

**DANYLO HALYTSKYI LVIV NATIONAL MEDICAL UNIVERSITY**

**DEPARTMENT OF PROPAEDEUTIC PEDIATRICS AND MEDICAL GENETICS**

"APPROVED"

First Vice-Rector on Scientific and Pedagogical Work

As. Professor Iryna SOLONYNKO



**DISCIPLINE PROGRAM**

**OK 21.1 «PROPAEDEUTIC PEDIATRICS»**

**Second (master's) level of higher education**

**Field of Knowledge 22 "Healthcare"**

**Specialty 222 "Medicine"**

**Faculty, year: Foreign Students, 3rd year**

Discussed and approved  
at the educational-methodical meeting  
of the Department of Propaedeutic pediatrics  
and medical genetics

Minutes No 8 dated "04" 04 2023

Head of Department

Prof. Olena LYCHKOVSKA



Approved

by the Profile Methodical Board on  
Pediatric Disciplines

Minutes No 2 dated "27" 04 2023

Head of the Board

Prof. Lesya BESH

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**The discipline program OK 21.1 «PROPAEDEUTIC PEDIATRICS» was developed and imported at the Department of Propaedeutic Pediatrics and Medical Genetics of Danylo Halytsky Lviv National Medical University for the 3<sup>rd</sup> year students of Faculty Foreign Students by the Specialty 222 “Medicine”.**

**Changes and additions to the study program of the discipline during 2023-2024 academic year.**

No	Content of changes (additions)	Minutes of the meeting of the Department, date	Notes
1	No changes or additions have been made	Discussed and approved at the educational-methodical meeting of the Department of Propaedeutic Pediatrics and Medical Genetics Minutes No. 8 dated April 4, 2023	

THIS PROGRAMME WAS CREATED BY

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REVIEWER

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## INTRODUCTION

The academic programme of discipline «Propaedeutic pediatrics» has been set up based on the Standard of higher education in Ukraine of the second (master's) level of the field of knowledge 22 "Health care" of specialty 222 "Medicine"

### The Description of the Subject (Summary)

Studying the discipline "Propaedeutic pediatrics" students get acquainted with physical and neuro-psychological development of children of different age groups, anatomical and physiological peculiarities of the child's organism, master methods of examination of the child. The discipline involves the study of the semiotics of syndromes of the most common pediatric diseases, as well as the principles of feeding of infants and rational nutrition of healthy children. Propedeutics pediatrics is that discipline with which study of Pediatrics starts. Propaedeutic pediatrics is not only an introduction to Clinical Pediatrics, but also a link connecting the teaching of theoretical and clinical disciplines.

Discipline "Propedeutics Pediatrics" is obligatory for students of specialty 222 "Medicine".

The organization of the educational process is carried out according to the requirements of the European Credit Transfer System

Name of discipline	Number of ECTS credits, number of hours, of which				Study year Study semester	Type of control
	Totally	Auditory		Self work (hr)		
		Lectures (hr)	Pactical classes (hr)			
«Propaedeutic pediatrics» 16 Parts	5 credits ECTS / 150 hr	14	62	74	III year (V-VI semesters)	Differential credit
according to semesters						
Parts 1 - 7	2 credits ECTS / 60 hr	6	28	26	V semester	- Differential credit
Parts 7 - 16	3 credits ECTS / 90 hr	8	34	48	VI semester	

**The subject of discipline «Propaedeutic pediatrics»:** anatomical and physiological peculiarities of the child's organism, methods of examination of organ systems of the child, semiotics of the most common pediatric diseases, principles of feeding of infants and rational nutrition of healthy children.

**Interdisciplinary links:** in accordance with the exemplary curriculum, studying Propaedeutic pediatrics is predicted in the 5th and 6th semesters, when the student acquires relevant knowledge on basic disciplines: medical biology, medical and biological physics, anatomy and physiology, bioorganic and biological chemistry, as well as studying microbiology, virology and immunology starts. Propaedeutic pediatrics forms the basis for further study of clinical disciplines pediatrics, medical psychology, pediatric infectious diseases, oncology, anesthesiology and intensive care.

### 1. The Aim and Objectives of the discipline

**1.1. The Aim** of the discipline «Propaedeutic pediatrics» is to lay basis for the following studying of pediatrics and other clinical disciplines, to form the ability to apply knowledge on propedeutics of pediatrics in the process of further education and professional activity; to lay main principles of a healthy lifestyle, mastering of the basic professional activities of the medical personnel based on the knowledge about peculiarities of the functioning of the sick child's organism in accordance with the principles of medical ethics and deontology.

**1.2. Main objectives** of the discipline «Propaedeutic pediatrics» include what a student should know and what a student should be able to do, studying a discipline.

As a result of studying the discipline «Propaedeutic pediatrics», student should know:

- the basic peculiarities of physical and neuro-mental development of children of different age groups;
- the clinical significance of age-related anatomical and physiological characteristics of the child's organism;
- principles of rational feeding and nourishment of healthy children;
- semiotics of syndromes of disorders of different organ systems and the most common pediatric diseases.

As a result of studying the discipline «Propaedeutic pediatrics», student should be able :

- to make conclusion about the physical and psychomotor development of children
- to conduct clinical examination of various organs and systems of a child.
- to analyze age features of organism functions.
- to interpret the condition of the child's organ systems.
- to count and compile a daily diet for infant.
- to correct the diet of children over one year.

**1.3 Competency and training results**, developed by the studying the discipline «Propaedeutic pediatrics» (the correlation with the normative content of practical training of those who are getting higher education, formulated in the terms of study results of Higher Education Standards).

According to the requirements of Higher Education Standards, the subject provides the development of the following **competences**:

- **integral:**

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

- **general:**

1. Ability to abstract thinking, analysis and synthesis (GC1).
2. Ability to learn and acquire modern knowledge (GC2).
3. Ability to apply knowledge in practical situations (GC3).
4. Knowledge and understanding of the subject area and understanding of professional activity (GC4).
5. Ability to adapt and act in a new situation (GC5)
6. Ability to make informed decisions (GC6)
7. Ability to work in a team (GC7).
8. The skills of interpersonal interaction (GC8).
9. Ability to use information and communication technologies (GC10)
10. Ability to search, process and analyze information from various sources (GC11)
11. Definiteness and persistence in terms of tasks and responsibilities (GC12).
12. Awareness of equal opportunities and gender problems (GC13).
13. Ability to realize one's rights and responsibilities as a member of society, to be aware of the values of a civil (free democratic) society and the necessity for its sustainable development, the rule of law, the rights and freedoms of a person (GC14)
14. Ability to preserve and multiply 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 technologies, to use various types and forms of motor activity for active recreation and healthy lifestyle (GC15)

- **special (professional):**

1. Ability to gather medical information about the patient and analyze clinical data (SC1).
2. Ability to determine the required laboratory and instrumental studies and evaluate their results (SC2)
3. Ability to establish a preliminary and clinical diagnosis of the disease (SC3).
4. Ability to determine the necessary mode of study, work and rest for the treatment and prevention of diseases (SC4)
5. Ability to determine type of nourishment for the treatment and prevention of diseases (SC5)
6. Ability to diagnose urgent conditions (SC7)
7. Convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists, in particular to students clearly and unequivocally (SC21)
8. Follow ethical principles during working with patients and laboratory animals (SC24)

Details of the competences are set out below in the matrix table of competences

***The Matrix of Competence***

No	Competence	Knowledge	Skills	Communication	Autonomy and responsibility
<b>Integral competence</b>					
ability to solve complex problems, including those of a research and innovation nature in the field of medicine. Ability to continue studying with a high degree of autonomy					
<b>General competences</b>					
1.	Ability to abstract thinking, analysis and synthesis	Know the methods of analysis, synthesis and further modern learning	Be able to analyze information, make informed decisions, be able to acquire modern knowledge.	Establish appropriate connections to achieve goals.	Be responsible for the timely acquisition of modern knowledge.
2.	Ability to learn and acquire modern knowledge	Know the current trends in the branch and analyze them	Be able to analyze professional information, make informed decisions, acquire modern knowledge.	Establish appropriate connections to achieve goals.	Be responsible for the timely acquisition of modern knowledge.
3.	Ability to apply knowledge in practical situations	Have specialized conceptual knowledge acquired in the learning process.	Be able to solve complex problems and problems that arise in professional activities	Clear and unambiguous communication of one's own conclusions, knowledge and explanations that substantiate them to specialists and non-specialists	Be responsible for making decisions in difficult conditions

4.	Knowledge and understanding of the subject area and understanding of professional activity	Have deep knowledge of the structure of professional activity	Be able to carry out professional activities that require updating and integration of knowledge.	Ability to effectively form a communication strategy in professional activities.	To be responsible for professional development, ability to further professional training with a high level of autonomy
5.	Ability to adapt and act in a new situation	Know the types and methods of adaptation, principles of action in a new situation.	To be able to apply means of self-regulation, to be able to adapt to new situations (circumstances) of life and activity	Establish appropriate connections to achieve results.	Be responsible for the timely use of self-regulatory methods
6.	Ability to make informed decisions	Know the tactics and strategies of communication, rules and ways of communicative behavior	Be able to make informed decisions, choose ways and strategies to communicate to ensure effective teamwork	Use communication strategies and interpersonal skills	Be responsible for the choice and tactics of communication.
7.	Ability to work in a team	Know the tactics and strategies of communication, rules and ways of communicative behavior	Be able to choose ways and strategies of communication to ensure effective teamwork	Use methods and strategies of communication to ensure effective teamwork.	Be responsible for the choice and tactics of communication.
8.	The skills of interpersonal interaction	Know the rules and methods of interpersonal interaction	Be able to choose ways and strategies of communication for interpersonal interaction	Use the skills of interpersonal interaction	Be responsible for the choice and tactics of communication.
10.	Ability to use information and communication technologies	Have deep knowledge in the field of information and communication technologies used in professional activities	Be able to use information and communication technologies in the professional field, which requires updating and integration of knowledge	Use informational and communication technologies in professional activity	Be responsible for the development of professional knowledge and skills.
11.	Ability to search, process and analyze information from various sources	Have deep knowledge in the field of information technologies used in professional activities	Be able to use information technologies in the professional field. Be able to search, and analyze information from various sources	Use informational and communication technologies in professional activity	Be responsible for the development of professional knowledge and skills.
12.	Definiteness and persistence in terms of tasks and responsibilities	Know the responsibilities and ways to accomplish the tasks.	Be able to set goals and objectives to be persistent and conscientious in the performance of duties	Establish interpersonal relationships to effectively perform tasks and responsibilities	Be responsible for the quality of the tasks.
13.	Awareness of equal opportunities and gender problems	Know social and community rights and responsibilities in context of gender problems	To form one's civic consciousness, to be able to act in accordance with it.	Ability to convey one's public and social position.	Be responsible for own civic position and activities.
14.	Ability to realize one's rights and responsibilities as a member of society,	Know social and community rights and responsibilities	To form one's civic consciousness, to be able to act in accordance with it.	Ability to convey one's public and social position.	Be responsible for own civic position and activities.

	to be aware of the values of a civil (free democratic) society and the necessity for its sustainable development, the rule of law, the rights and freedoms of a person				
15.	Ability to preserve and multiply 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 technologies, to use various types and forms of motor activity for active recreation and healthy lifestyle	Know the basics of ethics and deontology To know the history and patterns of development of the subject area Know the basics of a healthy lifestyle	Be able to apply ethical and deontological norms and principles in professional activities Be able to promote the basics of a healthy lifestyle in professional activities actively	The ability to convey to patients, their families, colleagues their professional position	Be responsible for the implementation of ethical and deontological norms and principles in professional activities
<b>Special competences</b>					
1.	Ability to gather medical information about the patient and analyze clinical data	To have specialized knowledge about child's organs and systems. Know methods and standard schemes of interviewing procedure and physical examination of the patient. Know the methods of assessing the state of intrauterine development of the fetus. Know methods of assessment of psychomotor and physical development of a child	Be able to gather data about the patient's complaints, anamnesis of illness, anamnesis of life based on algorithms and standards. Conduct physical examination of the patient. Be able to assess psychomotor and physical development of a child. Be able to assess a person's health condition (including child).	The ability to form effective communication strategy to communicate with patients and their relatives. The ability to submit information about the health condition of the child to the medical documentation	Be responsible for the quality of gathered information obtained on the basis of an interview, inspection, palpation, percussion of organs and systems and for correct assessment of the human health condition, psychomotor and physical development of a child and intrauterine development of the fetus and for the determination of appropriate measures
2.	Ability to determine the required list of laboratory and instrumental studies and evaluate their	To have specialized knowledge about a person, his organs and systems, to know the principles of laboratory and instrumental research and evaluation	Be able to analyze the results of laboratory and instrumental studies and evaluate information about the patient's	Prescribe and evaluate the results of laboratory and instrumental research reasonably	Be responsible for the correct and timely assessment of information about results of laboratory and instrumental research in a health

	results	of their results	diagnosis		care institution
3.	Ability to establish a preliminary and clinical diagnosis of the disease	To have specialized knowledge about a person, his organs and systems, to know the algorithm of a diagnosis in conditions of a health care institution	Be able: <ul style="list-style-type: none"> <li>• to identify leading clinical symptom or syndrome;</li> <li>• to establish the most probable syndrome diagnosis of the disease</li> <li>• to appoint laboratory and / or instrumental studies of the patient</li> <li>• to carry out differential diagnostics of diseases</li> </ul>	Obtain the necessary information from a specific source and, based on its analysis, formulate relevant conclusions	Be responsible for making informed decisions and actions regarding the correctness of the established preliminary and clinical diagnosis of the disease according to ethical and legal norms
4	Ability to determine the necessary mode of study, work and rest for the treatment and prevention of diseases	To have specialized knowledge about a person, a child, his organs and systems; ethical and legal norms; algorithms and standard schemes for determining the mode of study, work and rest during treatment, based on the preliminary and clinical diagnosis of the disease (according to list 2)	Be able to determine necessary mode of study and work and rest during the treatment of the disease (according to list 2) on the basis of a preliminary and clinical diagnosis, by making a reasoned decision	Form and convey to the patient and specialists the conclusions regarding the necessary mode of study, work and rest during the treatment of the disease (according to list 2)	Be responsible for the reasonableness of prescribing a work and rest regime during the treatment of a disease (according to list 2)
5	Ability to determine type of nourishment for the treatment and prevention of diseases	To have specialized knowledge about a person, a child, his organs and systems; algorithms and standard schemes for prescribing diet for the treatment of diseases (according to list 2)	Be able to determine type of nourishment for the treatment of the disease (according to list 2) on the basis of a preliminary and clinical diagnosis	Form and convey to the patient and specialists conclusions about nourishment during the treatment of the disease (according to list 2)	Be responsible for the reasonableness of determining nourishment during the treatment of a disease (according to list 2)
7.	Ability to diagnose urgent conditions	To have specialized knowledge about the structure of the child's body, its organs and systems; emergency medical care algorithm in case of cardiac and respiratory arrest	Be able, in case of absence of any information, using standard techniques, assess the condition of the person, child and determine the main clinical syndrome (or severity of patient's condition)	Under any circumstances, adhering to the relevant ethical and legal norms to make an informed decision to assess the severity of the condition of the person, child, diagnosis and organization of the necessary medical measures depending on the person's condition; fill in the relevant medical documents	Be responsible for the timeliness and quality of emergency medical care.
21	Convey one's own knowledge, conclusions and arguments on health care problems and related issues to	To have specialized knowledge about a person, a child, diseases, their clinical manifestations, methods of prevention.	Be able to conduct a conversation about the health condition with a patient (including a child) To be able to form	Form a communication strategy for effective communication with the patient	To be responsible for the qualitative gathered information based on the interview and for the choice of interview tactics



	specialists and non-specialists, in particular to students clearly and unequivocally		the patient's commitment (including child) to comply with the prescribed treatment, regime, diet.		
24	Follow ethical principles during working with patients and laboratory animals	Know the basics of ethics and deontology	To be able to apply ethical and deontological norms and principles in professional activity	Be able to convey one's professional position to patients, their family members, and colleagues correctly	To be responsible for the implementation of ethical and deontological norms and principles in professional activity

### *Learning outcomes*

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

#### **Compliance with standard defined learning outcomes and competencies**

Learning outcome (LO)	Code of the learning outcome	Code of competence
Have thorough knowledge about the structure of professional activity. To be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, the ability for further professional training with a high level of autonomy	LO-1	GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC10, GC11, GC12, GC13, GC14, GC15
Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care.	LO-2	GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC10, GC11, GC12, GC13, GC14, GC15
Specialized conceptual knowledge, which include scientific achievements in the field of health care and are the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems	LO-3	GC1, GC2, GC3, GC4, GC5, GC6, GC7, GC8, GC10, GC11, GC12, GC13, GC14, GC15
Identify and determine leading clinical symptoms and syndromes (according to list 1); according to standard methods, using preliminary data of the patient's history, data of the patient's examination, knowledge about the person, his organs and systems, establish a preliminary clinical diagnosis of the disease (according to list 2)	LO-4	GC1, GC2, GC3, GC6, GC7, GC8; SC1, SC2, SC3, SC7, SC24
Gather complaints, anamnesis morbi and vitae, evaluate psychomotor and physical development of the patient, the state of the organs and systems of the body, based on the results of laboratory and instrumental studies, evaluate information about the diagnosis (according to list 4), taking into account the age of the patient	LO-5	GC1, GC2, GC3, GC6, GC7, GC8; SC1, SC2, SC24
Assign and analyze diagnostic studies (laboratory, functional and/or instrumental) (according to list 4) of patients with diseases of organs and body systems for differential diagnosis of diseases (according to list 2).	LO-7	GC1, GC2, GC3, GC6; SC2
Determine the main clinical syndrome or causes of the severity of the victim/injured's (according to list 3) by making a reasoned decision and assessing the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in the conditions of an emergency and hostilities, in field conditions, in conditions of lack of information and limited time	LO-8	GC1, GC2, GC3, GC6; SC1, SC2, SC3, SC7
To assess the general condition of a newborn child by making a reasoned decision according to existing algorithms and standard schemes, observing the relevant ethical and legal norms.	LO-12	GC1, GC2, GC3, GC6; SC1, SC2, SC7, SC24
Assess and monitor the child's development, provide recommendations on feeding depending on age, organize preventive vaccinations according to the schedule	LO-13	GC1, GC2, GC3, GC6, GC15; SC1, SC4, SC5, SC21
Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information	LO-21	GC10, GC11
Convey one's own knowledge, conclusions and arguments on health care problems and related issues to specialists and non-specialists clearly and unambiguously	LO-25	SC21

### ***Learning outcomes for discipline***

As a result of studying the discipline «Propaedeutic pediatrics», student **has to:**

I. Master the modern knowledge about:

- the basic peculiarities of physical and neuro-mental development of children of different age groups;
- the clinical significance of age-related anatomical and physiological characteristics of the child's organism;
- rules and pattern of interviewing and examination of the patient;
- semiotics of syndromes of disorders of different organ systems and the most common pediatric diseases;
- principles of rational feeding of infants;
- nourishment of children over one year of age

II Be able to apply knowledge in practical situations:

1. Demonstrate the moral and deontological principles of the medical specialist and the principles of professional subordination in the pediatric hospital

2. Get information about child's complaints, medical history, life history, in the health care institution or at the patient's home, using the results of an interview with the patient, according to a standard patient questionnaire scheme. In any circumstances (in a health care institution, its unit, at the patient's home, etc.), using knowledge about the child, its organs and systems, according to certain algorithms:

- get information about the patient's general condition (consciousness, constitution) and appearance (examination of the skin, subcutaneous fat layer);
- assess the child's psychomotor and physical development;
- assess the condition of organs and systems;

3. To make a conclusion about physiological functions of the organism of the child, his/her systems and organs: to determine the basic vital signs (pulse, blood pressure, respiration)

4. Demonstrate the skills of clinical and paraclinical examination of children of all ages:

- to demonstrate anthropometric measurements of children and make a conclusion about physical development;
- to demonstrate the evaluation of psychomotor development of children of all ages;
- to analyze age features of organism functions;
- to demonstrate the clinical examination of organs and systems of a child;
- to define the necessary list of instrumental, laboratory studies and analyze their results ;
- to interpret the condition of the child's organ systems;
- to evaluate information about the diagnosis, applying a standard procedure based on the results of laboratory and instrumental studies
- to identify the leading clinical symptom or syndrome. Establish the most likely or syndromic diagnosis of the disease. Assign laboratory and/or instrumental examination of the patient. Carry out differential diagnosis of diseases. Establish a preliminary and clinical diagnosis

4. Demonstrate the ability to compose a daily diet for healthy children of all ages:

- to count and compile a daily diet for infant.
- to correct the diet of children over one year.

## **2.Content of information of discipline «Propaedeutic pediatrics»**

There are 5,0 ECTS credit = 150 hours for the learning of discipline. The program "Propaedeutic pediatrics" is structured into 16 parts.

### ***Part 1. Pediatrics as a science about a healthy and a sick child.***

#### ***Specific goals:***

1. To know the significance of propaedeutics of pediatrics in the system of general medicine.
2. To know the principles of organization of medical and preventive care for children.
3. To know the rules of sanitary-hygienic and anti-epidemic regimes in child's medical settings.
4. To treat the child's health criteria.
5. To analyze the basic statistical indicators of activity of medical settings.
6. To interpret the historical stages of development of pediatrics in Ukraine.

#### **Topic 1. The scope and history of Pediatrics. Main stages of development of Pediatrics in Ukraine. Patterns of health care in Ukraine**

Pediatrics as a science of a healthy and sick child, its significance in the system of general medicine. Objectives of the course on propedeutic pediatrics. The main historical stages of the development of pediatrics in Ukraine.

Principles of organization and methods of treatment and preventive care for children in Ukraine. Structure of child's medical settings, peculiarities of organization of their activity. Organization of sanitary-hygienic and anti-epidemic regimes. Hospitalization of patients in the children's hospital and the specifics of the activities of clinical departments. Main responsibilities of pediatrician. The concept of the health of children, the criteria for its evaluation. The main statistical indicators of activity of children's medical settings. Ethics and deontology in clinical pediatrics.

### ***Part 2. Periods of Childhood***

#### ***Specific goals:***

1. Conducting an interview with a sick child
2. Evaluate the peculiarities of the childhood periods.
3. Evaluate the general condition of the child
4. Know the characteristics of the incurable patient
5. Know how to communicate with the incurable patient and his relatives
6. Make a conclusion about the condition of a newborn child.
7. To interpret changes in a newborn child on the basis of knowledge of anatomical and physiological characteristics
8. Evaluate the peculiarities childhood periods.

### **Topic 2. Periods of Childhood.**

Periods of childhood, their characteristics.

Features and methods of collecting anamnesis in children.

Methods of clinical examination of healthy and sick children.

Criteria for assessing the general condition of sick children.

Specificity of the examination of seriously ill children. Moral-deontological principles in the context of incurable disease

### **Topic 3. Peculiarities of neonatal period of childhood**

Neonate. Physiological and transitional states of the neonatal period. The concept of the maturity of the newborn.

Signs of prematurity. Taking care of the newborn infant.

Examination of the newborn baby. Sanitary-hygienic mode of the department for neonates.

### **Part 3. Physical and Psychomotor Development of the Children**

#### **Specific goals:**

1. Measure the basic parameters of the child's body
2. Calculate anthropometric indices.
3. Calculate the appropriate indicators of physical development by empirical formulas, and percentile charts.
4. Assess physical development on the basis of the obtained data.
5. To evaluate the basic criteria and indicators of psychomotor development of children of different ages
6. To explain features of psychomotor development of newborn children.
7. To evaluate the psychomotor development of an infant by months.
8. To evaluate psychomotor development of children of preschool, school age.
9. To detect the factors influencing changes in psychomotor development in anamnesis.

### **Topic 4. Physical development of the children. Anthropometry**

The concept of physical development. The concept of accelerating development of children, the basic hypotheses and mechanisms of acceleration. Methods of anthropometry.

### **Topic 5. Principles and methods of physical development assessment in pediatric practice. Semiotics of physical development disorders**

Methods for assessing the physical development of children. Semiotics of disorders of physical development of children.

### **Topic 6. Psychomotor development of the children. Semiotics of psychomotor development disorders**

The concept of psychomotor development of children, its features in different periods of childhood. Day mode for children of all ages.

Evaluation of development of the newborn. Semiotics of disorders of psychomotor development of children. Development of emotions, aesthetic, moral, etc..

### **Part 4. Nervous System of Children**

#### **Specific goals:**

1. Know the anatomical and physiological features of the nervous system in children of all ages.
2. To be able to pick out from the anamnesis facts that reflect the presence of a child's lesion of the central and peripheral nervous system.
3. Be able to assess nervous system in children of all ages.
4. To interpret the most informative signs of the nervous system disorders in the data of instrumental and laboratory studies of the patient.

### **Topic 7. Anatomical and physiological peculiarities and physical examination of nervous system of children.**

Anatomical and physiological peculiarities of the nervous system in children. Disorders of embryogenesis as the basis of birth defects of the nervous system.

Neurological examination of children.

### **Topic 8. Semiotics of neurologic diseases in pediatric practice**

Semiotics of main diseases of the nervous system in children (hydrocephalus, meningitis, encephalitis, cerebral palsy, etc.). Cerebrospinal fluid changes (purulent and serous meningitis, hydrocephalus). Taking care of children with nervous system diseases.

### **Part 5. Skin, Subcutaneous Tissue and Musculoskeletal System of Children**

#### **Specific goals:**

1. To conduct physical examination of the skin, subcutaneous basis

2. To conduct physical examination of the musculo-skeletal system in children.
3. To plan diagnostic studies of the musculo-skeletal system
4. Interpret the obtained diagnostic studies data taking into account the anatomical and physiological features of the child's body
5. To determine syndromic diagnosis for children with skin and musculo-skeletal system diseases.

**Topic 9. Anatomical and physiological peculiarities and physical examination of skin and appendageal structures of children.**

Morphological and functional features of the skin and appendageal structures in children. Features of the structure of subcutaneous tissue.

**Topic 10. Semiotics of skin and adipose tissue diseases of children.**

Total semiotics of adipose tissue changes. Semiotics of skin and subcutaneous tissue lesions.

**Topic 11. Anatomical and physiological peculiarities and physical examination of musculoskeletal system of children. Semiotics of musculoskeletal system diseases in pediatric practice.**

Anatomical and physiological features of the musculo-skeletal system in children. Methods of study of musculo-skeletal systems. Semiotics of lesions and diseases of the musculo-skeletal system.

**Part 6. Respiratory System of Children**

*Specific goals:*

1. Conducting an interview with a patient with respiratory disease.
2. Conduct clinical examination of the respiratory system of the child.
3. Interpret the obtained data.
4. Analyze the main syndromes of respiratory diseases
5. To plan a complex of laboratory, instrumental studies for patient with respiratory disease.

**Topic 12. Anatomical and physiological peculiarities and physical examination of respiratory system of children**

Embryogenesis of respiratory system and anomalies of development. Anatomical and physiological features of respiratory system in children. Clinical examination of respiratory system in children.

**Topic 13. Semiotics of respiratory diseases in pediatric practice**

Topographic and comparative percussion of the lungs in children. Semiotics of percussive findings. Comparative auscultation of lungs. Vesicular, pierilic, suppressed vesicular breathing. Semiotics of common respiratory diseases in children.

**Topic 14. Clinical syndromes of respiratory diseases.**

Syndrome of consolidation of the lung tissue, lower airway obstruction, pleural effusions, pneumothorax, respiratory distress, respiratory failure. Diagnostic studies in pulmonary medicine. Spirography. SARS-CoV-2 in children: clinical manifestations, emergency care, measures to prevent the spreading of respiratory disease COVID-19

**Part 7. Cardiovascular System of Children**

*Specific goals:*

1. Conducting an interview with a patient with cardiovascular disease.
2. Conduct clinical examination of the cardiovascular system of the child.
3. Interpret the obtained data.
4. Analyze the main syndromes of cardiovascular diseases
5. To plan a complex of laboratory, instrumental studies for patient with cardiovascular disease.
6. Know the indications for the echocardiography
7. Know the age features of ECG;
8. Analyze ECG of children of all ages;
9. Interpret ECG data;
10. Know ECG characteristics of most common cardiovascular diseases in children.

**Topic 15. Anatomical and physiological peculiarities and physical examination of cardiovascular system of children**

Embryogenesis of the cardiovascular system, congenital anomalies of the heart and blood vessels. Fetal circulation. Anatomical and physiological features of the heart and blood vessels of children. Clinical examination of the cardiovascular system in children.

**Topic 16. Semiotics of cardiovascular system diseases in children**

Percussion of the borders of the absolute and relative heart dullness, semiotics of pathological findings. Semiotics of diseases of the cardiovascular system in children. Rules of heart auscultation in children. The main clinical symptoms of the cardiovascular system in children (cyanosis, bradycardia, tachycardia, etc.).

**Topic 17. Semiotics of congenital and acquired heart conditions. Peculiarities of ECG of the children of different age groups. ECG findings in main cardiovascular diseases of pediatric patients**

Semiotics of congenital and acquired cardiovascular diseases in children. Echocardiography.

Peculiarities of ECG of the children of different age groups. ECG findings in heart chambers hypertrophy, rhythm disorders, electrolyte disturbances.

**Part 8. Digestive System of Children.**

*Specific goals:*

1. Conducting an interview with a patient with digestive system disease.
2. Conduct clinical examination of the digestive system of the child. Interpret the obtained data
3. To analyze the main syndromes of digestive system diseases in children.

4. To plan laboratory and instrumental studies of the digestive system in children.

**Topic 18. Anatomical and physiological peculiarities and physical examination of digestive system of children**

Anatomical and physiological features of the digestive system in children. Clinical examination of digestive system (inspection, palpation, percussion, auscultation).

**Topic 19. Semiotics of digestive system diseases in pediatric practice.**

The main symptoms of the digestive system diseases in children. Symptom complexes of the main diseases of the digestive system (pylorospasm, pyloric tenosis, gastritis, peptic ulcer, cholecystitis) in children.

**Topic 20. Main syndromes of digestive system diseases**

The main syndromes of the digestive system diseases in children (acute abdominal syndrome, dyspeptic syndrome, syndrome of gastroduodenal area disorder, syndromes of small and large intestine disorders, syndromes of hepatic failure, etc.) in children. Diagnostic studies (sonography, endoscopy, CT).

**Part 9. Urinary System of Children**

**Specific goals:**

1. Conduct clinical examination of the urinary system of the child. Interpret the obtained data
2. To plan laboratory and instrumental studies of the urinary system in children.
3. To interpret the revealed changes as a result of the diagnostic studies.

**Topic 21. Anatomical and physiological peculiarities and physical examination of urinary system of children.**

**Semiotics of urinary system diseases in pediatric practice**

Anatomical and physiological peculiarities of urinary system of children Brief information on the embryogenesis of the urinary system as the basis of inborn anomalies. Physical examination of urinary system of children. Semiotics of main diseases of urinary system

**Topic 22. Semiotics of urinary system diseases. Main syndromes of urinary system diseases in pediatric practice.**

Semiotics of microscopic changes of urine sediment (protein, erythrocyte, leukocyte and cylinduria, etc.). Nephrotic and nephritic syndromes. Dysuria. Syndrome of acute and chronic renal failure. Radiological studies in nephrology

**Part 10. Hematopoietic and Immune Systems of Children**

**Specific goals:**

1. Conducting an interview with a patient with hematopoietic and immune systems diseases.
2. Conduct clinical examination of hematopoietic and immune systems of the child. Interpret the obtained data
3. To distinguish clinical signs of immunodeficiency states, anemia, to identify leading syndromes.
4. To interpret the results of laboratory, instrumental studies.

**Topic 23. Anatomical and physiological peculiarities and physical examination of hematopoietic system and immune system of children. Semiotics of blood diseases and immune system dysfunction in children.**

Features of the hematopoietic system in children of different age groups. Clinical and laboratory examination of children with hematopoietic system disease. Main syndromes (anemic, hemolytic, hemorrhagic, etc.) and diseases of the hematopoietic system in children.

Immune system of children. Immunodeficiencies: classification and manifestation. Diagnostic studies for evaluation of immunodeficiency in pediatric practice. HIV infection in children.

**Part 11. Endocrine System of Children**

**Specific goals:**

1. Conducting an interview with a patient with endocrine system disease.
2. Conduct clinical examination of the endocrine system of the child. Interpret the obtained data
3. To analyze the main syndromes of endocrine system diseases in children.
4. To plan laboratory and instrumental studies of the endocrine system in children.

**Тема 24. Anatomical and physiological peculiarities and physical examination of endocrine system of children.**

**Clinical manifestation of endocrine system diseases in pediatric patients.**

Anatomical and physiological features of the endocrine system in children. Examination of the endocrine glands. Semiotics of hyper- and hypofunction of endocrine glands and endocrine system diseases in children.

**Part 12. Metabolism in Children**

**Specific goals:**

1. To explain the peculiarities of protein, carbohydrate, fat, water, mineral metabolism and acid-alkaline state in children.
2. To conduct examination of children with metabolic disorders.
3. To recognize the clinical signs of errors of metabolism
4. To interpret data of laboratory-instrumental studies.

**Topic 25. Peculiarities metabolism in children. Errors of metabolism. Caloric consumption in childhood.**

**Peculiarities of fluid and electrolytes homeostasis in children, clinical manifestation of its disturbances. Acid-based abnormalities in children.**

Patterns of energy metabolism in children. Neuroendocrine regulation of metabolic processes in children. General manifestation of metabolic diseases.

Thermogenesis and thermoregulation in children. The semiotics of hypo and hyperthermia in children.

Peculiarities of protein metabolism and semiotics of its disorders in children.

Peculiarities of carbohydrate metabolism and semiotics of its disorders in children.

Peculiarities of lipid metabolism and semiotics of its disorders in children.

Water and mineral metabolism and acid-alkaline state of the organism in children. Violation of water-mineral metabolism and clinical manifestations.

Significance of vitamins for the metabolic processes of the child's body. The semiotics of hypoparathyroidism and hypervitaminosis in children.

**Part 13. Examination of a Child. Getting up Patient's Medical Record**  
**Specific goals:**

1. Conduct clinical examination of the child.
2. To determine clinical syndromes.
3. To establish a syndromic diagnosis.
4. To interpret the results of laboratory-instrumental studies.

**Topic 26. Getting up patient's medical record**

Collection of complaints and anamnesis, complete clinical examination of a sick child, analysis of the results of diagnostic studies of the patient.

**Topic 27. Supporting of a medical record**

Assessment of the written medical record. Supporting of a medical record.

**Topic 28. Control class "Physical examination of a child"**

Collection of complaints and anamnesis, demonstration of practical skills of examination of a sick child, analysis of results of diagnostic studies of a patient.

**Part 14. Breast Feeding of Infants**  
**Specific goals:**

1. Collect the history of breastfeeding and evaluate it.
2. Calculate the daily amount of food for a child, depending on age.
3. Calculate the amount of food per feeding, depending on the age of the infant.
4. Make a daily diet for a breastfed baby
5. Evaluate the daily diet of the child and carry out correction (if necessary).

**Topic 29. Breast feeding of infants before introducing complementary foods**

Advantages of breast feeding of infants. The importance of breastfeeding for the health of the baby and mother. Quantitative and qualitative composition of maternal milk. Immunobiological role of breast milk. Difficulty in breastfeeding. Prevention of hypogalactia and mastitis. Mode and nutrition of nursing women. Methods of calculating the daily volume of food and diet. Rules and techniques for breastfeeding. The need for a child in proteins, fats, carbohydrates and calories.

**Topic 30. Breast feeding of infants after introducing complementary foods**

Timely complementary feeding. Daily requirements of proteins, fats, carbohydrates and calories.

**Part 15. Artificial and Mixed Feeding of Infants**  
**Specific goals:**

1. To explain the definition of artificial feeding of infants, classification of milk formulas.
2. Collect the history of feeding and evaluate it.
3. Calculate the daily amount of food for a formulafed baby
4. Make a daily diet for formulafed infant
5. Organize correct artificial feeding, assess its effectiveness.
6. Evaluate the daily diet of the child and carry out correction (if necessary).
7. To explain the definition of mixed feeding of infants.
8. To collect the history of breastfeeding and evaluate it, to prevent the progression of maternal hypogalactia
9. Calculate the daily food amount and nutrients requirements for mixed feed baby
10. Make a one-day diet for mixed feed baby
11. Organize correct mixfeeding, interpret its effectiveness.
12. Adjust nutrition to a child in a mixed feeding

**Topic 31. Artificial and Mixed Feeding of Infants**

Concept of artificial feeding of infants. Classification and characteristics of infant formulas for the artificial feeding. Artificial feeding technique and criteria for evaluating its effectiveness. Daily requirement of proteins, fats, carbohydrates and calories for formula fed baby.

Complementary foods in artificial feeding of infants. Daily requirements of proteins, fats, carbohydrates and calories.

Technique and rules of feeding. The scheme of mixed feeding of infants. Correction of diet. Nutrients requirements for mixed feed baby.

**Part 16. Nourishment of Children Over 1 Year**  
**Specific goals:**

1. To collect the history of nutrition of a child over one year.
2. To assess the adequacy of nutrition for successful physical and psychomotor development of the child.
3. Make a one-day diet for a healthy child over one year, taking into account nutrients requirements.
4. Adjust nutrition for a child over one year.

**Topic 32. Principles of rational nourishment of children over 1 yr of age.**

Organization and principles of rational nourishment of children over 1 yr of age. Dietary variables according to age. The concept of the elimination diet.

### 3. Structure of discipline «Propaedeutic pediatrics»

Topic	Lectures	Practical classes	Self work	Individual work
<b>Part 1. Pediatrics as a science about a healthy and a sick child</b>				
1. Pediatrics as a science about a healthy and a sick child. The scope and history of Pediatrics. Main stages of development of Pediatrics in Ukraine. Patterns of health care in Ukraine.	-	-	2	
<b>Totally in the part 1</b>	-	-	2	
<b>Part 2. Periods of Childhood</b>				
2. Periods of childhood: characteristics and peculiarities. Peculiarities of examination of terminally ill children with limited prognosis. Moral and deontological principles in the context of incurable disease	-	2	2	
3. Peculiarities of neonatal period of childhood	-	2	2	
<b>Totally in the part 2</b>	-	4	4	
<b>Part 3. Physical and Psychomotor Development of the Children</b>				
4. Physical development of the children. Anthropometry.	-	2	1	
5. Principles and methods of physical development assessment in pediatric practice. Semiotics of physical development disorders	0,5	2	1	
6. Psychomotor development of the children. Semiotics of psychomotor development disorders	0,5	2	3	
<b>Totally in the part 3</b>	1	6	5	
<b>Part 4. Nervous System of Children</b>				
7. Anatomical and physiological peculiarities and physical examination of nervous system of children	0,5	2	2	
8. Semiotics of neurologic diseases in pediatric practice	0,5	2	2	
<b>Totally in the part 4</b>	1	4	4	
<b>Part 5. Skin, Subcutaneous Tissue and Musculoskeletal System of Children</b>				
9. Anatomical and physiological peculiarities and physical examination of skin and appendageal structures of children.	0,5	2	1	
10. Semiotics of skin and adipose tissue diseases of children.	0,5	2	2	
11. Anatomical and physiological peculiarities and physical examination of musculoskeletal system of children. Semiotics of musculoskeletal system diseases in pediatric practice.	1	2	1	
<b>Totally in the part 5</b>	2	6	4	
<b>Part 6. Respiratory System of Children</b>				
12. Anatomical and physiological peculiarities and physical examination of respiratory system of children	0,5	2	2	
13. Semiotics of respiratory diseases in pediatric practice.	0,5	2	2	
14. Clinical syndromes of respiratory diseases.	1	2	3	
<b>Totally in the part 6</b>	2	6	7	
<b>Part 7. Cardiovascular System of Children</b>				
15. Anatomical and physiological peculiarities and physical examination of cardiovascular system of children.	0,5	2	1	
16. Semiotics of cardiovascular system diseases in children	0,5	2	3	
17. Semiotics of congenital and acquired heart conditions.. Peculiarities of ECG of the children of different age groups. ECG findings in main cardiovascular diseases of pediatric patients	1	2	5	
<b>Totally in the part 7</b>	2	6	918	
<b>Part 8. Digestive System of Children</b>				
18. Anatomical and physiological peculiarities and physical examination of digestive system of children	0,5	2	2	
19. Semiotics of digestive system diseases in pediatric practice	0,5	2	2	
20. Main syndromes of digestive system diseases	1	2	2	

<b>Totally in the part 8</b>	2	6	6	
<b>Part 9. Urinary System of Children</b>				
21. Anatomical and physiological peculiarities and physical examination of urinary system of children. Semiotics of urinary system diseases in pediatric practice	1	2	2	
22. Semiotics of urinary system diseases. Main syndromes of urinary system diseases in pediatric practice	1	2	2	
<b>Totally in the part 9</b>	2	4	4	
<b>Part 10. Hematopoietic and Immune Systems of Children</b>				
23. Anatomical and physiological peculiarities and physical examination of hematopoietic system and immune system of children. Semiotics of blood diseases and immune system dysfunction in children	-	2	3	
<b>Totally in the part 10</b>	-	2	3	
<b>Part 11. Endocrine System of Children</b>				
24. Anatomical and physiological peculiarities and physical examination of endocrine system of children. Clinical manifestation of endocrine system diseases in pediatric patients.	-	2	1	
<b>Totally in the part 11</b>	-	2	1	
<b>Part 12. Metabolism in Children</b>				
25. Peculiarities of metabolism in children. Errors of metabolism. Caloric consumption in childhood. Peculiarities of fluid and electrolytes homeostasis in children, clinical manifestation of its disturbances. Acid-based abnormalities in children.	-	-	6	
<b>Totally in the part 12</b>	-	-	6	
<b>Part 13. Examination of a Child. Getting up Patient's Medical Record</b>				
26. Getting up patient's medical record	-	2	4	
27. Analysis and evaluation of the written patient's medical record. Supporting of a medical record	-	2	2	
28. Control class "Physical examination of a child"	-	2	4	
<b>Totally in the part 13</b>		6	10	
<b>Part 14. Breast Feeding of Infants</b>				
29. Breast feeding of infants before introducing complementary foods	0,5	2	2	
30. Breast feeding of infants after introducing complementary foods.	0,5	2	-	
<b>Totally in the part 14</b>	1	4	2	
<b>Part 15. Artificial and Mixed Feeding of Infants</b>				
31. Artificial and mixed feeding of infants.	0,5	2	2	
<b>Totally in the part 15</b>	0,5	2	2	
<b>Part 16. Nourishment of Children Over 1 Year</b>				
32. Principles of rational nourishment of children over 1 yr of age.	0,5	2	1	
<b>Totally in the part 16</b>	0,5	2	1	
33. Differential credit	-	2	4	
<b>Totally – 150 hr / 5 credits ECTS</b>	14	62	74	
<b>Final control</b>			<b>Differential credit</b>	
Classroom activity – 50,7 %, Self work – 49,3 %				

#### 4. Lecture Curriculum of discipline «Propaedeutic pediatrics»

No	Topic	Hours
<b>Part 3. Physical and Psychomotor Development of the Children</b>		
1	Physical and psychomotor development of the children of different age groups. Principles and methods of physical development assessment in pediatric practice. Assessment of psychomotor development of a child in the context of the maturation of the nervous system. Semiotics of physical and psychomotor development disorders and main neurologic diseases in pediatric practice.	2
	<b>TOTALLY</b>	2
<b>Part 5. Skin, Subcutaneous Tissue and Musculoskeletal System of Children</b>		



2.	Anatomical and physiological peculiarities of skin, appendageal structures and subcutaneous tissue of children. Semiotics of skin and adipose tissue diseases in pediatric practice. Anatomical and physiological peculiarities of musculoskeletal system of children. Semiotics of musculoskeletal system diseases in pediatric practice.	2
	<b>TOTALLY</b>	2
<b>Part 6. Respiratory System of Children</b>		
3.	Prenatal development and congenital abnormalities of respiratory system. Anatomical and physiological peculiarities of respiratory system of children. Semiotics of respiratory system diseases in pediatric practice. Main syndromes of respiratory diseases. SARS-CoV-2 in children: clinical manifestations, emergency care, measures to prevent the spreading of respiratory disease COVID-19	2
	<b>TOTALLY</b>	2
<b>Part 7. Cardiovascular System of Children</b>		
4.	Prenatal development of cardiovascular system. Congenital heart conditions. Peculiarities of fetal circulation. Anatomical and physiological peculiarities of cardiovascular system of children. Clinical manifestation of cardiovascular system diseases in children. Semiotics of congenital and acquired heart conditions of children.	2
	<b>TOTALLY</b>	2
<b>Part 8. Digestive System of Children</b>		
5.	Anatomical and physiological peculiarities of digestive system of children. Semiotics of gastrointestinal diseases. Main syndromes of of gastrointestinal diseases in pediatric patients. Acute abdominal pain. Syndromes of hepatic and gall bladder diseases, bile ducts disorders, diseases of pancreas.	2
	<b>TOTALLY</b>	2
<b>Part 9. Urinary System of Children</b>		
6.	Embryogenesis and congenital malformations of urinary system Anatomical and physiological peculiarities of urinary system of children. Semiotics of main renal and bladder diseases. Syndromes of main urinary system diseases	2
	<b>TOTALLY</b>	2
<b>Part 14. Breast Feeding of Infants Part 15. Artificial and Mixed Feeding of Infants Part 16. Nourishment of Children Over 1 Year</b>		
7.	Feeding of infants. Advantages of breast-feeding. Rules of introducing of complementary foods into the diet. Reasons for artificial and mixed feeding of infants. Classification and characteristics of formulas for artificial feeding of infants. Principles of rational nourishment of children over 1 yr of age. Dietary variables according to age.	2
	<b>TOTALLY</b>	2
	<b>TOTAL for discipline</b>	<b>14</b>

#### 5. Practice Curriculum of discipline «Propaedeutic pediatrics»

No	Topic	Hours
<b>Part 2. Periods of Childhood</b>		
1	Periods of childhood: characteristics and peculiarities. Main principles of pediatric clinical interview. Methods of physical examination in pediatric practice. Peculiarities of examination of terminally ill children with limited prognosis. Moral and deontological principles in the context of incurable disease	2
2.	Peculiarities of neonatal period of childhood.	2
	<b>TOTALLY</b>	4
<b>Part 3. Physical and Psychomotor Development of the Children</b>		
3.	Physical development of the children. Techniques of anthropometry.	2
4.	Assessment of physical development in pediatric practice. Semiotics of physical development disorders.	2
5.	Assessment of psychomotor development of the children of different age groups. Semiotics of psychomotor development disorders.	2
	<b>TOTALLY</b>	6
<b>Part 4. Nervous System of Children</b>		
6.	Anatomical and physiological peculiarities of nervous system of children. Physical examination of nervous system of a child.	2
7.	Semiotics of neurologic diseases in pediatric practice. Cerebrospinal fluid studies: normal and pathological findings.	2
	<b>TOTALLY</b>	4

<b>Part 5. Skin, Subcutaneous Tissue and Musculoskeletal System of Children</b>		
8.	Anatomical and physiological peculiarities, physical examination of the skin, appendageal structures and subcutaneous tissue of a child.	2
9.	Semiotics of skin and adipose tissue diseases of children.	2
10.	Anatomical and physiological peculiarities, physical examination and semiotics of musculoskeletal system diseases in pediatric practice.	2
	<b>TOTALLY</b>	6
<b>Part 6. Respiratory System of Children</b>		
11.	Anatomical and physiological peculiarities of respiratory system of children. Physical examination of respiratory system of a child.	2
12.	Semiotics of most common respiratory diseases in pediatric practice.	2
13.	Clinical syndromes of respiratory diseases. SARS-CoV-2 in children: clinical manifestations, emergency care, measures to prevent the spreading of respiratory disease COVID-19. Laboratory and instrumental studies in pediatric pulmonary medicine. X-ray studies of main respiratory diseases in children. Spirography.	2
	<b>TOTALLY</b>	6
<b>Part 7. Cardiovascular System of Children</b>		
14.	Anatomical and physiological peculiarities of cardiovascular system of children. Inspection, palpation, percussion, auscultation of cardiovascular system of a child.	2
15.	Semiotics of most common cardiovascular diseases in pediatric practice.	2
16.	Semiotics of congenital and acquired heart conditions. Peculiarities of ECG of the children of different age groups. ECG findings in main cardiovascular diseases of pediatric patients	2
	<b>TOTALLY</b>	6
<b>Part 8. Digestive System of Children</b>		
17.	Anatomical and physiological peculiarities of digestive system of children. Physical examination of digestive system of children (inspection, palpation, percussion, auscultation).	2
18.	Semiotics of digestive system diseases in pediatric practice.	2
19.	Main syndromes of digestive system diseases. Lab tests and instrumental investigations used for evaluation of digestive system condition in children	2
	<b>TOTALLY</b>	6
<b>Part 9. Urinary System of Children</b>		
20.	Anatomical and physiological peculiarities and physical examination of urinary system of children. Main symptoms of urinary system diseases.	2
21.	Semiotics of urinary system diseases. Syndromes of most common urinary system diseases in pediatric practice.	2
	<b>TOTALLY</b>	4
<b>Part 10. Hematopoietic and Immune Systems of Children</b>		
22.	Anatomical and physiological peculiarities of hematopoietic system of children of different age groups. Physical examination of hematopoietic system of children. Diagnostic studies in pediatric hematology. Semiotics of blood diseases in children. Anatomical and physiological peculiarities of immune system of children. Diagnostic studies for evaluation of immunodeficiency in pediatric practice. Semiotics of immune system dysfunction in children	2
	<b>TOTALLY</b>	2
<b>Part 11. Endocrine System of Children</b>		
23.	Anatomical and physiological peculiarities and physical examination of endocrine system of children. Semiotics of hypo- and hyperfunction of certain endocrine glands.	2
	<b>TOTALLY</b>	2
<b>Part 13. Examination of a Child. Getting up Patient's Medical Record</b>		
24.	Getting up patient's medical record	2
25.	Analysis and evaluation of the written patient's medical record. Supporting of a medical record	2
26.	Control class "Physical examination of a child"	2
	<b>TOTALLY</b>	6
<b>Part 14. Breast Feeding of Infants</b>		
27.	Breast feeding of infants before introducing complementary foods. Composition of human milk. Methods for calculation of daily food amount for infants.	2
28.	Breast feeding of infants after introducing complementary foods: supplementation and complementary foods, baby's nutrients and calories requirements.	2
	<b>TOTALLY</b>	4
<b>Part 15. Artificial and Mixed Feeding of Infants</b>		

29.	Artificial feeding of infants. Classification of formulas for artificial feeding of infants. Rules and technique of formula feeding. Criteria of formula feeding efficiency Mixed feeding of infants. Patterns of mixed feeding of infants. Supplementation and complementary foods in infants artificial and mixed feeding. Formula-fed and mixed-fed baby's nutrients and calories requirements.	2
	<b>TOTALLY</b>	2
<b>Part 16. Nourishment of Children Over 1 Year</b>		
30.	Principles of rational nourishment of children over 1 yr of age.	2
	<b>TOTALLY</b>	2
31.	Differential credit	2
	<b>TOTAL for discipline</b>	<b>62</b>

#### 6. Self-work Curriculum of discipline «Propaedeutic pediatrics»

No	Topic	Hours	Control
<b>Part 1. Pediatrics as a science about a healthy and a sick child.</b>			
1.	The scope and history of Pediatrics. Main stages of development of Pediatrics in Ukraine. Patterns of health care in Ukraine	2	Final control
	<b>TOTALLY</b>	2	
<b>Part 2. Periods of Childhood</b>			
1.	Peculiarities of examination of terminally ill children with limited prognosis. Moral and deontological principles in the context of incurable disease.	2	During classes
2.	Taking care of the newborn infant	2	
	<b>TOTALLY</b>	4	
<b>Part 3. Physical and Psychomotor Development of the Children</b>			
1.	Physical development of preterm children.	1	During classes
2.	Medical and social problems of obesity in children.	1	
3.	Griffiths Mental Development Scales: assessment of psychomotor development of children	1	
4.	Mental retardation: severity, clinical manifestation. Taking care of the children with delayed mental development.	2	
	<b>TOTALLY</b>	5	
<b>Part 4. Nervous System of Children</b>			
1.	Laboratory and instrumental studies in pediatric neurology	2	During classes
2.	Cerebral palsy: types, clinical manifestation. Taking care of the children with cerebral palsy	2	
	<b>TOTALLY</b>	4	
<b>Part 5. Skin, Subcutaneous Tissue and Musculoskeletal System of Children</b>			
1.	Peculiarities of examination of the skin, subcutaneous tissue in infants	1	During classes
2.	Rash of infectious and noninfectious origin	2	
3.	Floppy baby syndrome	1	
	<b>TOTALLY</b>	4	
<b>Part 6. Respiratory System of Children</b>			
1.	Laboratory and instrumental studies in pediatric pulmonary medicine	2	During classes
2.	Semiotics of chronic cough in children	2	
3.	Emergency conditions in pediatric pulmonary medicine	3	
	<b>TOTALLY</b>	7	
<b>Part 7. Cardiovascular System of Children</b>			
1.	Functional tests for assessment of the condition of the cardiovascular system of a child	1	During classes
2.	Emergency conditions in pediatric cardiology	3	
3.	Myocarditis in children of different age	2	
4.	ECG changes in case of conducting disorders, electrolyte disorders, hypertrophy of the heart chambers in children	3	
	<b>TOTALLY</b>	9	
<b>Part 8. Digestive System of Children</b>			
1.	Semiotics of hepatobiliary system disorders in children	2	During classes
2.	Acute abdomen syndrome, gastrointestinal bleeding in children	1	
3.	Laboratory and instrumental studies in pediatric gastroenterology. Obtaining gastric and duodenal contents, feces for diagnostic studies (main rules and technique)	3	
	<b>TOTALLY</b>	6	

Part 9. Urinary System of Children			
1.	Semiotics of acute and chronic renal failure	2	During classes
2.	Radiological studies in pediatric nephrology: indications, main principles. Laboratory studies in pediatric nephrology. Obtaining urine for diagnostic studies (main rules and technique)	2	
	TOTALLY	4	
Part 10. Hematopoietic and Immune Systems of Children			
1.	Clinical and hematological characteristic of hemorrhagic syndrome in children.	1	During classes
2.	Acquired immunodeficiency in children	2	
	TOTALLY	3	
Part 11. Endocrine System of Children			
1.	Thyroid gland disorders in children	1	During classes
	TOTALLY	1	
Part 12. Metabolism in Children			
1.	Caloric consumption in childhood	1	Final control
2.	Peculiarities of proteins metabolism in children	1	
3.	Peculiarities of carbohydrates metabolism in children	1	
4.	Peculiarities of fats metabolism in children	1	
5.	Peculiarities of fluid and electrolytes homeostasis in children, clinical manifestation of its disturbances. Acid-based abnormalities in children.	1	
6.	Role of vitamins for child's growth and development. Vitamins and metabolic processes	1	
	TOTALLY	6	
Part 13. Examination of a Child. Getting up Patient's Medical Record			
1.	Getting up patient's medical record. Preparation to the class "Supporting of a medical record"	6	During classes
2.	Practical skills training and preparation to the control class "Physical examination of a child"	4	
	TOTALLY	10	
Part 14. Breast Feeding of Infants			
1.	Technique of breast feeding. Nourishment and life style of lactating woman. Prevention of mastitis and hypogalactia	1	During classes
2.	Peculiarities of feeding of preterm neonates. Behaviors for optimal infant feeding: breast feeding on baby's demand	1	
	TOTALLY	2	
Part 15. Artificial and Mixed Feeding of Infants			
1.	Milk formulas for special needs of infants	1	During classes
2.	Rules and technique of supplementary and complementary types of mixed feeding.	1	
	TOTALLY	2	
Part 16. Nourishment of Children Over 1 Year			
1.	The concept of the elimination diet for children with food allergies	1	During classes
	TOTALLY	1	
1.	Preparation for the differential credit	4	Final control
	TOTAL for discipline	74	

**7. Individual work** is not provided by the programme (according to the order of Danylo Halytskyi LNMU No. 881-3, 15.03.2022)

## 8. Methods of training

Teaching the discipline "Propaedeutic pediatrics" consists of verbal, visual, practical, explanatory-illustrative (visual), reproductive, problem teaching, part-search, research methods. Method of independent work of students is used to understand and master the new material of work on the application of knowledge in practice and the development of skills and abilities, verification and evaluation of knowledge, skills and abilities. Visual (illustrative, demonstrative) teaching methods are used, which are auxiliary to the verbal method, their significance is to provide a brighter presentation and self-reflection. Illustrations (photo galleries, tables, models, images, etc.) are used also. Following types of demonstration: educational film, television program or video are very helpful for education.

*Practical methods:* educational, practical work in the diagnostic department of the hospital, student abstracts. These methods carry new educational and cognitive information and serve for consolidation, the formation of practical skills in the application of previously acquired knowledge.

*Creative, problem-searching methods* determine the relatively higher level of studying process. Problem-search methodology should be based on independent, creative cognitive activity of students. The concept of "creativity" is the creation of a new, original, "scientific" product.

*Problem method* of teaching is close to creativity, it is situated between reproduction, mental formation and creativity.

*Independent work of students* outside the control of a teacher - independent work at home. Self-work contributes to the development of skills for independent cognitive activity.

*Creating a situation of interest* in the teaching of discipline "Propaedeutic pediatrics" - a review of educational video, using role-playing games, educational discussions, interesting clinical observations in the on-line system). The development of students' motivation means activating learning that facilitates a better studying.

Practical classes on discipline are carried out at the clinical base of the department of propaedeutics of pediatrics and medical genetics (Lviv Regional Clinical Pediatric Hospital). Lectures are given in the conference hall of the same hospital. Types of educational activity of students according to the curriculum are: a) lectures, b) practical classes, c) self-work of students.. Thematic plans of lectures, practical classes, self-work provide the implementation of all topics from the content of the program into educational process.

Duration of practical classes is 2 hours. Practical classes are aimed at controlling the acquisition of theoretical material and the formation of practical skills, as well as the ability to analyze and apply the knowledge gained to solve practical problems. The main target of each practical class is the study of the physical and neuro-psychological development of children of different age groups; anatomical and physiological features of the child's organ systems; semiotics of syndromes, manifestation of disorders of different systems and the most common diseases of the child's organism, as well as the principles of rational nutrition. Means of control are MCQ, study cases; control of practical skills.

The following methodology for conducting practical classes is used:

1. Each class begins with 10-15 minutes test control in order to assess the initial level of knowledge and determine the degree of readiness of students to study.
2. Within 15-20 minutes the teacher explains and demonstrates the methodology of examination of a child, introduces students to the principles of organizing rational nutrition, etc.
3. Within 30-35 minutes students work with sick children independently, collect anamnesis, make examination, perform diagnostic and therapeutic manipulations, etc. During independent work, the teacher assists students and accentuates attention on the most important issues on this topic of practical classes.
4. Within 20-30 minutes students report about the results of their self-work. The teacher discusses, and explaining, emphasizes the peculiarities of different clinical cases. During the clinical examination, teacher controls the final level of knowledge of students.
5. After completing a practical class, teacher within 10-15 minutes summarise practical class, gives students the task for independent work, and offers a list of recommended literature for self-study.

## 9. Methods of control

Methods and forms of control and evaluation of students' progress in the discipline are carried out in accordance with the requirements of the program and Instructions for evaluating the students' educational activity in the context of the implementation of the European Credit Transfer System for the organization of the educational process, approved by the Ministry of Health of Ukraine (MOH Ukraine No. 08.01-47 / 10395 dated 15.04. 2014).

In assessing students' knowledge, preference is given to standardized control methods: testing (written), structured written work, work with standard medical documentation, standardized practice control exercises.

*Routine check* is carried out at every practical class. Preparation of the student for the class (initial stage) is checked on the basis of the answer to 10 test tasks. At the first practical lesson, these issues are included in the final control. For the correct answer for 10-9 tests the student receives 5 points, for 8-7 tests - 4 points, for 6-5 tests - 3 points, 4 and less - 0 points.

The main stage of practical training involves working in a clinic, mastering practical skills. The control of the main stage of the occupation is carried out by assessing the student's practical skills, analyzing his/her participation in the activities of the clinical department, and the ability to solve typical situational tasks. The survey is rated 12, 8, 4, 0 points.

At the final stage of the class, a summary of the practical activity of the student is made; a task is given for the student's time of self-work after the completion of the classroom part of the class. In order to assess the student's mastering of the topic, he is asked to solve three situational problems. If 3 tasks are correctly solved, the student gets 5 points, if 2 - 4 points, if 1 - 3 points. Scores obtained during the course are: scores obtained for the tests + scores received for the questions + scores obtained for the problem solving.

Recalculation of estimates from a multipoint scale is carried out as follows:

- 18 - 22 points - "excellent"
- 14 - 17 points - "good"
- 10 - 13 points - "satisfactory"
- 0 - 9 points - "unsatisfactory"

Routine control at practical classes, corresponding to Topics 24, 25, 26, is carried out in the following way:

- Topic 24: the student's ability to collect complaints and anamnesis, to conduct a complete objective examination of the patient, the ability to analyze the results of additional methods of examination of the patient are assessed. The assessment "excellent" is received by the student in case of comprehensive, correct, objective examination of the patient and the writing of Patient's Record without any remarks. The assessment "good" is received by a student who did not complete the objective examination of the patient sufficiently, did not fill in some sections of the Patient's Record correctly, but there were no significant errors, the syndromic diagnosis was substantiated. The assessment "satisfactory" is received by a student who has not completed the patient's examination fully, did not fill in most sections in the Patient's Record, made 1-2 serious errors, the syndromic diagnosis is vaguely substantiated. The assessment "unsatisfactory" is received by the student in the unwritten Patient's Record, or if it was written with 3 or more significant errors, with an unjustified syndrome diagnosis;

- Topic 25. Assessment of the supporting of the Patient's Record is carried out in this lesson as follows: Patient's Record is supported without errors - evaluation "excellent"; minor mistakes that are corrected by the student independently after the remark - the assessment is "good"; 1-2 significant defects in supporting, or inability to substantiate a syndromic diagnosis - an assessment "satisfactory"; Patient's Record is not supported - an assessment "unsatisfactory";
- Topic 26. The assessment "excellent" is obtained by the student in the ability to collect anamnesis and identify data indicating changes in the organs of the system in the child, conduct a complete objective examination of a sick child, distinguish the clinical symptom complexes. The assessment "good" is awarded to a student who has demonstrated practical skills with 1-2 mistakes that he/she corrected on his/her own. An assessment "satisfactory" is obtained by the student who showed 3 or more mistakes when demonstrating practical skills, corrected after a teacher's remark. The assessment is "unsatisfactory" if the student showed an inability to collect a history, to complete an objective examination of a sick child, or, demonstrated practical skills with 3 or more errors, which can not be corrected after the remarks of the teacher.

Since the classes that correspond to topics 24, 25, 26 summarize the student's knowledge obtained during the study of most part of the program of the discipline "Propaedeutics of Pediatrics", they can be evaluated only on a positive assessment. Thus, topics 24, 25, 26, which were assessed as "unsatisfactory", must be repassed for a positive mark.

*Final control* of the student's acquisition of theoretical and practical material of the discipline is differential credit, which corresponds to the Topic 31 and is conducted at the last practical lesson according to the schedule. The means of diagnostics of assimilation of the material are the theoretical tasks (the student is offered 80 tests (MCQ) of the A-format). The student is offered 40 MCQ of the first level, with one correct answer and 40 MCQ of the second level, extended choice with 50% of correct answers from the total number. For the correct answer on one question from the first level MCQ student receives 1 point, for the correct answer on one question from the second level MCQ student receives 0.25, 0.5, 0.75 or 1 point respectively, depending on the number of correct answers out of 4. The maximum number of points that a student can get for the differential credit is 80, the minimum number of points is 50.

Self work of the student is one of the organizational forms of study, which is regulated by the working curriculum and is performed by the student independently outside the classroom. Types of independent work of students are: preparation for practical classes, mastering practical skills of examination of a child, writing a history of illness, searching and studying additional literature and writing reports for speeches in practical classes

## 10. Routine check.

Types of routine check:

- test tasks
- typical situational problems
- practical skills assessment

In assessing the mastering of each topic of the current educational activity, the student is graded with a 4-point (traditional) scale, while taking into account all types of work required by the programme. A student receives an assessment on each topic. All traditional scale grades are converted into points. **Maximal score**, which the student can get for the current educational activity on the discipline, is **120 points**.

**Minimal score**, which the student can get for the current educational activity on the discipline, is **72 points**.

### 10.1. Assessment of the current educational activity

#### *Criteria of assessing educational activity:*

1. 5 / "excellent" is marked in the case when the student flawlessly mastered the theoretical material of the subject, demonstrates deep and comprehensive knowledge of the topic, the main principles of scientific sources and recommended literature, logically thinks and forms an answer, freely uses the acquired theoretical knowledge in the analysis of practical material, expresses his/her attitude to certain problems, demonstrates a high level of mastering of practical skills;
2. 4 / "good" is marked provided that the student has mastered the theoretical material of the class, he has the main aspects from the primary sources and the recommended literature, he reasonably teaches him; has practical skills, expresses his thoughts on certain problems, but some inaccuracies and errors are assumed in the logic of presentation of theoretical content or in the practice of practical skills;
3. 3 / "satisfactory" is marked if the student has mastered the theoretical knowledge of the educational subject, is well-versed in the primary sources and recommended literature, but isn't convincingly responsible, confuses the concept, additional questions cause the student insecurity or lack of stable knowledge; answering practical questions, reveals inaccuracies in knowledge, does not know how to evaluate facts and phenomena, associate them with future activities, make mistakes when exercising practical skills;
4. 2 / "unsatisfactory" is marked in cases when the student did not master the educational material of the topic, does not know scientific facts, definitions, is almost not oriented in the primary sources and recommended literature, there is no scientific thinking, practical skills are not formed.

**11. Type of final control:** differential credit. Differential credit (at the end of the fifth semester) - a form of final control of the student's acquisition of theoretical and practical material from discipline for the 5<sup>th</sup> and 6<sup>th</sup> semesters. A student is considered to be allowed to pass differential credit, if he has attended all practical classes provided by the curriculum, completed all the types of activities during the the 5<sup>th</sup> and 6<sup>th</sup> semesters, his total number of points is not less than minimum (72 points). Differential credit is carried out at the last practical class according to the schedule.

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

In assessing the mastering of each topic of the current educational activity, the student is graded with a 4-point (traditional) scale, taking into account all types of work required by the program. A student receives an assessment from each topic. All traditional marks are converted into points. The calculation of the number of points is based on the student's assessment of the traditional mark during the study of the discipline during the term, by calculating the average arithmetic (CA) rounded up to two decimal places. The resulting value is converted to a multi-scale score in such way

$$X = \frac{CA \times 120}{5}$$

### Recalculation of the average for the current educational activity on the multi-point scale of the discipline «Propaedeutic pediatrics»

4- point scale	120- point scale	4- point scale	120- point scale	4- point scale	120- point scale	4- point scale	120- point scale
5.00	120	4.45	107	3.95	95	3.45	83
4.95	119	4.41	106	3.91	94	3.41	82
4.91	118	4.37	105	3.87	93	3.37	81
4.87	117	4.33	104	3.83	92	3.33	80
4.83	116	4.29	103	3.79	91	3.29	79
4.79	115	4.25	102	3.74	90	3.25	78
4.75	114	4.20	101	3.70	89	3.20	77
4.70	113	4.16	100	3.66	88	3.16	76
4.66	112	4.12	99	3.62	87	3.12	75
4.62	111	4.08	98	3.58	86	3.08	74
4.58	110	4.04	97	3.54	85	3.04	73
4.54	109	3.99	96	3.49	84	3	72
4.50	108					< 3	Not enough

*Self-work* is evaluated during the routine check of the topic in the relevant class. Mastery of the topics that are required only in independent work is assessed at the final control.

**Maximal score**, which the student can get for the differential credit is 80.

**Minimal score**, which the student can get for the differential credit is 50.

**Maximal score**, which the student can get for the educational activity on the discipline, is **200 points**.

**Minimal score**, which the student can get for the educational activity on the discipline, is **120 points**.

Points are independently converted into both the ECTS and 4-point scale. The ECTS scores are not converted into the 4-point scale and vice versa

Students who study in one specialty are ranked in the ECTS scale in such way:

ECTS credit	Statistic indicator
A	The best 10 % of students
B	The following 25 % of students
C	The following 30 % of students
D	The following 25 % of students
E	The last 10 % of students

A, B, C, D, E credits are ranked to the students of this course, who study in one specialty and successfully complete the study of the discipline. Students who received FX, F ("2") scores are not included in the list of credited students. Students with an FX score after redoing automatically receive an "E" score.

Score points for students who have successfully completed the program are converted into a traditional 4-point scale by the absolute criteria listed in the table below:

Scores of the discipline	4-point scale scores
From 170 to 200 points	5
From 140 to 169 points	4
From 139 points to the minimal point (122)	3
Lower than the minimal point (122)	2

The ECTS scores is not converted into the traditional scale because the ECTS scale and the four-point scale are independent.

Objectivity of evaluation of students' educational activity is checked by statistical methods (correlation coefficient between ECTS assessment and national scale assessment).

### 13. Methodical support

- Academic programme of the discipline;
- Curriculum of the practical classes and students' self-work;
- Recorded video of lectures
- Video for practical training
- Methodical guidelines for the teacher;
- Methodical guidelines of practical classes for the students;
- Methodical guidelines for the students' self-work;
- Test and control tasks for practical classes;
- List of questions for final control;
- Methodological support for the final control:

- MCQ with answers
- a list of standardized practical skills

Creation of test-control questions, study cases, list of practical skills is based on the content of academic programme of the discipline "Propaedeutic pediatrics".

### 14. List of reference materials

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5. Illustrated Textbook of Paediatrics by Tom Lissauer (Editor); Will Carroll (Editor), 2018.- 533 pp.
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8. Manual of Propaedeutic Pediatrics for the 3rd Year Students of Medical Faculty / ed. by Dr. I. Kulachkovska, PhD, Associated Professor, Dr. O. Sadova, PhD, Associated Professor. – Lviv, 2017. – 269 p
9. Nelson Textbook of Pediatrics: 2-Volume Set , 21st edition / ed. by By Robert M. Kliegman, MD and Joseph St. Geme, MD – Elsevie, 2020. – 4264 pp.
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13. Breastfeeding: [https://www.cdc.gov/breastfeeding/?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fbreastfeeding%2Fresources%2Fus-breastfeeding-rates.html](https://www.cdc.gov/breastfeeding/?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fbreastfeeding%2Fresources%2Fus-breastfeeding-rates.html)