

DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY

Department of **Pediatrics № 1**

**“APPROVED”**



Acting the First pro-rector  
on scientific and academic affairs  
Associate Professor Iryna SOŁONYNKO

*Iryna Solonyenko*

10 \_\_\_\_\_ 2023

**DISCIPLINE PROGRAM**

**"Paediatrics"**

**SB 3.2**

**Individual profile course Surgery**

**SB 3.1.3 PEDIATRICS, CHILDREN'S INFECTIONS**

**3.1.3.1 - PEDIATRIC**

**Training of specialists of the second (master's) level of higher education  
field of knowledge 22 «Health Care»  
specialty 222 "Medicine"**

Discussed and approved  
at the methodological meeting of the  
Department of Pediatrics No 1  
Protocol No 16  
of "20" April 2023  
Head of Department  
Professor Sergiy NYANKOVSKYY

*Sergiy Nyankovskyy*

Approved by the profile  
Methodical Commission  
of Pediatric disciplines  
Protocol No 4  
of "07" 09. 2023  
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## INTRODUCTION

### The program in the discipline "Pediatrics"

in accordance with the Educational and professional program "Medicine" of the second (master's) level of higher education  
fields of knowledge 22 "Health care"  
specialty 222 "Medicine"

### Description of the discipline (summary)

In the study of the discipline "Pediatrics" students consolidate the knowledge gained during classes at the Department of Propaedeutics of Pediatrics, Departments of Pediatrics in 4-5 courses, improve skills in the examination of pediatric patients, establishing clinical diagnoses, concomitant diseases, conducting differential diagnostics, evaluating the examination results and prescribing the necessary tests, prescribing complex treatment with drug doses, providing emergency medical care not only for typical cases but also for complex clinical cases. The final year students solve complex (non-typical) situational tasks, practice their skills on dummies and at the bedside of a sick child, and keep medical records.

| Structure of discipline         | Quantity of credits, hours consist of: |           |           | Academic Year | Types of Control |                             |
|---------------------------------|--|-----------|-----------|---------------|------------------|-----------------------------|
|                                 | Total hours/credit                     | Classroom |           |               |                  | Independent work of student |
|                                 |  | Lectures  | Workshops |               |                  |                             |
| Consists of 6 thematic chapters | 6 credits / 180 hours                  | 0         | 90        | 90            | 6                | Credit                      |

### The subject of the discipline is:

Differential diagnosis of diseases of the bronchopulmonary, cardiovascular, digestive, urinary systems, rheumatological diseases in children of different age groups. Emergency care in case of severe complications, resuscitation of newborns. Prevention and treatment of diseases, taking into account the main, concomitant diagnoses and complications, age-specific features of drug therapy.

**Interdisciplinary connections:** according to the curriculum, the study of the discipline "pediatrics" is provided in the 6th year (XI-XII semesters), when the student has acquired knowledge of the main basic disciplines, clinical departments 3-5 courses:

- Medical biology,
- Biological physics
- Normal human anatomy and physiology
- Pathological anatomy and physiology
- Pediatric propaedeutics
- Pharmacology
- Microbiology
- Clinical immunology
- Pediatrics 4-5 courses

The program of the discipline "Pediatrics" is integrated and continued with these disciplines. As a continuation of pediatrics propaedeutics, our discipline, along with other clinical disciplines, involves the integration of teaching with these disciplines and the formation of future doctors' skills to apply the acquired knowledge in their further professional activities.

### 1. Purpose and objectives of the discipline

- 1.1. The purpose of teaching the discipline "Pediatrics" is

The development of the ability to utilize knowledge, skills, and understanding to address typical and complex tasks within the field of pediatric healthcare, with applications encompassing specific syndromes and disease symptoms, urgent conditions, physiological states, and illnesses necessitating specialized patient management strategies; including laboratory and instrumental investigations, as well as medical procedures.

- 1.2. The main **task** of studying the discipline "pediatrics" is what the student should know and be able to do when studying the discipline

As a result of studying the discipline "pediatrics" the student **should know:**

- etiological factors of the most common somatic diseases of childhood;
- pathogenetic links of the most common somatic diseases of childhood;
- classification of the most common somatic diseases of childhood;
- basic clinical symptoms of the most common somatic diseases of childhood;
- principles of treatment of the most common somatic diseases of childhood.

As a result of studying the discipline "pediatrics", the student **should be able to**

- take anamnesis;
- conduct an examination of a sick child;
- make a preliminary clinical diagnosis;
- plan the examination of a sick child;
- interpret the data of laboratory and instrumental studies;
- to conduct differential diagnosis of the most common diseases of childhood in the case of their typical course;
- prescribe treatment;

- 1.3. **Competence and learning outcomes**, the formation of which is facilitated by the discipline in accordance with the requirements of the Standard of Higher Education.

The discipline provides students with the acquisition of the following **competences**:

***Integral competence:***

The ability to solve complex problems, including those of a research and innovation nature in the field of medicine Ability to continue learning with a high degree of autonomy.

***General competences:***

|      |   |
|------|---|
| GC1  | The ability to abstract thinking, analysis, and synthesis   |
| GC2  | Ability to learn and master modern knowledge  |
| GC3  | Ability to apply knowledge in practical situations  |
| GC4  | Knowledge and understanding of subject area and understanding of professional activity  |
| GC5  | The ability to adapt and act in a new situation   |
| GC6  | Ability to make a justified decision  |
| GC7  | Ability to work in a team   |
| GC8  | Interpersonal skills interaction  |
| GC9  | Ability to communicate in foreign language  |
| GC10 | Skills in using information and communication technologies  |
| GC11 | Ability to search, process and analyze information from various sources   |
| GC12 | Awareness and perseverance concerning taken tasks and duties  |
| GC14 | The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights  |
| GC15 | Ability to preserve and increase moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to use various types and forms of physical activity for active recreation and healthy lifestyle |

**Professional (Special) competences:**

|      |  |
|------|--|
| PS1  | Ability to collect medical information about the patient and analyze clinical data   |
| PS2  | Ability to determine the required list of laboratory and instrumental studies and assess their results   |
| PS3  | The ability to establish preliminary and clinical diagnoses  |
| PS5  | Ability to prescribe an appropriate diet in treatment and prevention of diseases   |
| PS6  | Ability to determine the principles and type of treatment and prevention of diseases   |
| PS7  | Ability to diagnose emergency conditions   |
| PS8  | Ability to determine the tactics of emergency medical care   |
| PS10 | The skills of performing medical manipulations   |
| PS11 | Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information taking into account aspects of social and ethical responsibility      |
| PS13 | Ability to carry out sanitary and preventive measures  |
| PS14 | Ability to plan and implement preventive and anti-epidemic measures against infectious diseases  |
| PS16 | Ability to maintain medical records, including electronic forms  |
| PS17 | Ability to assess the impact of the environment, socio-economic and biological determinants on the health of an individual, family, population   |
| PS21 | Clearly and unambiguously communicate one's own knowledge, conclusions, and arguments about health problems and related issues to professionals and non-specialists, particularly to trainees. |
| PS24 | Adherence to ethical principles when working with patients   |
| PS25 | Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results   |

Detailed competences are present in accordance with the descriptors of the NRK in the form of "Competences Matrix".

**Competences Matrix**

|  | <b>Competence</b>  | <b>Knowledge</b>  | <b>Skills</b>  | <b>Communication</b>                                     | <b>Autonomy and responsibility</b>                                |
|--|--|---|--|--|---|
| <b>Integral competence</b>   |  |   |  |  |   |
| The ability to solve complex problems, including those of a research and innovation nature in the field of medicine Ability to continue learning with a high degree of autonomy. |  |   |  |  |   |
| <b>General competence</b>  |  |   |  |  |   |
| 1.   | Abstract thinking, analysis and synthesis capability (GC1) | Know the ways of analyzing, synthesis and further modern learning   | Be able to analyze information, make informed decisions, be able to master modern knowledge    | Establish the appropriate links for achieving the goals. | To be responsible for the timely acquiring of modern knowledge.   |
| 2.   | Ability to learn and master modern knowledge (GC2)         | To know the current trends of medicine development and analyze them | Be able to analyze professional information, make informed decisions, acquire modern knowledge | Establish the appropriate links for achieving the goals. | To be responsible for the timely acquisition of modern knowledge. |

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| 3.  | Ability to apply the knowledge in practical situations (GC3)                | Have specialized conceptual knowledge, acquired in the process of studying.                      | To be able to solve difficult tasks and problems that arise in professional activity.                                   | Understandable and unequivocal explanation of own conclusions and knowledge to specialists and non-specialists. | To be responsible for decisions, made in difficult conditions  |
| 4.  | Knowledge and understanding of subject area and professional activity (GC4) | Have profound knowledge in the structure of professional activity.                               | Be able to carry out professional activities that need updating and integrating knowledge.                              | Ability to effectively form communications strategy in professional activities                                  | To be responsible for professional development, the ability to further professional training with a high level of autonomy |
| 5.  | The ability to adapt and act in a new situation (GC5)                       | To know types and ways of adaptation, principles of action in a new situation                    | To be able to use means of self-regulation, to be able to adapt to new situations (circumstances) of life and activity. | Establish appropriate links to achieve the result.  | To be responsible for, timely use of methods of self-regulation.   |
| 6.  | The ability to make a justified decision (GC6)                              | To know the tactics and strategies of communication, laws and methods of communicative behavior  | To be able to make justified decisions, choose the ways and strategies of communication to ensure effective teamwork    | Use strategies to communicate and interact with interpersonal skills  | To be responsible for choice and tactics of communication method   |
| 7.  | Ability to work in a team (GC7)   | To know the tactics and strategies of communication, laws and methods of communicative behavior. | To choose the ways and strategies of communication to ensure effective teamwork   | Use communication strategies  | To be responsible for choice and tactics of communication method   |
| 8.  | Skills of Interpersonal interaction (GC8)                                   | Know the laws and ways of interpersonal interaction  | To choose the ways and strategies of communication for interpersonal interaction  | Use the skills of interpersonal interaction   | To be responsible for choice and tactics of communication method   |
| 9.  | Ability to communicate in foreign language (GC9)                            | Have basic knowledge of a foreign language   | Able to communicate a foreign language.   | Use a foreign language in professional activities   | To be responsible for the development of professional knowledge with the use of foreign language.                          |
| 10. | Skills of using of informative and communicativ                             | To possess profound knowledge in the field of  | To be able to use informative and communicative technologies in   | Using of informative and inter-communicative  | To be responsible for the development of professional  |

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|     | e technologies (GC10)   | informative and communicative technologies applied in professional activities   | the professional field, that need updating and integrating the knowledge.   | technology in professional activities   | knowledge and skills.   |
| 11. | Ability to search, process and analyze information from various sources (GC11)  | Have knowledge about searching and analysis of information from various sources   | Be able to search, process and analyze information  | Obtain information from a particular source and draw conclusions from its analysis  | Be responsible for the completeness and quality of information analysis and conclusions   |
| 12. | Awareness and perseverance concerning taken tasks and duties (GC12)   | Know the responsibilities and ways of fulfilling the tasks  | To be able to identify goals and objectives to be persistent and conscientious in the performance of responsibilities     | To establish interpersonal-net connections for effective execution of tasks and responsibilities                                  | To be responsible for the quality of fulfillment of the tasks   |
| 13. | Awareness of equal opportunities and gender issues (GC13)   | To know and be aware of equal opportunities and gender issues   | Be able to evaluate rights and responsibilities regarding equal opportunities and gender issue                            | Establish interpersonal interaction based on equal opportunities and excluding gender problems                                    | Be responsible for establishing equal opportunities and eliminating gender issues   |
| 14. | The ability to exercise their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights (GC14) | Know your social and civil rights and responsibilities  | To form your civil consciousness, to be able to act in accordance with it   | Ability to convey own public and social position  | To be responsible for the own citizenship position and activity   |
| 15. | Ability to preserve and enhance moral, cultural, scientific values and achievements of society  | To know the moral, cultural, scientific values and achievements of society based on an understanding of the history and | Be able to preserve and increase moral, cultural, scientific values and achievements of society based on an understanding | Adhere to moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of | To be responsible for the observance of moral, cultural, scientific values and achievements of society based on an understanding of the history and |

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| based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to use various types and forms of physical activity for active recreation and healthy lifestyle (GC15) | patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to know about various types and forms of physical activity for active recreation and healthy lifestyle | of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, use various types and forms of physical activity for active recreation and be able to lead a healthy lifestyle | development of the subject area, their place in the general system of knowledge about nature and society and in the development of society, technology and technology, adhere to various types and forms of physical activity for active recreation and healthy lifestyle | patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology |
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**Special (Professional, subject) competence**

|    |  |  |  |   |  |
|----|--|--|--|---|--|
| 1. | Ability to collect medical information about the patient and analyze clinical data (PC1) | To have specialized knowledge about the child, her organs and systems, the anatomical and physiological peculiarities of the children of different age, to know the standard methods of inquiry, taking genealogical information, preparation of pedigree, physical examination of patient of different ages. To know the methodology for assessment of prenatal | To be able to talk to a child-and/or her parents (guardians), on the basis of algorithms and standards. Use the principles of communication with the parents of children with incurable diseases. Using standard techniques To carry out examination of the patient. Be able to examine psychomotor and physical development of the child. Able to assess the quality of care, | To effectively form a communication strategy when communicating with the patient and/or his parents (guardians). Transfer information about the health of the child or intrauterine development of the fetus to the relevant medical documentation. | Be responsible for qualitative gathering of information received on the basis of interviews, surveys, review, and palpation, percussion of organs and systems and for timely assessment of the condition: child's health, psychomotor and physical development of the child and Intrauterine development of fetus and for taking appropriate measures. |
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|   |  | development of the fetus. Know the stages and methods of examination of psychomotor and physical development of the child.  | infant feeding and nutrition of children. Be able to conduct a comprehensive assessment of child health.  |  |   |
| 2 | Ability to determine the required list of laboratory and instrumental studies and assess their results (PC2) | To have specialized knowledge about the child, her organs and systems, standard methods of laboratory and instrumental examinations   | To be able to analyze the results of laboratory and instrumental examinations and to make preliminary diagnosis   | To form and convey to the patient and/or his/her parents (guardians), experts conclusions on the necessary List of laboratory and instrumental studies                   | Be responsible for deciding on the results evaluation of laboratory and instrumental examinations   |
| 3 | Ability to establish preliminary and clinical diagnosis (PC3)  | To have specialized knowledge about the child, its organs and systems; Standard methods of examination; algorithms for diagnosing diseases; Algorithms for selection of leading symptoms or syndromes; preliminary and final clinical diagnoses; methods of laboratory and instrumental examination; Assessment of the child's condition. | Be able to conduct physical examination of the patient; Be able to make informed decisions about allocation of leading clinical symptom or syndrome; Be able to make the preliminary and final clinical diagnosis; to recommend laboratory and instrumental examination of the patient by applying standard methods | On the basis of normative documents fill in medical documents- (ambulatory and hospital cards, etc.).  | On the basis of ethical and legal norms, be responsible for making reasonable decisions and actions on the correct preliminary and final clinical diagnosis |
| 4 | Ability to prescribe an appropriate diet in treatment and prevention of diseases (PC5)                       | Have specialized knowledge about algorithms and standard schemes of nutrition for healthy children and during the   | Be able to determine the type of nutrition of healthy children and on the basis of preliminary and final diagnoses, the type of nutrition in the treatment of   | Formulate and communicate to the patient and/or their parents (guardians), specialists conclusions on the nutrition of healthy children and in the treatment of diseases | Be responsible for the reasonableness of nutritional determinations for healthy children and in the treatment of illness                                    |

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|   |  | treatment of diseases   | diseases   |  |  |
| 5 | Ability to determine the principles and type of treatment and prevention of diseases (PC6) | Have specialized knowledge of algorithms and standard methods for disease treatment   | Able to determine the principles and methods of treatment of disease   | To form and convey to the patient and/or his/her parents (guardians), experts own conclusions about the principles and methods of the treatment  | Be responsible for deciding on the principles and methods of treatment of disease  |
| 6 | Ability to diagnose emergency conditions (PC7)   | To have specialized knowledge about the person, its organs and systems, standard methods of human examination (at home, on the street, in the health care institution) in terms of lack of information.   | To be able, in terms of lack of information, using standard methods, to make a reasonable decision, to assess the condition of the person and determine the main clinical syndrome (or what is due to the severity of the victim/injured)  | Under any circumstances, on the basis of appropriate ethical and legal norms, make a reasonable decision concerning assessment of the severity of the human condition, diagnosis and organization of necessary medical measures, depending on the human condition; fill in relevant medical documents. | Be responsible for the timely and effective medical measures for the diagnosis of emergency conditions.  |
| 7 | Ability to determine the tactics of emergency medical care (PC8)                           | Know legislative base for emergency medical care, including the law of Ukraine "on emergency medical care". To have specialized knowledge about human emergency conditions; principles of emergency medical care, algorithms for providing emergency medical care for emergency states. | To be able to determine emergency conditions; The principles and tactics of emergency medical care; To carry out organizational and diagnostic measures aimed at rescue and save the human life. To be able to provide emergency medical care in the emergency state of a person | Substantiate and explain to the patient or his legal representative the need for emergency assistance and get consent for medical intervention. Explain the need and procedure for therapeutic measures of emergency medical care.   | Be responsible for correct determination of urgent state, degree of its severity and tactics of emergency medical care. Responsible for timeliness of and quality of emergency medical care. |
| 8 | The skills of  | To have   | Be able to carry   | Reasonably   | To be responsible  |

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|    | performing medical manipulations (PC10)  | specialized knowledge about the child, its organs and systems, the anatomical physiological and age peculiarities; Knowledge of algorithms of medical manipulations  | out medical manipulations   | formulate and communicate to the patient, and/or their parents (guardians), specialists the conclusions about the need for medical manipulation   | for the quality of medical manipulations   |
| 9  | Ability to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information taking into account aspects of social and ethical responsibility (PC11) | Have specialist knowledge of standard child assessment techniques (at home, outdoors, in a health care setting) new or unfamiliar environments and in information-poor settings  | Be able to assess the child's condition and identify the main clinical syndrome (or the severity of the victim's condition) in an information-poor environment, using standard techniques   | In all circumstances, respecting appropriate ethical and legal standards, make an informed decision on the assessment of the severity of the child's condition, the diagnosis and the organisation of the necessary medical measures according to the child's condition; complete the relevant medical documents  | Be responsible for solving medical problems in new or unfamiliar environments in the presence of incomplete or limited information   |
| 10 | Ability to provide sanitary and preventive measures (PC13)   | To know the system of hygienic and prophylactic events among the population observed.<br>To know the principles of organization of follow-up of different groups of population, who are subject to supervision (newborns, children, teenagers) and a group of patients;<br>To know the assessment indicators of the organization and efficiency of follow-up. To | Be able to form groups of children for their clinical examination.<br>Be able to make a plan for clinical groups.<br>Have skills in organizing the follow-up contingents.<br>Have the skills to analyze the health of population groups based on the results of clinical and medical and preventive measures.<br>Have skills in drafting analytical certificate about | Based on the results of clinical examination and analysis of children's health, state of production and environment know the principles of submitting analytical information to the local management and health authorities; to heads of industrial enterprises about method of elimination the harmful effects on children's health. Use the local press to publications on health | Be responsible for timely and qualitative activities on assessment of the health of children, health improvement and improvement of the health of certain contingents, improving the environment, promoting healthy lifestyles, primary prevention of diseases and injuries. |

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|  |     | <p>know the methodical approaches to assess the condition of the surrounding environment and the presence of factors which affect the health of the population in these conditions. Know principles of rational nutrition, water supply, mode of activity and rest, forming a favorable work environment, primary prevention of diseases and injuries; Principles and methods of promoting healthy lifestyles</p> | <p>the health of children depending on factors of industrial and environmental conditions. Able to organize the propaganda of healthy lifestyles, primary prevention of diseases and injuries of the population.</p> | <p>improvement activities and environmental improvements, use radio, television, lectures and interviews.</p>  |   |   |
|  | 11  | Ability to plan and implement preventive and anti-epidemic measures against infectious diseases (PC14)  | Know the system of hygiene and preventive measures among the assigned population.  | Have skills in analyzing the health status of population groups and developing medical and preventive measures.  | Clearly and unambiguously communicate your knowledge of the need for preventive and anti-epidemic measures to professionals and non-specialists | To be responsible for the timely and high-quality implementation of preventive and anti-epidemic measures             |
|  | 12. | Ability to keep medical records, including electronic forms (PC16)  | Know the system of official document circulation in the doctor's work, including modern computer information technology  | Be able to determine the source and location of the required information depending on its type; To be able to process information and analyze received information | To receive the necessary information from the defined sources and form the relevant conclusions based on its analysis                           | Be responsible for the completeness and quality of the analysis of information and conclusions based on its analysis. |
|  | 13. | Clearly and unambiguously communicate one's own knowledge, conclusions,   | To think critically about problems in the field and on the border of the fields of knowledge   | Ability to solve problems in new and unfamiliar environments in the presence of incomplete or limited  | Use foreign languages in professional activities  | Be responsible for contributing to professional knowledge and practice and/or evaluating results                      |

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|     | and arguments about health problems and related issues to professionals and nonspecialists, particularly to trainees (PC21)        |   | information, taking into account aspects of social and ethnic responsibility |   |  |
| 14. | Adherence to ethical principles when working with patients (PC24)  | Know ethical principles of Helsinki declaration of human rights as medical subjects, and other law of harmonization in medical practice | Be able to follow ethical principles when working with patients              | Communicate ethical principles when working with patients       | To be responsible implementation of ethical principles into practice               |
| 15  | Adherence to professional and academic integrity, to be responsible for the reliability of the obtained scientific results (PC 25) | Know the basic principles of academic and professional integrity  |  | Adhere to the principles of academic and professional integrity | Be responsible for observing the principles of academic and professional integrity |

### Learning outcomes:

Integrative final program learning outcomes, the formation of which is facilitated by the discipline:

PLO 1. Have a thorough knowledge of the structure of professional activity. Be able to carry out professional activities that require updating and integrating knowledge. To be responsible for professional development, the ability to further professional training with a high level of autonomy.

PLO 2. Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient to solve professional problems in the field of health care.

PLO 3. Specialized conceptual knowledge, including scientific achievements in the field of health care and is the basis for research, critical thinking of problems in the field of medicine and related interdisciplinary problems.

PLO 4. To isolate and identify the leading clinical symptoms and syndromes; according to standard methods, using preliminary data from the patient's history, examination data, knowledge of the child's organs and systems, to establish a preliminary clinical diagnosis of the disease.

PLO 5. Collect complaints, anamnesis of life and disease, assess the patient's psychomotor and physical development, the state of organs and body systems, evaluate information on the diagnosis based on the results of laboratory and instrumental studies, taking into account the patient's age.

PLO 6. To establish the final clinical diagnosis by making an informed decision and analyzing the obtained subjective and objective data of clinical, additional examination, differential diagnosis, adhering to the relevant ethical and legal standards, under the supervision of a supervising physician in a health care facility.

PLO 7. To prescribe and analyze additional (mandatory and optional) methods of examination (laboratory, functional and/or instrumental) of patients with diseases of organs and systems of the body for differential

diagnosis.

PLO 9. Determine the nature and principles of treatment of patients with diseases, taking into account the age of the patient on the basis of a preliminary clinical diagnosis, adhering to relevant ethical and legal standards, by making an informed decision on existing algorithms and standard schemes, if necessary, expand the standard scheme to be able to justify personalized recommendations under the supervision of a supervising physician in a medical institution.

PLO 10. Determine the necessary regimen of work, rest and nutrition based on the final clinical diagnosis, adhering to the relevant ethical and legal standards, by making an informed decision according to existing algorithms and standard schemes.

PLO 12. To assess the general condition of a newborn child by making an informed decision according to existing algorithms and standardized schemes, adhering to relevant ethical and legal standards

PLO 13. To assess and monitor the development of the child, provide recommendations on feeding and nutrition depending on age, organize preventive vaccinations according to the calendar.

PLO 14. Determine the tactics and provide emergency medical care in case of emergencies in a time-limited environment in accordance with existing clinical protocols and standards of care.

PLO 17. Perform medical manipulations in a medical institution, at home on the basis of a preliminary clinical diagnosis and / or indicators of the patient's condition by making an informed decision, adhering to relevant ethical and legal standards.

PLO 18. Determine the state of functioning and limitations of a person's vital activity and the duration of disability with the preparation of relevant documents in a health care facility based on data on the disease and its course, peculiarities of a person's professional activity, etc. Maintain medical records for the patient and a certain population on the basis of regulatory documents.

PLO 20. Analyze the epidemiological situation and carry out measures of mass and individual, general and local prevention of infectious diseases.

PLO 21. Search for the necessary information in professional literature and databases of other sources, analyze, evaluate and apply this information.

PLO 24. To organize the necessary level of individual safety (own and persons taken care of) in the event of typical dangerous situations in the individual field of activity.

PLO 25. To clearly and unambiguously communicate own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists.

PLO 29: Plan, organize and implement measures for the specific prevention of infectious diseases, including in accordance with the National Immunization Schedule, both mandatory and recommended. Manage vaccine stocks, organize additional vaccination campaigns and immunization activities.

### **Learning outcomes for the discipline:**

- Evaluate information about the diagnosis in a health care facility, its unit, using knowledge of the patterns of development and course of diseases in children, based on the results of the patient's examination, laboratory and instrumental studies.
- Carry out differential diagnosis of the disease.
- To prescribe treatment.
- Determine the prognosis of the disease.

## **2. Information volume of the discipline**

The discipline is allocated 6 ECTS credits 180 hours.

### **Content section 1.**

**Differential diagnosis of the most common respiratory diseases in children. Emergency care for major emergencies.**

**Topic 1: Differential diagnosis of pneumonia in children. Acute respiratory disease COVID-19 in children. Modern aspects of treatment.**

Leading clinical symptoms and syndromes in various clinical variants and complications of pneumonia in children. Problems of acute respiratory disease COVID-19 in children at the present stage. Data of laboratory and instrumental studies in various clinical variants of pneumonia.

Differential diagnosis of pneumonia, bronchitis and bronchiolitis in children. Establishment of preliminary and clinical diagnoses. Tactics of patient management in various clinical variants of pneumonia. Prevention and follow-up care.

**Topic 2. Modern aspects of antibiotic therapy in children.**

Therapeutic possibilities of antibiotic therapy. Groups of antibacterial drugs. Types of antibiotic action. Pharmacokinetics, pharmacodynamics. Indications and contraindications taking into account the age of the child and concomitant pathology

**Topic 3. Radiological syndromes of lung diseases in children.**

Possibilities of X-ray examination of the respiratory system in children. Differential diagnosis of squeezed radiological changes.

**Topic 4. Differential diagnosis of lung diseases in newborns**

Diagnostic search for lung pathology in newborns. Assessment of the type and severity of respiratory disorders. Differential diagnosis. The main complications. Modern approaches to treatment.

**Topic 4. Differential diagnosis of lung diseases in newborns**

Diagnostic search for lung pathology in newborns. Assessment of the type and severity of respiratory disorders. Differential diagnosis. The main complications. Modern approaches to treatment.

**Topic 5. Differential diagnosis of bronchial obstruction syndrome in children.**

Leading clinical symptoms and syndromes in bronchial asthma, bronchiolitis and acute obstructive bronchitis in children. Features of the course of asthma in children depending on the severity and level of control. Data of laboratory and instrumental studies in bronchial asthma, bronchiolitis and acute obstructive bronchitis and their complications. Differential diagnosis of bronchial asthma and bronchial obstruction syndrome in the setting of acute respiratory diseases in children of different ages. Establishment of the diagnosis. Tactics of patient management in various clinical variants of bronchial obstruction syndrome and its complications in children. Providing emergency care in case of dyspnea and severe asthma attack. Prevention of bronchial asthma and bronchial obstruction syndrome in the setting of acute respiratory diseases in children of different ages.

**Topic 6. Differential diagnosis of hereditary, congenital and chronic diseases of the bronchopulmonary system in children.**

Leading clinical symptoms and syndromes in chronic bronchitis, bronchiectasis, hereditary and congenital diseases of the bronchopulmonary system (cystic fibrosis, idiopathic pulmonary hemosiderosis, primary ciliary dyskinesia, Wilms-Campbell syndrome, bronchomalacia, lung aplasia and hypoplasia,  $\alpha$ 1-antitrypsin deficiency, bronchopulmonary dysplasia, lung sequestration) in children. Data of laboratory and instrumental studies in chronic bronchitis, bronchiectasis, hereditary and congenital diseases of the bronchopulmonary system and their complications. Differential diagnosis of chronic, hereditary and congenital diseases of the bronchopulmonary system in children. Tactics of patient management in hereditary, congenital and chronic diseases of the bronchopulmonary system and their complications in children. Prevention of hereditary, congenital and chronic diseases of the bronchopulmonary system in children.

**Content section 2.**

**Differential diagnosis of the most common diseases of the circulatory system, systemic connective tissue diseases in children. Emergency care for major emergencies.**

**Topic 7. Differential diagnosis of congenital heart disease in children. Treatment tactics, timing and possibilities of surgical correction**

Leading clinical symptoms and syndromes of congenital heart disease in children. Data of laboratory and instrumental studies of congenital heart disease in children. Differential diagnosis. Tactics of management.

**Topic 8. Differential diagnosis of inflammatory heart disease in children.**

Tactics of managing a patient with myocarditis, endocarditis, pericarditis. Providing emergency care in acute heart failure. Treatment and prevention of chronic heart failure

**Topic 9: Differential diagnosis of heart rhythm and conduction disorders according to ECG data.**

ECG changes in extrasystole, paroxysmal tachycardia, atrial fibrillation, complete atrioventricular block. Clinical variants of paroxysmal tachycardia and atrial fibrillation in children. Differential diagnosis of arrhythmias.

**Topic 10. Heart failure in children. Drugs used in pediatric cardiology.**

Causes of heart failure in children. Medical tactics

**Topic 11. Differential diagnosis of systemic connective tissue diseases and systemic vasculitis in children.**

Leading clinical symptoms and syndromes in juvenile idiopathic arthritis, systemic lupus erythematosus, acute rheumatic fever, dermatomyositis, scleroderma, Kawasaki disease, polyarteritis nodosa and other systemic vasculitis in children. Clinical variants and complications of systemic connective tissue diseases and systemic vasculitis in children. Data of laboratory and instrumental studies in systemic connective tissue diseases and systemic vasculitis in children. Differential diagnosis of systemic connective tissue diseases in children. Differential diagnosis of arthritis in children. Tactics of managing patients with systemic connective tissue diseases and systemic vasculitis in children. Primary and secondary prevention of acute rheumatic fever in children.

**Topic 12: Kawasaki disease: causes, symptoms, diagnosis and treatment.**

Differential diagnosis of Kawasaki disease and syndrome at the present stage. Diagnostic search, treatment, prognosis.

**Topic 13. Differential diagnosis of arterial hypertension in children. Metabolic syndrome**

Arterial hypertension syndrome, clinical manifestations, causes. Primary and secondary arterial hypertension. Data of laboratory and instrumental studies in arterial hypertension syndrome. Establishing a clinical diagnosis. Differential diagnosis with metabolic syndrome. Tactics of patient management in arterial hypertension and metabolic syndrome. Prevention. Emergency care in sympatho-adrenal (panic attack) and hypertensive crises.

**Content section 3.**

**Differential diagnosis of the most common diseases of the digestive system in children. Emergency care for major emergencies.**

**Topic 14: Differential diagnosis of functional and organic diseases of the digestive system in children.**

Leading clinical symptoms and syndromes in functional and organic diseases of the digestive system in children. Clinical and instrumental studies and differential diagnosis. Tactics of managing children.

**Topic 15: Differential diagnosis of abdominal pain in children. Gastric bleeding.**

Differential diagnosis of abdominal pain syndrome. Diagnosis of complicated course of gastric ulcer in children, tactics of general practitioner, emergency care for gastric bleeding in children.

**Topic 16. Differential diagnosis of diseases of the hepatobiliary system and pancreas in children. Portal hypertension syndrome.**

Leading clinical symptoms and syndromes in biliary dyskinesia, acute and chronic cholecystitis, acute and chronic pancreatitis and chronic hepatitis in children. Clinical variants of biliary dyskinesia, acute and chronic cholecystitis, acute and chronic pancreatitis, and chronic hepatitis in children. Data of laboratory and instrumental studies in biliary dyskinesias, acute and chronic cholecystitis, acute and chronic pancreatitis, and chronic hepatitis in children. Differential diagnosis of biliary dyskinesia, acute and chronic cholecystitis, acute and chronic pancreatitis and chronic hepatitis in children.

Tactics of patient management in biliary dyskinesia, acute and chronic cholecystitis, acute and chronic pancreatitis and chronic hepatitis in children. Emergency care in acute liver failure and complications of portal hypertension syndrome. Prevention of biliary dyskinesia, acute and chronic cholecystitis, acute and chronic pancreatitis and chronic hepatitis in children.

**Topic 17. Differential diagnosis of malabsorption syndrome in children.**

Malabsorption syndrome, clinical manifestations, causes. Modern approaches to the diagnosis of malabsorption syndrome, treatment tactics. Multidisciplinary approach.

**Topic 18: Differential diagnosis of congenital malformations of the gastrointestinal tract in children.**

Anomalies of the development of the digestive system in children. The complexity of diagnosis. Interdisciplinary approach. Possibilities of correction. Tactics of the doctor.

**Topic 19: Differential diagnosis of jaundice syndrome in children**



Diagnostic search for jaundice syndrome in children of different age groups. Interdisciplinary approach. Analysis of the results of laboratory and instrumental examinations. The doctor's tactics.

#### **Content section 4.**

**Differential diagnosis of the most common diseases of the urinary system in children. Emergency care for major emergencies.**

**Topic 20: Differential diagnosis of infectious and inflammatory diseases of the urinary system in children.**

Infectious and inflammatory diseases of the urinary system (urinary system infections, urethritis, cystitis, pyelonephritis), dysmetabolic nephropathy, Clinical variants of the course and complications of infectious and inflammatory diseases of the urinary system, interstitial nephritis, dysmetabolic nephropathy and hereditary tubulopathy in children. Data of laboratory and instrumental studies in the most common infectious and inflammatory diseases of the urinary system, interstitial nephritis, dysmetabolic nephropathies and hereditary tubulopathies in children. Differential diagnosis of the most common infectious and inflammatory diseases of the urinary system, interstitial nephritis, and dysmetabolic nephropathies. Tactics of managing a sick child with the most common infectious and inflammatory diseases of the urinary system and their complications, interstitial nephritis, dysmetabolic nephropathies and hereditary tubulopathies in children. Emergency care in case of acute urinary retention. Prevention of urethritis, cystitis, pyelonephritis.

**Topic 21: Differential diagnosis of hereditary diseases of the urinary system in children.**

Leading clinical symptoms and syndromes in hereditary tubulopathies (phosphate diabetes, Debreu de Toni Fanconi syndrome, renal diabetes insipidus, renal tubular acidosis) and interstitial nephritis in children. Management tactics.

**Topic 22. Differential diagnosis and treatment of glomerulonephritis in children. Acute and chronic renal failure. Management tactics. Emergency care Differential approaches to treatment.**

Clinical and morphological variants of primary glomerulonephritis in children. Differential diagnosis of acute poststreptococcal glomerulonephritis with hereditary Alport's nephritis, rapidly progressive glomerulonephritis, Berger's disease, etc. Nephrotic syndrome in children: differential diagnosis, complications. Clinical variants of chronic glomerulonephritis in children. Indications for kidney biopsy in children. Tactics of managing a sick child with acute and chronic glomerulonephritis. Tactics of treatment of acute and chronic glomerulonephritis in children. Outpatient observation of children with glomerulonephritis. Prevention of the development of chronic kidney disease.

Acute kidney injury (acute renal failure) in children: etiology, pathogenesis, clinical and laboratory symptoms, differential diagnosis, emergency care, tactics of management of sick children. Chronic renal failure: management tactics. Prevention of progression of CRF.

**Topic 23. Research methods in pediatric nephrology. Radiological syndromes of diseases of the urinary system in children**

Features of the examination of the urinary system in children. Modern methods of visualization.

**Topic 24. Conditions accompanied by hematuria and proteinuria in children. Renal replacement therapy in children**

Differential diagnosis of hematuria syndrome in children. Diagnostic search. Tactics of patient management.

#### **Content section 5.**

**Dynamic observation of healthy and sick children in a polyclinic. Emergency care for major emergency conditions.**

**Topic 25. Differential diagnosis of lymphoproliferative syndrome in children**

Pathological conditions accompanied by lymphoproliferative syndrome in pediatric practice. Data of laboratory and instrumental studies in lymphoproliferative syndrome. Differential diagnosis of lymphoproliferative syndrome. Tactics of managing a child with lymphoproliferative syndrome.

**Topic 26. Medical observation of children in the first three years of life in the clinic. Integrated management of childhood diseases**

The procedure for conducting mandatory preventive examinations of a child under the age of three. Rational feeding and nutrition of a child under three years of age. Assessment of physical and psycho-

motor development of a child under three years of age. Tactics of a general practitioner in case of violation of physical and neuropsychological development of children in the first three years of life. Principles of effective counseling. Differential diagnosis and prevention of the most common deficiency conditions (rickets, iron deficiency anemia) in young children. Preventive vaccinations for children under three years of age. Strategy of integrated management of childhood diseases and its goal. General signs of danger of the child's condition. Evaluation, classification, treatment, consultation and follow-up of cough, difficulty breathing, diarrhea, ear problems, sore throat, fever, malnutrition and anemia, in the presence of HIV infection in children from 2 months to 5 years. Evaluation, classification, treatment, consultation and follow-up in children under 2 months of age with jaundice, diarrhea, feeding problems and low body weight, extremely severe illness and local bacterial infection.

**Topic 27. Resuscitation of a newborn child.**

Indications for resuscitation. Basic principles of resuscitation. Initial and subsequent steps of resuscitation

**Topic 28. Differential diagnosis of the most common hematologic diseases in children.**

Differential diagnosis of hematuria syndrome in children. Diagnostic search. Tactics of patient management

**Topic 29: Nutrition of children in the first 3 years of life: intake of vitamins and macro- and micronutrients with food.**

Rational feeding and nutrition of a child under three years of age. Leading clinical symptoms and syndromes in hypovitaminosis Management tactics and prevention.

**Topic 30. Newborn asphyxia and perinatal CNS lesions: prevention, differential diagnosis and principles of treatment.** Differential diagnosis of asphyxia and perinatal CNS lesions in newborns. Diagnostic algorithm. Principles of treatment. Treatment tactics. Early intervention.

**3. Structure of the educational discipline**

| Topic  | Lectures | Workshops | IWS |
|--|----------|-----------|-----|
| <b>Content section 1. Differential diagnosis of the most common respiratory diseases in children. Emergency care for major emergencies.</b>  |          |           |     |
| Topic 1: Differential diagnosis of pneumonia in children. Acute respiratory disease COVID-19 in children. Modern aspects of treatment.   |          | 6         | 3   |
| Topic 2. Modern aspects of antibiotic therapy in children.   |          |           | 3   |
| Topic 3. Radiological syndromes of lung diseases in children.  |          |           | 3   |
| Topic 4. Differential diagnosis of lung diseases in newborns   |          |           | 3   |
| Topic 5. Differential diagnosis of bronchial obstruction syndrome in children.   |          | 6         | 3   |
| Topic 6. Differential diagnosis of hereditary, congenital and chronic diseases of the bronchopulmonary system in children.   |          | 6         | 3   |
| <b>Content section 2. Differential diagnosis of the most common diseases of the circulatory system, systemic connective tissue diseases in children. Emergency care for major emergencies.</b> |          |           |     |
| Topic 7. Differential diagnosis of congenital heart disease in children. Treatment tactics, timing and possibilities of surgical correction  |          | 6         | 3   |
| Topic 8. Differential diagnosis of inflammatory heart disease in children.   |          | 6         | 3   |
| Topic 9: Differential diagnosis of heart rhythm and conduction disorders according to ECG data.  |          |           | 3   |
| Topic 10. Heart failure in children. Drugs used in pediatric cardiology.   |          |           | 3   |
| Topic 11. Differential diagnosis of systemic connective tissue diseases and systemic vasculitis in children.   |          | 6         | 3   |
| Topic 12: Kawasaki disease: causes, symptoms, diagnosis and treatment.   |          |           | 3   |
| Topic 13. Differential diagnosis of arterial hypertension in children. Metabolic syndrome  |          |           | 3   |
| <b>Content section 3. Differential diagnosis of the most common diseases of the digestive system in children. Emergency care for major emergencies.</b>  |          |           |     |

|   |  |               |           |
|---|--|---------------|-----------|
| Topic 14: Differential diagnosis of functional and organic diseases of the digestive system in children.  |  | 6             | 3         |
| Topic 15: Differential diagnosis of abdominal pain in children. Gastric bleeding.   |  | 6             | 3         |
| Topic 16. Differential diagnosis of diseases of the hepatobiliary system and pancreas in children. Portal hypertension syndrome.  |  | 6             | 3         |
| Topic 17. Differential diagnosis of malabsorption syndrome in children.   |  |               | 3         |
| Topic 18: Differential diagnosis of congenital malformations of the gastrointestinal tract in children.   |  |               | 3         |
| Topic 19: Differential diagnosis of jaundice syndrome in children   |  |               | 3         |
| <b>Content section 4. Differential diagnosis of the most common diseases of the urinary system in children. Emergency care for major emergencies.</b>                                       |  |               |           |
| Topic 20: Differential diagnosis of infectious and inflammatory diseases of the urinary system in children.   |  | 6             | 3         |
| Topic 21: Differential diagnosis of hereditary diseases of the urinary system in children.  |  | 6             | 3         |
| Topic 22. Differential diagnosis and treatment of glomerulonephritis in children. Acute and chronic renal failure. Management tactics. Emergency care Differential approaches to treatment. |  | 6             | 3         |
| Topic 23. Research methods in pediatric nephrology. Radiological syndromes of diseases of the urinary system in children  |  |               | 3         |
| Topic 24. Conditions accompanied by hematuria and proteinuria in children. Renal replacement therapy in children  |  |               | 3         |
| <b>Content section 5. Dynamic observation of healthy and sick children in a polyclinic. Emergency care for major emergency conditions.</b>  |  |               |           |
| Topic 25. Differential diagnosis of lymphoproliferative syndrome in children  |  | 6             | 3         |
| Topic 26. Medical observation of children in the first three years of life in the clinic. Integrated management of childhood diseases   |  | 6             | 3         |
| Topic 27. Resuscitation of a newborn child.   |  | 6             | 3         |
| Topic 28. Differential diagnosis of the most common hematologic diseases in children.   |  |               | 3         |
| Topic 29: Nutrition of children in the first 3 years of life: intake of vitamins and macro- and micronutrients with food.   |  |               | 3         |
| Topic 30. Newborn asphyxia and perinatal CNS lesions: prevention, differential diagnosis and principles of treatment.   |  |               | 3         |
| <b>Final control</b>  |  | <b>Credit</b> |           |
| <b>Total:</b> ECTS credits - 6; hours - 180; of which   |  | <b>90</b>     | <b>90</b> |

IWS - independent work of the student;

**4. Thematic plan of lectures** - the curriculum does not provide for lectures (Order No. 1053-z of 24.03.2023)

#### **5. Thematic plan of workshops**

| No. | Topic  | Hours |
|-----|--|-------|
| 1   | Differential diagnosis of pneumonia in children. Acute respiratory disease COVID-19 in children. Modern aspects of treatment.      | 6     |
| 2   | Differential diagnosis of bronchial obstruction syndrome in children.  | 6     |
| 3   | Differential diagnosis of hereditary, congenital and chronic diseases of the bronchopulmonary system in children.                  | 6     |
| 4   | Differential diagnosis of congenital heart disease in children. Treatment tactics, timing and possibilities of surgical correction | 6     |
| 5   | Differential diagnosis of inflammatory heart disease in children.  | 6     |
| 6   | Differential diagnosis of systemic connective tissue diseases and systemic vasculitis in children.                                 | 6     |
| 7   | Differential diagnosis of functional and organic diseases of the digestive system in children.                                     | 6     |

|    |   |           |
|----|---|-----------|
| 8  | Differential diagnosis of abdominal pain in children. Gastric bleeding.   | 6         |
| 9  | Differential diagnosis of diseases of the hepatobiliary system and pancreas in children. Portal hypertension syndrome.  | 6         |
| 10 | Differential diagnosis of infectious and inflammatory diseases of the urinary system in children.   | 6         |
| 11 | Differential diagnosis of hereditary diseases of the urinary system in children.  | 6         |
| 12 | Differential diagnosis and treatment of glomerulonephritis in children. Acute and chronic renal failure. Management tactics. Emergency care Differential approaches to treatment. | 6         |
| 13 | Differential diagnosis of lymphoproliferative syndrome in children  | 6         |
| 14 | Medical observation of children in the first three years of life in the clinic. Integrated management of childhood diseases   | 6         |
| 15 | Resuscitation of a newborn child.   | 6         |
|    | <b>Total</b>  | <b>90</b> |

## 6. Thematic plan of students' independent work

| No. | Topic   | Hours     | Type of control                   |
|-----|---|-----------|-----------------------------------|
| 1   | Modern aspects of antibiotic therapy in children.   | 3         | On-going control during workshops |
| 2   | Radiological syndromes of lung diseases in children.  | 3         |                                   |
| 3   | Differential diagnosis of lung diseases in newborns   | 3         |                                   |
| 4   | Differential diagnosis of heart rhythm and conduction disorders according to ECG data.                          | 3         |                                   |
| 5   | Heart failure in children. Drugs used in pediatric cardiology.  | 3         |                                   |
| 6   | Kawasaki disease: causes, symptoms, diagnosis and treatment.  | 3         |                                   |
| 7   | Differential diagnosis of malabsorption syndrome in children.   | 3         |                                   |
| 8   | Differential diagnosis of congenital malformations of the gastrointestinal tract in children.                   | 3         |                                   |
| 9   | Differential diagnosis of jaundice syndrome in children   | 3         |                                   |
| 10  | Differential diagnosis of arterial hypertension in children. Metabolic syndrome                                 | 3         |                                   |
| 11  | Research methods in pediatric nephrology. Radiological syndromes of diseases of the urinary system in children  | 3         |                                   |
| 12  | Conditions accompanied by hematuria and proteinuria in children. Renal replacement therapy in children          | 3         |                                   |
| 13  | Differential diagnosis of the most common hematologic diseases in children.                                     | 3         |                                   |
| 14  | Nutrition of children in the first 3 years of life: intake of vitamins and macro- and micronutrients with food. | 3         |                                   |
| 15  | Newborn asphyxia and perinatal CNS lesions: prevention, differential diagnosis and principles of treatment.     | 3         |                                   |
|     | <b>Total</b>  | <b>90</b> |                                   |

## 7. Individual assignments

The curriculum does not provide for individual assignments (Order No. 1053-z of 24.03.2023).

## 8. Teaching methods

Practical classes are clinical according to the organization's methodology, aimed at controlling the assimilation of theoretical material, improving practical skills from previous years of study, as well as the ability to analyze and apply the knowledge gained to solve complex practical problems. Practical classes are mainly held in the pediatric departments of the department's clinical bases.

Each lesson begins with a test to assess the initial level of knowledge and determine the degree of readiness of students for the lesson. The teacher determines the purpose of the lesson and creates positive cognitive motivation; answers students' questions that arose during the SRS on the topic of the lesson.

The main stage of the class consists of practical work of the student at the patient's bedside. The teacher and the students make rounds with the patients. Students examine sick children, collect anamnesis, examine them, perform diagnostic manipulations, etc. The control of the main stage of the lesson is carried

out by assessing the student's performance of practical skills, ability to solve atypical situational tasks. The teacher discusses and gives explanations, emphasizes the peculiarities of the course of the disease in a particular child, aims at a more rational conduct of a particular examination technique, etc.

At the final stage of the lesson, to assess the student's mastery of the topic, they are asked to answer situational tasks. The instructor summarizes the class, gives students assignments for independent work, points out the key issues of the next topic and offers a list of recommended reading for independent study.

Control over the implementation of independent work, which is provided for in the topic along with classroom work, is carried out during the current control of the topic at the relevant classroom session.

During the development of the discipline, the following educational technologies, methods of transfer and assimilation of knowledge, skills and abilities are used:

- clinical practical training
- simulation technologies
- role-playing training games
- case methods
- multimedia presentations
- training videos.

## **9. Methods of control**

Methods and forms of control and evaluation system are carried out in accordance with the requirements of the discipline program and instructions on the system of evaluation of students' learning activities under the European Credit Transfer System of the educational process, approved by the Ministry of Health of Ukraine (letter of the Ministry of Health of Ukraine № 08.01-47/10395 of 15.04.2014).

When assessing students' knowledge, preference is given to standardized control methods: testing (written), structured written work, standardized control of practical skills, work with standard medical documentation.

- **Types of control - current**
- **Form of final control - credit**
- **Evaluation criteria (current control, final control)**

**10. The current control** is carried out during the training sessions and is aimed at checking the students' mastery of the training material.

Forms of current control:

- Test tasks (from the Krok-2 database)
- Assessment of practical skills and abilities
- Complex situational tasks

### 10.1 Assessment of current learning activities.

When assessing the mastery of each topic for the current learning activity, the student is assigned grades on a **4-point** (traditional) scale, taking into account the approved assessment criteria for the relevant discipline. This takes into account all types of work provided by the curriculum. The student must receive a grade for each topic. The student must receive a grade for each topic for further conversion of grades into points on a multi-point (200-point) scale.

Forms of assessment of current learning activities are standardized and include control of theoretical and practical training.

Current control is carried out at each practical lesson in accordance with the specific objectives for each topic. Traditional grades are assigned in the student's progress journal during practical classes. Practical classes during the study of the module "Pediatrics" are structured and provide for a comprehensive assessment of all types of learning activities (learning tasks) that students perform during the practical class:

- The student answers at least 10 tests (tests on the topic of the class, format A).
- Answers standardized questions, knowledge of which is necessary to understand the current topic.
- Demonstrates knowledge and skills of practical skills in accordance with the topic of the practical lesson

- Solves a situational problem on the topic of the lesson

### Evaluation Criteria

**Excellent ("5")** – the student correctly responds to 90-100% of the test of A format. Correctly, clearly, logically corresponds to all standardized questions of the current topic. Closely binds theory with practice and demonstrates the correct implementation of practical skills. Analyzes the results of the lab/instrumental investigations without problems, and has proper methods of examination of the patient. Makes differential diagnosis. Solves clinical case with higher level of difficulty and knows how to compile the material.

**Good ("4")** -the student responds correctly to 70-89% of the test of A format. Correctly and essentially responds to all standardized questions of the current topic. Demonstrates knowledge of practical skills. Correctly uses theoretical knowledge to solve practical problems. Able to solve easy and medium complexity clinical cases. Has the necessary practical knowledge and techniques and their uses, more than the required minimum.

**Satisfactory ("3")** -the student responds correctly to 50-69% of the test of A format. Incomplete, with the help of additional questions answers all the standardized questions on the current topic. Cannot independently make a clear logical answer. While the students is answering and demonstrating practical knowledge he makes mistakes. Can solve only the easiest situational tasks. Has knowledge of only the minimum methods of investigations.

**Unsatisfactory ("2")** - the student responds correctly to 50% of the test of A format.

Does not know the material of the current topic, cannot build a logical response, does not respond to additional questions, and does not understand the content of the material. During the response and demonstration of practical skills makes significant, gross mistakes.

Evaluation of the independent work of students for preparation to the practical classes is carried out during the current control of the topic at the appropriate workshop.

### 11. Form of the final control of learning performance

Final control form – **credit**

The control methods are standardized and include control of theoretical and practical training. Students are admitted to semester final control:

- who have performed all types of work, tasks provided for in the curriculum for the semester in accordance with the discipline;
- attended all classes provided by the curriculum;
- worked out missed classes;
- scored the number of points for the current success, not less than the minimum.

Students who have missed workshops are allowed with the *Dean's permission* to work academic debts up to the specified term within the semester.

The credit is granted after the end of the discipline (during the last lesson).

The credit is granted by teachers who carried out practical and other classes in the group.

“Students are given a Credit, if their average score of marks during the semester is at least "3" (120 points for 200-point scale).

The record Credit is made in the student's academic book as well as credit and examination record list.

### 12. Chart of calculation and distribution of points that students receive:

*For disciplines the form of final control of which is “credit”:*

**The maximum number of points** that the student can recruit for the current educational activity when studying the discipline is 200 points.

**The minimum number of points to** be dialed by the student for the current educational activities for admission is 120 points.

**The calculation of points** is carried out based on the student's estimates for the 4-th point (national) scale during the study of the discipline, by calculating the arithmetic mean (AM) rounded up to two decimal places. Resulting value is converted into points according to multipoint scale as follows:

$$x = \frac{CA \times 200}{5}$$

For convenience, a conversion table for 200-point scale is given below.

### Recalculation of the average assessment for the current activity in a multi-level scale for the disciplines completed

| 4-<br>бальна<br>шкала | 200-<br>бальна<br>шкала | 4-<br>бальна<br>шкала | 200-<br>бальна<br>шкала | 4-<br>бальна<br>шкала | 200-<br>бальна<br>шкала | 4-<br>бальна<br>шкала | 200-<br>бальна<br>шкала |
|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| 5                     | 200                     | 4.45                  | 178                     | 3.92                  | 157                     | 3.37                  | 135                     |
| 4.97                  | 199                     | 4.42                  | 177                     | 3.89                  | 156                     | 3.35                  | 134                     |
| 4.95                  | 198                     | 4.4                   | 176                     | 3.87                  | 155                     | 3.32                  | 133                     |
| 4.92                  | 197                     | 4.37                  | 175                     | 3.84                  | 154                     | 3.3                   | 132                     |
| 4.9                   | 196                     | 4.35                  | 174                     | 3.82                  | 153                     | 3.27                  | 131                     |
| 4.87                  | 195                     | 4.32                  | 173                     | 3.79                  | 152                     | 3.25                  | 130                     |
| 4.85                  | 194                     | 4.3                   | 172                     | 3.77                  | 151                     | 3.22                  | 129                     |
| 4.82                  | 193                     | 4.27                  | 171                     | 3.74                  | 150                     | 3.2                   | 128                     |
| 4.8                   | 192                     | 4.24                  | 170                     | 3.72                  | 149                     | 3.17                  | 127                     |
| 4.77                  | 191                     | 4.22                  | 169                     | 3.7                   | 148                     | 3.15                  | 126                     |
| 4.75                  | 190                     | 4.19                  | 168                     | 3.67                  | 147                     | 3.12                  | 125                     |
| 4.72                  | 189                     | 4.17                  | 167                     | 3.65                  | 146                     | 3.1                   | 124                     |
| 4.7                   | 188                     | 4.14                  | 166                     | 3.62                  | 145                     | 3.07                  | 123                     |
| 4.67                  | 187                     | 4.12                  | 165                     | 3.57                  | 143                     | 3.02                  | 121                     |
| 4.65                  | 186                     | 4.09                  | 164                     | 3.55                  | 142                     | 3                     | 120                     |
| 4.62                  | 185                     | 4.07                  | 163                     | 3.52                  | 141                     | Менше<br>3            | Недос-<br>татньо        |
| 4.6                   | 184                     | 4.04                  | 162                     | 3.5                   | 140                     |                       |                         |
| 4.57                  | 183                     | 4.02                  | 161                     | 3.47                  | 139                     |                       |                         |
| 4.52                  | 181                     | 3.99                  | 160                     | 3.45                  | 138                     |                       |                         |
| 4.5                   | 180                     | 3.97                  | 159                     | 3.42                  | 137                     |                       |                         |
| 4.47                  | 179                     | 3.94                  | 158                     | 3.4                   | 136                     |                       |                         |

Control of execution of independent work, which is provided for in the topic along with classroom work, is carried out during the current control of the topic at the corresponding classroom session. Mastering of topics that are assigned only to independent work is controlled during by the final control.

Points of discipline are independently converted both in the ECTS scale and in 4-grade scale. The ECTS scale scores in the 4-grade scale are not converted and vice versa. Scores of students who study according to one specialty, taking into account the number of points earned from discipline are ranked on the ECTS scale as follows:

| Evaluation of ESTS | Statistical index    |
|--------------------|----------------------|
| A                  | Best 10% of students |
| B                  | Next 25% of students |
| C                  | Next 30% of students |
| D                  | Next 25% of students |
| E                  | Next 10% of students |

Ranking by assigning ratings of "A", "B", "C", "D", "E" is conducted for students of this course, who learn same specialty and successfully completed the study of discipline. Students who have received an assessment of FX, F ("2") are not written to the list of ranked students. Students with a rating FX after recompiling automatically receive a score of "E".

Points of discipline for students who have successfully completed the program are converted into a traditional 4-th grade scale according to absolute criteria, which are listed below in the table:

| Scores on discipline | Score according to the four-point scale |
|----------------------|---|
| 170 - 200            | 5                                       |
| 140 -169             | 4                                       |
| 139 -120             | 3                                       |

Evaluation of ECTS is not converted to a traditional scale because the ECTS scale and the 4-th grade scale are independent.

Objectivity of evaluation of student's educational activity is checked by statistical methods (coefficient of correlation between ECTS and estimation according to national scale).

### 13. Methodological aid

- Working program of discipline
- Thematic plans of lectures, practical classes and independent work of students
- Methodical guidelines of practical classes for the students
- Methodical guidelines for the teachers
- Methodical materials that provide independent work of the student
- Multiple choice questions and clinical cases for practical classes
- The list of standardized methods for performing practical skills
- Recorded video of lectures

### 14. Reference

#### Main sources

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### 15. Information resources

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<https://pubmed.ncbi.nlm.nih.gov/>  
<https://www.who.int/>  
<https://www.aap.org/en-us/Pages/Default.aspx>  
<http://www.generalpediatrics.com/>