practice.
- Indications and consultations of narrow specialists. Consultation rules.

Be able to:

- To collect anamnesis in children with surgical pathology in a polyclinic. Collection of an allergic medical history. Collecting anamnesis in the third person.
- Identify harmful risk factors in newborns with congenital malformations.
- Build a history of the children disease with surgical pathology in a polyclinic. Filling out outpatient cards, the journal of small operations and the journal of medical examinations of children with surgical pathology at polyclinics.
- Designation of the disease by a cipher in accordance with the current international classification of diseases.
- Work in accordance with active user national protocols/guidelines.
- To evaluate indications and contraindications for surgical intervention in children with surgical pathology in polyclinic settings.
- Assess the general condition of the patient (appearance, position, nutrition, consciousness, mental state). Assessment of vital functions of the body (body temperature, respiratory rate and type, pulse rate, arterial and venous pressure).
- Document anthropometric data (height, weight, BMI, head circumference, waist, hip).

Master the following skills:

- Studies of temperature, vibration and positional sensitivity in children.
- Taking a biopsy of tumor formations and lymph nodes.
- Performing diagnostic and therapeutic punctures.
- Probing cavities and fistulas.
- Conducting infiltrative local anesthesia, conduction, regional, and vagosympathetic blockades.
- Gastric children lavage
- Examination of lymph nodes, peripheral and central arterial pulsation, detection of arterial noise.
- Examination of the lips, oral region, oropharynx, as well as teeth, tongue, tongue root, pharyngeal arches, tonsils, examination of the excretory ducts of the parotid glands and submandibular glands.
- Palpation of the floor of the oral cavity, cheeks, tonsils and tongue root. Examination and palpation of the parotid and submandibular glands.
- Examination of the shape and mobility of the chest, examination of pain under pressure and / or percussion. Determination of the size of the chest excursion - examination, palpation, measurement of the 2-circumference of the chest. Palpatory detection of voice tremor. Percussion of the lungs, determination of excursion of the lower edge at the lungs. Auscultation of the lungs.

- Definitions of the apical push (heart). Defining the boundaries of cardiac dullness. Auscultation of the heart. Determination of peripheral vascular pulsation.
- Examination of the abdomen. Auscultation of the abdominal cavity (intestinal murmurs). Abdominal percussion (determining the size of the liver, spleen). Detection of abdominal soreness, peritoneal irritation symptom, muscle protection. Definition of "splash noise".
- Determination of soreness at the kidney area.
- Research of inguinal hernia by examination and palpation of the hernial gate. External examination and palpation of the perianal area. Examination and palpation of the penis and scrotum (testicles, testicular appendages, spermatic cord). Examination and palpation of female external genitalia (vulva, perineum).
- Studies of the spine, spinal mobility, paravertebral muscles, standing and lying on the back (kyphosis, scoliosis). Palpation, percussion, determination of spine soreness.
- Studies of tactile and pain sensitivity. Assessment of the degree of impaired consciousness. Study of orientation in space and time.
- Preoperative preparation of the operating field for minor surgical interventions, asepsis and antiseptics.
- Preparation for the operation (washing hands before the operation, putting on a sterile operating uniform, putting on sterile gloves).
- Use and explain to the patient technique of using a metered-dose inhaler spacer and nebulizer.
- Performing cardiopulmonary resuscitation
- Research and first aid for external injuries (wounds, bleeding, burns, sprains, dislocations, fractures).
- Transportation of a patient with an injury. Stopping bleeding (compression, applying a tight bandage, applying a tourniquet).
- Probing cavities and fistulas.
- Primary surgical treatment of wounds, removal of sutures. Suturing the skin.
- Treatment of burn surfaces and infected wounds.
- Bandages, applying soft bandages, splints. Reduction of dislocations.
- Autopsies of abscesses, panaricia, phlegmon.
- Removal of an ingrown nail.

The total labor intensity of mastering the discipline is 4 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

**"Children's resuscitation and anesthesiology" for students of the 6th year of the faculty**

### **"Pediatrics"**

Objective: formation of competencies for the management of children with surgical diseases. during the event antiesthetic department benefits, teach them render highly qualified medical information help for children located in terminal states.

Tasks:

- To study the etiopathogenetic and morphological manifestations of surgical diseases requiring anesthesia and intensive care
- To study the clinical manifestations of surgical diseases requiring an anesthetic aid and intensive care in their typical manifestation, as well as variants of the course and features
- To develop the student's ability to determine the scope and sequence of diagnostic measures for surgical diseases that require an anesthetic allowance and intensive care
- Develop the student's skills in making and formulating a clinical diagnosis for surgical diseases that require anesthesia and intensive care
- Teach you how to make a differential diagnosis.
- Study complications surgical procedures diseases those requiring antiesthetic treatment and intensive care, as well as the most common comorbid conditions.
- Master the basic principles of treatment and surgical diseases requiring anesthesia and intensive care.
- Teach emergency care methods for surgical diseases to require anesthesia and intensive care.

Topic content:

Terminal conditions and clinical death, intensive care and resuscitation in Russia hospital settings. Intensive care for hyper thermic, convulsive syndromes, brain edema. Intensive care for acute respiratory failure.

Methods and indications for mechanical ventilation.

General principles of anesthesia in children. The choice of anesthesia depends on the condition of the child and the type of pathology. Preparation of patients for general anesthesia.

Dangers and complications of anesthesia, their prevention. Indications and contraindications for various types of general anesthesia.

Blood transfusion. Modern aspects of hemotransfusiology. Indications and contraindications for blood transfusion. Determination of the ABO blood type and To the rhesus factor. Post-transfusion complications and reactions, emergency care. Comas. Etiopathogenetic. Clinic, tactics of introduction of children with coma. Acute exogenous and endogenous intoxications, comatose states treatment methods.

Intensive care of acute circulatory disorders. Etiopathogenesis, clinic, exam. Cardiopulmonary resuscitation in children. Shock of children. Pathogenesis. Classification. Shock clinic. Emergency care for shock conditions in children.

The most common poisoning of children. Principles of introducing children with disabilities poisoning.

As a result of mastering the discipline "Pediatric resuscitation and anesthesiology", the student

should know:

- Indications for heretic treatment, primary and secondary prevention, rehabilitation And forecast surgical procedures diseases requiring anesthetic aid and intensive care
- Terminal conditions and clinical death, intensive care and resuscitation in a hospital setting. Intensive care for hyper thermic, convulsive syndromes, brain edema



- Features of anesthesia in children. Pain relief depending of the child's condition and type of pathology. Diagnosis, etiopathogenetic, clinic.
  - Intensive care of acute hemodynamic disorders. Etiopathogenetic, clinic, examination.
  - Acute exogenous and endogenous intoxications, comatose states treatment methods.
  - Types of pain relief.
  - Theories, stages of anesthesia, components of anesthesia. Preparation of patients for general anesthesia.
  - Technique of carrying out various types (inhalation and non-inhalation) anesthesia. Combined anesthesia.
  - Maintaining body functions during general anesthesia .
  - Dangers and complications of anesthesia, their prevention. Indications and contraindications for various types of general anesthesia.
  - Terminal conditions, clinical death, pathophysiology, clinic, indications for resuscitation. Technique of resuscitation measures. Drug therapy of acute respiratory arrest and cross-treatment, defibrillation.
  - Criteria for brain death and decortication. Indications for stopping resuscitation. Post-resuscitation disease, intensive care.
  - Intensive care for acute hemodynamic disorders. Hypovolemia, collapse, shock. Pulmonary edema. Etiology of pathogenesis, clinic, diagnosis
  - Intensive care for acute respiratory failure. Methods and indications for mechanical ventilation.
  - Artificial parenteral nutrition. Methods for calculating the volume of liquids and calories.
  - Features of resuscitation and intensive newborn care
  - Quantitative and qualitative criteria of the main laboratory and functional research methods in normal and pathological conditions.
  - Features of diagnosis and treatment taking into account age, complications and comorbid conditions.
  - Methods of providing emergency care for surgical diseases requiring anesthesia and intensive care.
- Be able to:
- Collect anamnesis from a seriously ill or dying patient. Collecting family history (drawing a family tree)
  - Identify and describe nystagmus
  - Describe the optical disc and retinal vessels (the difference between a normal picture and a pathological one)
  - Determine arterial insufficiency, Moshkovich method
  - Measure temperature, to determine vibration system and positional information sensitivity
  - Communicate negative information to the patient and their loved ones
  - Document the results of the examination in the patient's medical history/outpatient card
  - Write an extract and transfer epicritic

- Fill out a medical prescription
- Fill out a death certificate
- Work in accordance with active user national protocols/guidelines
- Assess the general condition of the patient (appearance, position, nutrition, consciousness, mental state)
- Assess vital functions of the body (body temperature, respiratory rate and type, pulse rate, arterial and venous pressure)
- Conduct an examination of the skin and mucous membranes (signs of anemia, cyanosis, jaundice, edema, dehydration)
- Evaluate attention, thinking (form and content), perception, emotional and psychomotor behavior
- Estimate the time of death (cadaveric spots, rigor mortis, rectal temperature)
- Determine the suitability of blood for transfusion, blood transfusion, administration of sera Master the following skills:
- Studies of radicular cervical and lumbar symptoms.
- Gastric probing, duodenal probing in children.
- Feeding heavy and premature babies through a probe
- Treatment of the oral mucosa in children
- Perform drip and jet transfusions of medicines blood substitutes
- Trachea-or coniotomy, tracheostomy
- Performing a biopsy of tumor formations and lymph nodes
- Performing diagnostic and therapeutic punctures, paracentesis
- Probing cavities and fistulas
- Conducting infiltrative local anesthesia, conduction, regional, and vago sympathetic blockades
- Performing a puncture cystostomy
- Administration of drugs into the larynx and bronchi with a laryngeal syringe and through a nasal catheter
- Performing tonometry
- Conducting cleansing, siphon and therapeutic enemas in children
- Performing cardiopulmonary resuscitation, connecting to a ventilator
- Performing defibrillation

The total labor intensity of mastering the discipline is 3 credits.

### **BLOCK OF " NARROW " CLINICAL DISCIPLINES:**

#### **ANNOTATED PROGRAM CONTENT**

##### **Academic disciplines**

##### **"Infectious diseases»**

Objective of the discipline: formation of competencies for the management of patients with infectious diseases.

Objectives of the discipline:

- To study the etiopathogenetic of the most common infectious diseases.

- To study the clinical manifestations of infectious diseases in their typical manifestation, as well as variants of the course and features of diseases depending on age.
- To form the student's skill in determining the scope and sequence of diagnostic measures for infectious diseases.
- Develop the student's skills in making and formulating a clinical diagnosis in infectious nosology.
- Study the complications of infectious diseases and teach them how to help with them.
- Master the basic principles of treatment and prevention of infectious diseases

Content of the discipline: Organization of care for infectious patients.

Structure and operating mode of an infectious diseases hospital / department (reception, boxed, specialized department). Clinical and epidemiological features of the course of parasites (A and B). Complications of typhoid and paratyphoid diseases. Clinic, diagnosis and treatment. Bacterial and protozoal colitis. Clinical and laboratory diagnostics. Complications. Principles of treatment and prevention. Cholera. The degree of dehydration. Hypovolemic shock. Treatment. Conditions for issuing convalescents.

Prevention. Salmonellosis. Clinic, diagnostics. Complications. Treatment and prevention. Botulism. Clinic, diagnostics. Complications. Treatment.

Clinical laboratory diagnostics of round helminths (ascariasis, trichophilia's, toxocariasis). Clinical and laboratory diagnostics of flatworms and flukes (tenias, tenancies, opisthorchis's). Clinical and epidemiological features of the course of CAA and HEV. Treatment. Prevention. Clinical and laboratory diagnostics of parenteral viral hepatitis B, C and D. Outcomes of viral hepatitis (fulminant, chronic course, cirrhosis of the liver). Differential diagnosis of acute respiratory viral infections (influenza, parainfluenza, adenovirus, rhinovirus infections). Meningococcal infection. Clinic, diagnosis, and complications. Treatment and prevention. Enterovirus infection. Clinic, diagnostics. Treatment and prevention. Herpesvirus infection (herpes simplex and herpes zoster). Clinic, diagnosis and treatment. Epidemic typhus.

Brill's disease. Clinic, diagnostics. Complications. Treatment and prevention. Cu-fever. Clinic, diagnostics. Treatment and prevention. Tick-borne encephalitis.

Clinic, diagnostics. Complications. Treatment and prevention. Malaria. Complicated forms. Treatment and prevention. Leishmaniasis: cutaneous and visceral. Clinic, diagnosis and treatment. Orthosis. Clinic, diagnosis, treatment and prevention.

Brucellosis. Diagnosis and treatment of subacute and chronic forms. Pseudotuberculosis and intestinal yersinosis. Clinic, diagnosis and treatment. Leptospirosis. Clinic, diagnostics. Complications. Treatment and prevention. Erysipelas. Clinic, diagnostics. Complications. Treatment. Tetanus. Clinic, diagnostics. Complications. Treatment and prevention. Rabies. Clinic, diagnostics. Treatment. Measures for handling persons with animal bites. Anthrax. Clinical and laboratory diagnostics.

Complications. Treatment and prevention. The plague. Measures to detect particularly dangerous quarantine infections. Opportunistic infections in HIV infection. Clinic,

diagnosis, treatment, and prevention. Principles of ART for HIV infection.

As a result of mastering the discipline "Infectious diseases", the student must **know:**

- basic principles of diagnosis, treatment and rehabilitation of infectious diseases in adults and adolescents,
- indications for hospitalization of patients with infectious diseases;
- implementation specific information and non-specific prevention measures infectious diseases in the population;
- structure of the infectious service, indications for outpatient treatment of an infectious patient, transportation of an infectious patient to a hospital, isolation rules for hospitalization of patients features of the organization of work with patients with HIV infection.

**be able to:**

- examine the patient with an infectious disease (examination, percussion, palpation, auscultation);
- organize the collection of infectious material from patients with infectious diseases conduct differential diagnostics between various infectious diseases, as well as infectious diseases with pathological conditions of non-infectious origin organize work in quarantine and especially dangerous infections.

**Possess to:**

- methodology for assessing the degree of severity of the patient's condition with an infectious disease;
- methodology for determining the nature of the rash;
- methods of collecting pathological material from a patient with an infectious disease; provide emergency care to patients in emergency situations.

**The total labor intensity of mastering the discipline is 4 credits.**

#### **ANNOTATED PROGRAM CONTENT**

##### **Academic disciplines**

##### **"Dermatovenerology»**

Objectives of the discipline:

teach students the diagnostic criteria and treatment principles of the main diseases (in accordance with the " Program on skin and venereal diseases for students of higher medical institutions») skin and venereal diseases, as well as features of their course, manifestations, diagnosis and treatment on the oral mucosa.

Objectives of the discipline:

- based on the lecture material, practical exercises, independent work, to form students
- knowledge of the etiology and pathogenesis of major skin and venereal diseases;
- knowledge of diagnostic criteria, practical skills in the diagnosis of major skin and venereal diseases;
- knowledge of the principles of treatment of major skin and venereal diseases.
- knowledge of the features of clinical manifestations, diagnosis and treatment of skin and venereal diseases on the oral mucosa.

Content of the discipline: Morphological elements of rash (primary and secondary). Pyoderma. Parasitic skin diseases. Keratomycotic. Candidiasis. Dermatomycosis (trichomycosis). Dermatitis. Eczema. Toxicoderma. Neurodermatosis (pruritus, purge, atopic dermatitis, urticaria). Psoriasis, lichen planus. The main types of psoriasis in childhood. Exudative erythema multiforme, pink lichen. Bullous dermatoses (pemphigus, dermatitis herpetiformis urticaria). Skin manifestations of connective tissue diseases (lupus erythematosus, scleroderma). Seborrhea, vulgar and rosacea. General pathology of syphilis. Etiology and pathogenesis. Classification. I syphilis. II, III syphilis. Congenital syphilis. Modern principles of syphilis diagnosis and treatment. Gonorrhea. Trichomoniasis. Bacterial vaginosis. Chlamydia, mycoplasma and ureaplasma infections. Genital herpes, urogenital candidiasis.

As a result of mastering the discipline "Dermatovenerology", the student should know:

- Basic rules for working at the bedside of a patient with skin and veins. a medical condition.
- Basic principles of medical history collection and approaches to examination of an adult and a child with skin pathology.
- Basic medical documentation of the patient.
- pathogenesis, classification, clinical picture, laboratory and instrumental methods of diagnostics of pathological conditions, symptoms and syndromes of various nosologically forms, principles of therapy, prevention, rehabilitation;
- Necessity of medical examination and features of observation of chronic diseases of the skin and veins. diseases.
- Specific prevention of managed STIs
- Main pathological symptoms and syndromes of diseases in patients with ICD-10
- Methods of first aid in emergency situations with acute skin diseases.
- Management of patients with skin pathology and STIs.
- Principles of treatment of patients at home, indications for hospitalization.
- Basic principles of pathology treatment and rehabilitation in dermatovenerology.

Be able to:

- Develop a treatment and rehabilitation plan for the patient.
- Perform basic diagnostic measures to identify urgent and life-threatening conditions;
- Carry out anti-epidemic work, determine the terms of isolation of the patient, contact, measures in the focus.
- Prevent nosocomial infections
- Interpret the results of laboratory and instrumental research methods.
- Examine the patient to identify the main clinical signs of the disease that are characteristic of a particular disease.

- Assign a patient's examination plan.
- Identify the main clinical syndromes of diseases with skin pathology.
- Analyze the obtained research results for pathological symptoms and syndromes of common diseases
- Recognize primary and secondary morphological elements of skin rashes; apply clinical protocols (standards) for the diagnosis and treatment of the most common skin diseases and sexually transmitted infections.

Possess to:

- Methods of general clinical examination (anamnesis collection, examination, palpation, percussion, auscultation) with assessment of laboratory data.
- The technique of collecting biomaterial for bacteriological and other laboratory research methods.
- Skills in identifying various symptoms, syndromes, and pathologies of skin diseases
- Methods of conducting sanitary education work among the population;
- The method of providing emergency care:
  - Resuscitation measures for angioedema; Lyell's syndromes and Stevens-Johnson
  - Skills of etiologic, pathogenetic and specific therapy in skin pathology and STIs
  - modern methods of clinical, instrumental, laboratory and laboratory analysis. another one surveys, used by in dermatovenerology;
- modern methods of general and local therapy of skin diseases and sexually transmitted infections.

The total labor intensity of mastering the discipline is 3 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"RADIATION DIAGNOSTICS AND THERAPY"**

The purpose of the discipline: - students acquire knowledge on radiation diagnostics of syndromes of diseases of various organs and systems of the human body; correct and adequate use of the acquired knowledge in the medical and diagnostic process.

Students study the issues of treatment and prevention of malignant tumors, the basic principles of planning and conducting radiation therapy in patients with malignant neoplasms. Students ' mastering of the theoretical foundations of the software the use of radiation therapy in the treatment of malignant tumors in adults and children, the choice of methods.

Objectives of the discipline:

- to teach students to independently recognize the signs of radiation manifestations of various disease syndromes when studying medical imaging documents (radiographs, CT, MR tomograms, echograms, scintigrams, angiograms).

- to teach students how to draw up medical documentation in the form of research protocols using various methods of medical Introscope.
- to teach students the elements of differential diagnostics in the study of medical images of various syndromes of diseases of human organs and systems.
- teaching a student tactics when a patient is suspected of having a malignant neoplasm.
- introduction to the organization of cancer care for the population and modern principles of diagnosis and treatment of cancer patients.
- study of the biological effects of ionizing radiation,
- study of indications and contraindications to radiation therapy.
- training students in modern technologies of radiation therapy, non-traditional methods and methods of radiation, combined and complex treatment of cancer patients.
- students will master theoretical information and practical skills in the field of preparing patients for radiation therapy and its implementation.

Content of the discipline:

Radiation diagnostics: A history of radiology. Fundamentals of medical imaging. Radionuclide diagnostics. Kinds radiation sources in radiation therapy diagnostics. Radiological method. Special X-ray methods of research. Computer program tomography (CT scan). Magnetic resonance imaging system tomography (MRI). Ultrasound method (ultrasound). Endoscopy. Interventional radiology. Radiation methods for studying the respiratory system. Radiation semiotics of diseases of the respiratory system. Radiation research methods and normal radiation anatomy of the gastrointestinal tract. Radiation research methods and normal radiation anatomy of the hepatobiliary-pancreatic-lineal zone. Radiation methods of heart and large vessels research. Radiation signs of congenital heart defects. Methods of radiation diagnostics of the musculoskeletal system. Radiation anatomy of muscles and ligaments, bones and joints. Comparative characteristics of radiation diagnostics methods in patients with research of the brain and spinal cord. Normal radiation anatomy of the brain and spinal cord. Hypertension syndrome. Radiation anatomy of the breast. Radiation diagnostics of diffuse and focal breast formations. Radiation diagnostics in endocrinology.

Radiation therapy: An introduction to radiation therapy. Physical, technical, biological and organizational bases of radiation therapy. Clinical radiobiology. Principles and biological bases of radiation therapy of malignant neoplasms. Simulation.

Methods of radiation therapy. Radiation reactions and injuries. Radiation therapy of non-cancer diseases. Stereotactic surgery.

As a result of mastering the discipline "Radiation diagnostics and therapy", the student should know:

- a system of radiation protection and occupational safety in the diagnostic and therapeutic use of radiation;
- biophysical properties, radio sensitivity and radio resistance of tissues and organs;
- types of electromagnetic, ultrasonic, and corpuscular sensors radiation sources, used in radiation diagnostics;

- basic and special methods of image acquisition in radiation diagnostics, digital image generation and transmission system; organ-integrated use of modern methods of radiation visualization and radiation therapy
- types and methods of radiation examination,
- radiation semiotics and diagnostics of diseases of internal organs and musculoskeletal system

be able to:

- determine indications and contraindications for radiation testing;
- prepare the patient for radiation testing;
- decipher the results of radiation testing for the most common diseases of the lungs, heart, esophagus, stomach, intestines, gallbladder, kidneys, endocrine system, bones and joints;
- determine the presence of a fracture and dislocation, free gas in the abdominal cavity, and a hydropneumothorax by X-ray.;

To be able to:

- skills of making a preliminary diagnosis based on the results of radiation research
- the method of decoding the main results of radiation examination for the most common pathology

The total labor intensity of mastering the discipline is 5 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Children's neurology with a course in medical genetics and neurosurgery»**

Objective: To develop the student's professional competencies of clinical neurological thinking, the ability and willingness independently diagnose the most common neurological and neurosurgical diseases of childhood, including hereditary nature, the ability to professionally provide assistance in emergency conditions of diseases of the nervous system, determine indications for surgical treatment of neurological diseases and know the basics of prevention of these diseases.

Tasks:

teaching students to recognize and treat the most common diseases in childhood and getting acquainted with the latest achievements in the field of neurology, neurosurgery and medical genetics.

Summary of the topic: Neurology. Methodology of motor system research.

Reflex sphere. Methods of motor functions research. Inspection. Active and passive movements. Muscle tone. Muscle strength. Normal reflexes.



Pathological reflexes. Clonus. Pathological synkinesis. Gait. Types of pathological gaits. Central and peripheral paralysis. Akinetic-rigid syndrome. Hypotonic-hyperkinetic syndrome.

Method of research of the sensitive sphere. Types of sensitivity disorders.

Meningeal and hypertensive syndromes. Meningeal syndrome: symptoms. Hypertension syndrome: main clinical and paraclinical signs.

Research methodology. CSF is normal and abnormal. Research methods for 9, 10, 11 and 12 PMN. Lesion syndromes. Research methodology 5,7,8 PMN.

Lesion syndromes. The trigeminal nerve. Research methodology 3,4,6 PMN. Lesion syndromes.

Methods for studying the functions of oculomotor nerves. The main syndromes of the lesion. Innervation of eyeball movements. Alternating syndromes in midbrain lesions.

Methods of olfactory nerve research. The main syndromes of the lesion.

Research methodology and optic nerve damage.

Methods of research of the autonomic nervous system. Lesion syndromes. Methodology for the study of higher brain functions. Lesion syndromes. Basic principles of neurosurgical operations in children. Technique of cranial trepanation and laminectomy.

Closed and open craniocerebral trauma in children. Classification.

Brain tumors in children. Additional research methods. Dislocation syndrome. Principles of treatment of brain tumors in children.

Spinal cord tumors in children. Principles of diagnosis, surgical treatment, and outcomes.

Parasitic diseases of the brain in children. Echinococcosis. Cysticercosis. Toxoplasmosis.

Emergency conditions in neurosurgery in children. Hypertension and dislocation syndromes. Epileptic status. Principles of treatment.

Damage to the spine and spinal cord in children.

Peripheral nerve damage.

Perinatal lesions of the nervous system: hypoxic-ischemic encephalopathies, birth injuries of the nervous system.

Children's cerebral palsy. Etiology. Pathogenesis. Clinic.

Congenital pathology of the nervous system: syringomyelia, cerebral hernias, craniovertebral anomalies. Causes of congenital pathologies of the nervous system.

Neurotic reactions in children: tics, night terrors and enuresis. Neurotic sleep disorders (night terrors). Neurotic enuresis. Neurotic encopresis.

Obsessive-compulsive disorder. Hysterical neurosis. Tics in children.

Acute disorders of cerebral circulation: ischemic and hemorrhagic strokes.

student should know:

- anatomical features of the brain and spinal cord in children, as well as functional features of the child's nervous system. A method for collecting anamnesis that reflects the child's neuropsychological development, behavioral characteristics, and character traits.
- main clinical manifestations (symptoms, syndromes) of the studied neurological diseases in children;
- medical tactics and be able to provide first aid in emergency and life-threatening neurological conditions,
- methods of performing basic neurosurgical interventions;
- basic methods of laboratory and instrumental diagnostics, additional clinical and paraclinical research methods used in neurology, medical genetics, neurosurgery (indications and contraindications for use, theoretical foundations of the method, interpretation of results).

The student must be able to:

- master it the methodology surveys the patient with by selecting individual symptoms of the lesion with their subsequent grouping into syndromes, and determination of the level of topical lesion.
- make a clinical diagnosis of major neurological and neurosurgical diseases, including hereditary ones in children;
- prescribe adequate treatment to neurologic patients, patients with hereditary diseases of the nervous system and neurosurgical patients in accordance with the diagnosis made;
- make out medical records of neurological and neurosurgical patients;
- recognize common manifestations of hereditary pathology, use appropriate terminology when describing the clinical picture (phenotype) the patient;
- collect anamnesis and genealogical information, make a pedigree, graphically and analyze the inheritance of a disease or trait in family;
- identify patients at risk of developing multifactorial diseases;
- assess the severity of neurological and neurosurgical diseases; predict the course and outcome of neurological and neurosurgical diseases;
- diagnose emergency conditions in neurological and neurosurgical patients and provide emergency (emergency) and first aid, student must be proficient in:
- Methods of studying the child's motor system;
- Using the method of studying the sensitive area of a child;
- Methodology for the study of higher brain functions in a child;
- Methods of studying vegetative functions;
- Craniocerebral nerve research methodology
- Methodology for the study of meningeal symptoms
- The method of performing a lumbar puncture

Credit hours: 180 hours (6 credits)

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Jurisprudence»**

The purpose of the discipline: formation of the future doctor of the necessary level of theoretical knowledge about the main definitions and provisions of legal science, as well as the necessary skills of lawful behavior in the implementation of professional activities and in everyday life; legal education, raising the level of legal awareness and legal culture.

Objectives of the discipline:

- teaching students theoretical knowledge about the principles of rights, legal institutions, categories and the current level of development of legal science;
- teaching students the main provisions of the legislation of the Kyrgyz Republic in the field of health and the environment;
- training students in the interpretation and application of legal norms of various branches of law to specific legally significant facts;
- training students in correct legal orientation in the current legislation on healthcare in the Kyrgyz Republic and its adequate application in specific practical situations;
- familiarization of students with the rights of citizens, individual groups of the population and patients to health protection, guarantees of medical and social assistance;
- familiarization of students with the rights and obligations of medical workers in medical institutions, various structures the system principles and provisions of their social and legal protection, legal liability for violations in the course of professional activity;
- educating students to respect laws and other normative legal acts as a fundamental guarantor of the rights, freedoms and interests of citizens and society.

Content of the discipline: Fundamentals of the theory of state law. Legal basis of healthcare management in the Kyrgyz Republic. Medical law. Subject of medical law. Subjects of a legal relationship arising in the provision of medical care.

Content of the legal relationship that arises in the course of medical activity. Fundamentals of criminal law. Various branches of law. Health protection in the Kyrgyz Republic: organization, principles, tasks, guarantees, system of insurance medicine. The rights of citizens, certain groups of the population and patients in the field of health protection. Rights. Social Network protection, duties and responsibilities of the health worker. Law "On Sanitary and epidemiological welfare of the population of the Kyrgyz Republic". Regulations on licensing of medical and pharmaceutical activities. Legal basis of healthcare management in the Kyrgyz Republic. Fundamentals of labor law. A measure for evaluating the quality of medical services. Performing an assessment of professional actions. Crime against the life, health, dignity of citizens, public safety and public health.

Compensation for damage caused to the health of citizens in case of improper provision of medical services help. Guarantees of medical and social assistance to citizens and medical expertise. Resolution of medical and legal disputes. Constitutional law. Society-Law-Medicine. Fundamentals of the Laws "Protection of maternity", "Protection of the rights of children and minors". Healthcare system of the Kyrgyz Republic. Objects of a legal relationship that arises by rendering services medical help.

Legal entities fundamentals of a doctor's responsibility when committing an illegal act. The right to engage in medical activities in the Kyrgyz Republic. Legal basis of citizens' health insurance.

Legal aspects of transplantology and resuscitation. The concept and principles of public international law. Fundamentals of social security law. The concept of an official crime and an official in the healthcare system. Fundamentals of environmental management rights. Violation rules requests with drugs and strong substances.

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

To know:

- system of organization of forensic medical examination in the Kyrgyz Republic;
- rights, duties and responsibilities of a doctor;
- methods of establishing the limitation period for the occurrence of death, the concept of "bodily injuries", classification of injuries the concept of "brain death";
- regulatory provisions for the determination of death;
- probable signs of death, the concept "experience" tissue disorders (supravital reactions), early and late cadaveric changes circumstances of criminal liability of medical personnel employees in connection with the performance of their official and professional duties.

be able to:

- apply the legal and medical aspects of determining the death of a person, state biological and clinical death,
- conduct an examination of the body at the place of its discovery,
- identify physical evidence of biological origin and organize their referral for examination;
- conduct a forensic medical examination of living persons and interpret the results of laboratory tests, objects of forensic medical examination

Possess to:

- methods of conducting a medical forensic examination to determine the nature and severity of injuries;
- methods of collecting sectional material for laboratory research (chemical, biological, medical and forensic);
- methods of ascertaining death the method of examining the corpse at the place of its discovery (incident);
- methods for describing injuries;
- methods of examination of victims and suspects in some cases gender groups crimes.

The total labor intensity of mastering the discipline is 2 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Forensic medicine"**

Objective of the discipline: the main purpose of teaching forensic medicine is to teach students the theoretical and practical issues of forensic medicine to the extent necessary for the successful performance of the duties of a specialist in production initial payments investigative services actions, introduction their

morphological features of the course of pathological processes in mechanical trauma and some extreme conditions (terminal conditions, death and cadaverous changes, poisoning, mechanical asphyxia); legal regulation and organization of forensic medical examination, issues of liability of doctors for causing harm to health and for professional and professional-official offenses.

Objectives of the discipline:

- ensuring the audience and information needs of students ' training by giving a course of lectures and conducting practical classes, the materials of each of which are designed to improve the theoretical training of students both in special forensic medicine and in a broader general medical context;
- instill students a minimum of practical skills and abilities through conducting practical classes, where students, under the guidance of a teacher, directly participate in the implementation of targeted forensic research methods (for example, research of corpses, clothing, injuries, diagnosis of death, etc.);
- ensuring the effectiveness of extracurricular work of students through rational organization of independent work of students in preparation for practical classes in forensic medicine;
- ensuring the development of the creative part of students ' knowledge by conducting individual, educational and research work of students.
- implementation of control of students 'knowledge at all levels of its assimilation by performing test tasks, drawing up control questions and control work (acts and conclusions of the CME) to check students' independent training, organizing modules and tests.

Content of the discipline: Subject and content of forensic medicine, its history. Process procedural basis of forensic medical examination in the Kyrgyz Republic The Republic. Organization of forensic medical examination in the Kyrgyz Republic. Forensic thanatology and examination (research) of the corpse. Inspection of the scene of the accident and the body at the place of its discovery. Forensic medical examination (research) of the corpse. Forensic traumatology. General issues of forensic traumatology. Damage caused by blunt, hard objects. Transport system injuries and falls from heights. Damage caused by sharp objects. Gunshot injuries mechanical asphyxia. Injuries and deaths caused by high and low temperatures and other physical factors. Forensic toxicology. Forensic medical examination of victims, suspects and other persons. Forensic medical examination of material evidence of biological origin. Forensic medical examination in cases of professional and professional official offenses of medical workers. Medico – forensic research methods in forensic medicine. General provisions of forensic biological examination. General provisions of forensic biological examination. Procedure, organization and technique of performing forensic medical examination of physical evidence. Procedure for conducting a forensic chemical examination independent medical examination and commission forensic medical examination in medical cases.

As a result of mastering the discipline "Forensic Medicine", the student must know:

- system of organization of forensic medical examination in the Kyrgyz Republic;
- rights, duties and responsibilities of a doctor;
- methods of establishing the limitation period for the occurrence of death, the concept of "bodily injuries", classification of bodily injuries the concept of "brain death"; regulatory provisions for the determination of death;
- probable signs of death, the concept of "experiencing" tissues (supravital reactions), early and late cadaveric changes, the circumstances of criminal liability of medical workers in connection with the performance of their official and professional duties.

be able to:

- apply the legal and medical aspects of establishing the death of a person, state biological and clinical death, conduct an examination of the corpse at the place of its discovery, identify material evidence of biological origin and organize their referral for examination;
- conduct a forensic medical examination of living persons and interpret the results laboratory tests research projects, objects forensic medicine expert review

possess to;

- methods of conducting a medical forensic examination to determine the nature and severity of injuries;
- methods of collecting sectional material for laboratory research (chemical, biological, medical and forensic);
- methods of ascertaining death - the method of examining the corpse at the place of its discovery (incident); the method of describing injuries;
- methods of examination of victims and suspects in some cases gender groups crimes.

The total labor intensity of mastering the discipline is 3 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Clinical Psychology»**

The purpose of the discipline: To teach the student the basics of effective communication with the patient.

Objectives of the discipline:

- To form students' general understanding of communication and communication in the treatment process.
- Teach the skills of active listening, creating an atmosphere of cooperation.
- Teach proper interaction with difficult patients.
- Teach you how to work in large and small groups.
- Teach the skills of correctly informing patients and their relatives about the disease.

Content of the discipline: Man as a subject of psychology cognition. Perception of the surrounding world. The concept of consciousness as the highest form of mental development.

Thinking. Memory. Speech. Intelligence. Attention. Motivations and needs. Learning and

creativity. Emotional and volitional sphere of a person. A person's personality. Temperament.

Character. Mechanisms of psychological protection. Patient psychology. Difficult patient. Psychology of the doctor. Psychology of the treatment process. Communication in everyday life and the medical environment. Introduction to the patient. Creating an atmosphere of cooperation.

Clinical interview and features of doctor-patient interaction. Communication in the group. Ethics and deontology in the communicative process.

As a result of mastering the discipline "Clinical Psychology", the student must know:

- characteristics of psychology as a science;
- the main categories and concepts of scientific psychology;
- the main directions, approaches, theories in psychology and current trends in the development of psychological concepts;
- have an understanding of individual characteristics of a person, emotional and volitional regulation of his behavior, motivational sphere, self-awareness, cognitive processes and personal growth in general;
- on the peculiarities of consciousness as the highest form of psychic life;
- on the basic laws of functioning of the psyche;
- goals, functions, types and levels of communication;
- mechanisms of mutual understanding in communication;
- communication techniques and techniques, rules of listening, conversation, beliefs; ethical principles of communication;
- sources, causes, types, and methods of conflict resolution.

be able to:

- master the system of theoretical knowledge in the main sections of psychology;
- analyze different approaches to the categories of psychology and formulate your own definitions; scientifically substantiate your own position when analyzing psychological facts; give a reflexive assessment of your own behavior;
- scientifically substantiate your own position in the analysis of psychological facts;
- use the conceptual framework of psychology; use the scientific language of various psychological schools;
- apply effective communication techniques and techniques in your professional activities;
- use methods of self-regulation of behavior in the process of interpersonal communication.

Possess to:

- methods of self-regulation of behavior in the process of interpersonal communication;
- techniques and techniques of effective communication in professional activities.

The total labor intensity of mastering the discipline is 4 credits.

## **ANNOTATED PROGRAM CONTENT**

## **Academic disciplines**

### **"Psychiatry and narcology»**

The aim of the discipline is to develop competencies in identifying patients with mental and behavioral disorders and providing them with assistance at the primary health care level.

Objectives of the discipline:

the formation of students' communication skills with patients considering ethics and deontology, the formation of a holistic approach;

the formation of respect for the mentally ill, as an individual, as a normal patient in need of medical care;

the students ability to identify the leading symptoms and syndromes of mental disorders;

learning the knowledge of the pathogenesis, diagnostic features, course, differential diagnosis, principles of treatment and prevention of major mental and behavioral disorders;

training students to provide assistance to patients suffering from mental disorders at the PHC level

training students to identify criteria for referral to a specialist.

Content of the discipline: Psychiatry in the activities of a family doctor, GP, internist doctor. Causes of mental disorders. Basic measures for destigmatization in psychiatry. Application of the main provisions of the Istanbul Protocol in psychiatry. Methods of examination of patients with mental disorders in the practice of a PHC doctor. Features of interaction with patients suffering from mental disorders. Recognition of mental disorders. Assessment of the mental state. Features of counseling patients with mental disorders. Basic information for the patient and family. When you need consult a psychiatrist. Diagnosis and clinical manifestations of perception and thinking disorders. Influence of perception disorders on the process of diagnosis and treatment. Attention disorders, memory disorders, and intelligence disorders in the practice of a family doctor.

Features of counseling and diagnostics of patients with emotional-volitional and motor disorders (aggressive behavior, types of arousal) at the PHC level. Qualification of disorders of consciousness at the PHC level. Psychotropic substances means in the work of a general practitioner. The main groups of psychotropic drugs: indications, use in general somatic practice, therapeutic and side effects, complications. ICD-10, Chapter Y-Mental and behavioral disorders: structure, principles build.

Organic products, including symptomatic disorders in the practice of a family doctor. Diagnosis of mental disorders in epilepsy. Diagnosis of acute and chronic psychotic disorders at the PHC level. Patient and family counseling. Diagnosis of depressive disorders at the PHC level. Diagnosis of masked forms of depression. Features of the course of depression in some somatic diseases. Suicide. Signs of suicidal behavior. Assessment of the degree of suicide risk.



Patient and family counseling. Differential diagnosis of anxiety-phobic disorders. Diagnosis and treatment of panic disorder. Features of counseling and diagnostics of patients with generalized anxiety and obsessive-compulsive disorders. The main diagnostic criteria for stress-related disorders are acute stress response, post-traumatic stress disorder, and adjustment disorders. Qualification of psychological specialists consequences of torture. Providing advice. Differential diagnosis of dissociative (conversion) disorders, somatoform disorders. Diagnosis of eating disorders, sleep disorders. Specific personality disorders. Disorders of habits and drives. Advising patients and families. Diagnosis and differential diagnosis of mental retardation. Mental and behavioral disorders of childhood and adolescence often found at the PHC level: hyperkinetic disorder, behavioral disorders, inorganic enuresis, children's autism: diagnostic signs, basic information for the patient and family, indications for specialist consultation. Diagnostic criteria for mental and behavioral disorders due to the use of psychoactive substances: alcohol, opioids, cannabinoids, sedatives and sleeping pills, tobacco and other surfactants. Features of patient and family counseling. As a result of mastering the discipline "Psychiatry and narcology", the student must know: etiology, pathogenesis, diagnostic criteria and clinic of major mental disorders; the main groups of psychotropic drugs, indications for their use in the most common mental disorders at the PHC level. be able to: describe the mental state of patients with various mental disorders; identify the leading symptoms and syndromes of mental disorders; conduct differential diagnostic assessment of mental disorders; render help for patients with the most common forms of mental disorders at the PHC level; provide emergency care for urgent mental disorders; use psychotropic drugs in the complex treatment of outpatient mental disorders. to possess skills of communication with patients with mental disorders; the skills of history taking and interviews with patients with mental disorders; the skills of identifying patients with major forms of mental pathology; skills of diagnosis and differential diagnosis of major mental disorders; the skills of management of patients with mental disorders outpatient level; skills of emergency care for acute reaction to stress, panic disorder, delirious state, suicidal behavior, acute alcohol intoxication, opioid intoxication (overdose), psychomotor agitation.

The total labor intensity of mastering the discipline is 5 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

**"General physical therapy, medical supervision and physical therapy with clinical support rehabilitation services»**

Objectives of the discipline: training of a general practitioner is the formation of competencies by students on the basics of physiotherapy, balneology and physical therapy for conducting full-fledged complex therapy of patients, as well as rehabilitation and preventive measures aimed at restoring the functional state of the body and preventing diseases.

Objectives of the discipline:

- Training in the basics of medical rehabilitation,
- determination of indications and contraindications for medical rehabilitation facilities,
- introduction to modern methods of medical rehabilitation,
- evaluation of the effectiveness of rehabilitation measures.

Content of the discipline: Subject and tasks of physiotherapy. Mechanism of therapeutic action of electrotherapy. The role of a general practitioner in sports medicine and medical rehabilitation of patients. Spa treatment. Main resort factors.

Resorts in Kyrgyzstan. Hydrotherapy (showers, baths, rubdown, douching).

Balneotherapy (using mineral waters). Heat treatment (mud treatment, paraffin treatment, ozokeritolechenie). Light therapy (ultraviolet, infrared and visible radiation). Mechanical vibration treatment (ultrasound, ultra phonophoresis, vibrotherapy, shock wave therapy) and its therapeutic and preventive use.

Use of direct currents for treatment and prevention. Application of alternating currents and electromagnetic fields for treatment and prevention. Therapeutic use of magnetic fields. Application of pulsed currents for treatment and prevention.

Content of medical supervision. Medical groups. Medical report.

Familiarization with the scheme of medical examination of persons engaged in physical culture and sports (form 227). Self-examination. Basics of physical therapy, mechanism of action (means of physical therapy). Fundamentals of physical therapy (forms of physical therapy).

As a result of mastering the discipline "General physiotherapy, medical supervision and physical therapy with clinical rehabilitation", the student must know:

- methods of treatment and indications for use, the mechanism of therapeutic action of physical therapy and physiotherapy, indications and contraindications to their appointment, features of their implementation.

be able to:

- choose the means and methods of rehabilitation and physiotherapy for the main disabling pathology;
- create an individual rehabilitation program with predicting the result; choose the method of physiotherapy in the treatment of acute pathology.

Possess to:

- methods for assessing physical development;
- methods for assessing the functional state in the main disabling pathology;
- methods for conducting and evaluating standard load samples;

–the main methods of electrotherapy and light therapy.

The total labor intensity of mastering the discipline is 3 credits.

## **Block of medical and preventive disciplines ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"General hygiene, military hygiene"**

The purpose of the discipline: is to acquire a conscious understanding of the relationship of health status with the environment, factors and conditions of life and work in order for them to carry out effective medical and preventive measures among the population in the future during the implementation of professional medical activities in their chosen field

**OBJECTIVES OF THE DISCIPLINE: THEY CONSIST IN THE ACQUISITION OF ACADEMIC COMPETENCE BY STUDENTS, WHICH IS BASED ON:**

- formation of positive medical behavior in the adult population, adolescents and children aimed at maintaining and improving the level of health;
- formation of motivation for a healthy lifestyle in the adult population, adolescents and children, including the elimination of bad habits that adversely affect the health of the younger generation;
- training of the adult population, adolescents and children in the main health-improving activities that contribute to the prevention of diseases and health promotion.
- implementation of measures aimed at improving the health of children, adolescents and adults;
- prevention of diseases among children, adolescents and adults;
- formation of motivation among adults and children to preserve and promote health;
- carrying preventive measures and ant epidemiological measures events, aimed at preventing the occurrence of diseases;
- implementation of dispensary monitoring of the adult population, adolescents and children;
- carrying out sanitary and educational work among adults, children, their relatives and medical personnel in order to form a healthy lifestyle.
- Content of the discipline: Place and significance of hygiene in the system of medical sciences. Teaching about environmental hygiene. Environment and health. Hygienic bases of organization of water supply in populated areas. Hygienic bases of sanitary protection of the soil of populated areas. Physical properties and chemical composition of atmospheric air, its hygienic value. Lighting hygiene. Organization of rational lighting premises. Modern hygienic conditions problems hospital construction. The importance of hygiene measures in ensuring optimal conditions for patients ' stay in medical organizations. Influence of factors of the production environment on the health of employees. Prevention of occupational diseases. Nutrition as a health factor. Modern aspects of rational nutrition. Issues of prevention of alimentary diseases and food poisoning. Hygiene of children and adolescents. Methods of assessment of physical development and questions of organization of educational process. Fundamentals of organization of sanitary and hygienic measures in the Russian Federation wartime. Questions of personal hygiene and human health.

As a result of mastering the discipline "physical culture", the student must know:  
hygienic aspects of nutrition,  
hygiene of medical organizations,  
hygienic problems of medical and sanitary care for the working population;  
sanitary and hygienic requirements for the structure, organization and working hours of health organizations;  
organization of medical control over the state of public health,  
issues of disability expertise and medical and legal assistance to the population

be able to:  
to perform preventive measures,  
hygienic conditions and anti-epidemic measures events;

possess to:  
Skills of hygienic assessment of microclimate, ventilation,  
lighting, quality of drinking water and food products;  
Methods of determining indicators of physical development, physical fitness;  
Methods for assessing the actual nutrition and nutrition status, compiling and analyzing the menu layout of products;  
Methods for assessing the quality of water and food, the state of nutrition and working conditions of military personnel

The total labor intensity of mastering the discipline is 4 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"Public health and healthcare, health economics»**

The purpose of the discipline: Based on the study of the basic concepts of the discipline, to train a specialist who has the knowledge and skills to assess public health and its determining factors; systems that ensure the preservation, strengthening and restoration of public health;

organizational and medical technologies and management processes, including economic, administrative and organizational

Objectives of the discipline:

- analysis of the theoretical and methodological foundations of medical statistics;
- organization of medical and statistical research;
- methods for calculating statistical indicators used in medicine;
- analysis of public health indicators and recommendations for improving the health status of the population;
- analysis of performance indicators of healthcare organizations;
- methods of graphic images of statistical quantities used in medicine;

- organization of activities of health care institutions and their structural divisions, including organization of work with personnel;
- organization of work in healthcare institutions;
- carrying scientific and practical projects research projects by problems public transport health, organizations, management, economics public health services;
- independent work with educational, scientific, normative and reference literature

Content of the discipline: Public health and public health as a scientific discipline and subject of teaching. Fundamentals of medical statistics.

Statistical values. Evaluation of the reliability of average and relative values. Correlation analysis of medical phenomena. Medical and demographic indicators (general). Medical and demographic indicators (special ones). Methods for studying morbidity and disability. ICD-10. The role of health promotion services in shaping people's preventive thinking.

Health promotion. Fundamentals of the Health for All Policy in the 21<sup>st</sup>

Century. Strengthening health of children, women, and the elderly. Human resource management in healthcare. Leadership. Motivation, stimulation, and communication.

Organization of primary health care and inpatient care for the population.

Organization and evaluation of the quality of medical care for the population. Licensing and accreditation of medical institutions. Budget and insurance medicine.

Modern problems of public health protection and promotion.

Public health market.

As a result of mastering the discipline " Public health and public health, health economics" a student should know:

- fundamentals of the legislation of the Kyrgyz Republic, basic regulatory documents on public health protection;
- fundamentals of insurance medicine in the Kyrgyz Republic, structure of the modern healthcare system of the Kyrgyz Republic;
- methodology for calculating indicators of medical statistics; basics of applying statistical analysis the method in medical services research projects, use of statistical indicators in assessing the health status of the population and the activities of medical organizations;
- maintaining standard accounting and reporting medical documentation in medical organizations;

be able to:

- apply the statistical method of research in practical and scientific activities
- calculate statistical values using computer technologies, evaluate the significance of sample statistical indicators and their differences
- fill out the main accounting forms of medical documentation of healthcare organizations
- calculate the main health indicators of the population using computer technologies
- calculate key indicators and analyze the activities of healthcare organizations
- plan the activities of healthcare organizations based on state minimum social standards,

Possess to:

- statistical analysis skills;
- the main methods of processing scientific data.
- methods for assessing public health of the population;
- methods for evaluating the performance of healthcare organizations;
- management decision-making methods;
- ability to develop a set of preventive measures;
- methods for evaluating effectiveness in healthcare

The total labor intensity of mastering the discipline is 4 credits.

## **ANNOTATED PROGRAM CONTENT**

### **Academic disciplines**

#### **"General and clinical epidemiology"**

The aim of the discipline is to master theoretical and practical knowledge on the features of epidemiology of infectious and non-communicable diseases, organization and implementation of anti-epidemic measures aimed at preventing and reducing the incidence of the population.

Objectives of the discipline:

- provide theoretical knowledge on general epidemiology;
  - develop practical skills in conducting epidemiological investigations, anti-epidemic and preventive measures
  - develop independent epidemiological thinking aimed at effective use of the acquired knowledge in the organization of epidemiological surveillance
  - develop students' competencies to establish causal relationships and identify risk factors;
  - develop competencies for self-assessment of the results of their activities;
  - prepare the graduate for practical performance of functional duties in special health care units and institutions of the civil defense medical service and the disaster medicine service;
  - to train students in the implementation of supervision functions for health care facilities to ensure sanitary and epidemiological well-being
- General epidemiology: Epidemiology, its place in the structure of medical science. Subject of studying epidemiology. System-structural characteristics of the doctrine of the epidemic process. Causes and driving forces of the epidemic process development. The place and significance of immunization in the system of anti-epidemic measures for various infections. Current trends in epidemiology. Epidemiological approach to the study of human diseases. Mechanism of development of the epidemic process. Content of immunoprophylaxis. Maintenance of disinfection and sterilization.
- Clinical and military epidemiology: Epidemiological research methods, their purpose in assessing the state of health. Epidemiological features of aerosol infections and their epidemiological surveillance system. Epidemiological features of intestinal infections and the system of epidemiological surveillance for them. Epidemiological features of the group of vector-borne and external skin infections and the system of epidemiological

surveillance for them.

Epidemiological features of parasitosis and their epidemiological surveillance system

Epidemiological surveillance of nosocomial infections. Procedure

for disposing of medical waste. Theoretical and methodological foundations of military epidemiology. Clinical epidemiology is the foundation of evidence-based

medicine. Subject, goals and objectives of clinical epidemiology.

As a result of mastering the discipline "General and clinical Epidemiology", the student should know:

–The specifics of the population level of life organization and its reflection in medicine; the influence and ratio of genotypic, phenotypic and environmental (social and natural) "risk factors" that determine the pathology of people.

–General patterns of occurrence and spread of infectious, parasitic and non-communicable diseases among the population and in military collectives.

–Causes and conditions, mechanism of development and manifestation of the epidemic process among the population in certain nosological forms.

–Features of the epidemic process in the context of the use of weapons of mass destruction by the enemy and during natural disasters.

–Methodological and organizational bases of epidemiological surveillance of individual groups and nosological forms of infectious and parasitic diseases.

–Fundamentals of epidemiological diagnostics with methods of evidence-based medicine and clinical epidemiology.

be able to:

–Carry out the necessary anti-epidemic and preventive measures.

–measures in the foci of certain groups and nosological forms of infectious and parasitic diseases.

–Calculate indicators that characterize morbidity.

–To assess the epidemiological situation of the served territory on the basis of retrospective and operational epidemiological analyses.

–Evaluate the potential and actual effectiveness of individual anti-epidemic measures and their complex.

--To assess the sanitary and epidemiological condition of the unit, its location area, and then determine the list of measures for anti-epidemic and anti-bacterial protection of troops.

Possess to:

proper maintenance of medical records.

The total labor intensity of mastering the discipline is 3 credits.

## **ADDITIONAL TYPES OF TRAINING**

### **ANNOTATED PROGRAM CONTENT**

#### **Academic disciplines**

#### **"Physical education»**

The purpose of the discipline: is to form the worldview and culture of a person who has a unique personality. Civil by position, moral principles qualities, a feeling responsibilities,

Independence in acceptance solutions, initiative, tolerance, the ability to successfully socialize in society, the ability to use various forms of physical culture and sports in everyday life to preserve and strengthen their health and the health of their loved ones, family and work collective for a high-quality life and effective professional activities. Objectives of the discipline:

- Providing an understanding of the role of physical education in personal development and preparation for professional activity.
- Forming motivational and value-based approach relationships to physical education, attitudes towards a healthy lifestyle, and the need for regular exercise.
- Mastering the system of special knowledge, practical skills and abilities that provide Conservation and strengthening health, formation of compensatory processes, correction of existing deviations in the state of health, mental health well-being, development and Improvement of psychophysical abilities, formation of professionally significant qualities and personality traits.
- Adaptation of the body to the effects of mental and physical stress, as well as expanding the functional capabilities of physiological systems, increasing the resistance of the body's defenses.
- Mastering the methodology of forming and performing a set of health-improving exercises for independent classes, methods of self-control when performing physical activities of various types, personal hygiene rules, and a rational work and rest regime.
- Mastering the means and methods of countering unfavorable factors and working conditions, reducing fatigue in the process of professional activity and improving the quality of results.

Content of the discipline: Physical culture in general cultural and professional training of students. History of the formation and development of the Olympic Movement and University Games. Socio-biological foundations of physical culture. Fundamentals of a healthy student lifestyle. The role of physical culture in ensuring health Therapeutic physical culture as a means of prevention and rehabilitation in various diseases. Psychophysiological foundations of educational work and intellectual activity. Means of physical culture in the regulation of working capacity General physical and special training in the system of physical education. Structure of physical culture of the individual. The importance of motivation in the field of physical culture.

Problems of forming students ' motivation for physical culture classes Sport.

Classification of sports. Features of practicing an individual sport or a system of physical exercises.

As a result of mastering the discipline "Physical education", the student should know:

- social role of physical culture in personal development and preparation for professional activity;
- principles of a healthy lifestyle;
- factors conducive to health stabilization;
- family-friendly activities;
- features of the physiological state of people of different ages;
- types and forms of independent physical education and sports activities;



- mechanism of action of hardening procedures on the human body;
- main types of hardening procedures;
- characteristics of body types;
- a program of body shaping by means of physical exercises;
- classification of reserves of the human body;
- on the reserve capabilities of a person in the conditions of labor, household and sports activities.

be able to:

- understand the issues of physical culture used for prevention and treatment;
- evaluate a person's functional state;
- calculate a person's biological age;
- apply methods for assessing the functioning of the cardiovascular system;
- realize selection process facilities for recoveries physical working capacity;
- apply methods for assessing a person's physical development;
- apply methods for assessing the human respiratory system;
- use massage techniques for preventive and curative purposes.

Possess to:

- skills in using sources of information on healthy lifestyle issues, electronic databases, and Internet resources;
- skills in carrying out activities that increase a person's commitment to leading a healthy lifestyle;
- skills fill-ins your diary self-monitoring by classes health-improving physical culture and sports;
- skills developments recommendations to the public by to use health-improving techniques;
- methods of physical self-improvement and self-education.

The total labor intensity of mastering the discipline is 400 hours.