#### DANYLO HALISTKY LVIV NATIONAL MEDICAL UNIVERSITY

Department of Pediatrics # 2

First Vice-Rector on First Vice-Rector on Cricing and Pedagogical work Pedagogical work Pedagogical University Addical University Pedagogical University 2023

# THE PROGRAM OF THE DISCIPLINE «PEDIATRICS» EB 3.3

Individual profile course: Obstetrics and gynecology EB 3.3.4 PAEDIATRICS, CHILDREN'S INFECTIONS 3.3.4.1 - PEDIATRICS

training of specialists of the second (master's) level of higher education field of knowledge 22 "Healthcare" specialty 222 "Medicine"

Discussed and endorsed at the methodological meeting of the Department of Pediatrics #2
Protocol № 12 of "21" April 2023
Head of the Department of Pediatrics #2

Professor Lesya Besh

Approved by the Thematic methodological commission on Pediatric disciplines
Protocol № 2 of "27" <u>April</u> 2023
Head of the Thematic methodological

commission

Professor Lesya Besh

#### **PROGRAM CONTRIBUTION:**

Besh LV, Head of the Department of Pediatrics #2, Danylo Halytskyy Lviv National Medical University, Professor

**Dobryanskyy DO**, Professor, Department of Pediatrics #2, Danylo Halytskyy Lviv National Medical University

**Gerasymov SV**, Associate Professor, Department of Pediatrics #2, Danylo Halytskyy Lviv National Medical University

**Dedyshyn LP,** Associate Professor, Department of Pediatrics #2, Danylo Halytskyy Lviv National Medical University

**Matsyura OI**, Associate Professor, Department of Pediatrics #2, Danylo Halytskyy Lviv National Medical University

#### **REVIEWERS:**

**Kulachkovska IYu,** Associate Professor, Department of Propaedeutics of Pediatrics and Medical Genetics, Danylo Halytsky Lviv National Medical University

**Hromnatska NM,** Professor, Department of Family Medicine, Danylo Halytsky Lviv National Medical University

# Introduction Program of discipline "Pediatrics"

The program is made according to the Educational-professional program "Medicine" of the second (master's) level of higher education on a specialty 222 "Medicine" field of knowledge 22 "Health"

#### **Description of academic discipline (abstract)**

Studying the discipline "Pediatrics" students consolidate knowledge gained in the classroom at the department of Propaedeutic Pediatrics and pediatric departments years 4-5. They are mastering basic skills of collecting anamnesis, conducting a physical examination, systemizing the symptoms in syndromes, planning examination of a sick child, interpretation of laboratory and instrumental examinations, carrying out a differential diagnosis most common diseases of the neonatal period and childhood, determination of the preliminary clinical diagnosis, determination of therapeutic tactics, comprehensive treatment with drug dosages administration, emergency medical care not only in typical but also in complex clinical situations. The 6<sup>th</sup> year students are solving complex (atypical) clinical cases, working off practical skills on mannequins and near the bed of a sick child, feeling in the medical records.

Academic curriculum for discipline "Pediatrics for students of the medical faculties specializing in 222 - Medicine

	Quantity of	f credits, l	nours, of w			
Structure of the educational discipline	Total hours/	Classroom		Self-	Educational	Type of control
educational discipline	credits	Lecture	Practical	education	year	
Pediatrics Thematic chapters 2	180/6	0	90	90	6	credit

#### The subject of the study of the discipline is:

Differential diagnosis of diseases of bronchopulmonary, cardiovascular, digestive, urinary systems, systemic connective tissue diseases in children of different ages, observation of children in the polyclinic. Prevention and treatment of diseases, taking into account the main, concomitant diagnoses and complications, age-related features of drug therapy.

**Interdisciplinary integration:** according to the curriculum, the study of the discipline "Pediatrics" is provided during the 6th academic year (XI -XII semesters), when the student has acquired knowledge of the basic disciplines, at clinical departments during 3-5 academic years:

- Medical Biology,
- Biological physics
- Normal human anatomy and physiology
- Pathological anatomy and physiology
- Histology, Cytology and Embryology
- Propaedeutic of pediatrics
- Pediatrics 4-5 courses
- Pharmacology
- Microbiology
- Clinical immunology
- Hygiene and Ecology
- Radiology

With these disciplines the curriculum of discipline "Pediatrics" is integrated. As the continuation of the Propaedeutic Pediatrics, our discipline in parallel with other clinical disciplines provides integration of teaching with these disciplines and forming skills of future physicians to use the acquired knowledge in their professional activity.

#### 1. Purpose and tasks of academic discipline

- 1.1. The purpose of teaching the educational discipline "Pediatrics" is as follows: formation of the ability to use knowledge, skills to solve typical problems of the doctor in the children's health field, the use of which is foreseen by defined list of syndromes and symptoms of diseases, emergency conditions, physiological conditions, and diseases requiring special tactics of patient management; laboratory and instrumental examinations, medical manipulations.
- 1.2. The main task of studying the discipline "Pediatrics" is that the student should know and be able to do while study the discipline. As a result of studying the discipline "pediatrics" student <u>should know</u>:
  - Etiologic factors of the most common childhood diseases;
  - Pathogenesis of the most common somatic diseases of childhood;
  - Classification of the most common somatic diseases of childhood;
  - The main clinical symptoms of the most common somatic diseases of childhood;
  - Principles of treatment of the most common childhood diseases.

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

- Take anamnesis;
- Examine the sick child;
- Put a preliminary clinical diagnosis;
- Plan an investigation of a sick child;
- Interpret laboratory and instrumental data;
- Make a differential diagnosis of the most common childhood diseases in their typical course;
- prescribe treatment;
- 1.3. **Competency and learning outcomes**, the formation of which is facilitated by discipline (the relationship with the normative content of the training of higher education graduates, formulated in terms of the results of training in the higher education standard).

According to the standard of higher education, discipline provides students with competences:

#### General:

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 an appropriate 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 Certainty and perseverance on the tasks and responsibilities
- GC13 Awareness of equal opportunities and gender issues
- 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 retain and develop moral, cultural, scientific values and achievements of society based on understanding 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, use various types of physical activities for recreation and a healthy lifestyle

### Special (Professional):

- SC1 Ability to collect medical information about the patient and analyze clinical data
- SC2 Ability to determine the required list of laboratory and instrumental studies and assess their

	results.
SC3	The ability to establish preliminary and clinical diagnosis
SC5	Ability to prescribe an appropriate diet in treatment and prevention of diseases
SC6	Ability to determine the principles and type of treatment and prevention of diseases
SC7	The ability to diagnose emergency conditions
SC8	Ability to determine the tactics and implement emergency medical care
SC10	The skills of performing medical manipulations
SC11	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
SC13	Ability to carry out sanitary and hygienic and preventive measures
SC14	Ability to plan and carry out preventive and anti-epidemic measures for infectious diseases
SC16	Ability to keep medical records, including electronic forms
SC21	Clearly and unambiguously to convey own knowledge, conclusions and arguments on health care
	problems and related issues to specialists and non-specialists, in particular to people who are
	studying
SC24	Adherence to ethical principles when working with patients
SC25	Adherence to professional and academic integrity, be responsible for the accuracy of scientific
	results

Detailing of competencies in accordance with the National Qualification Frame (NQF) descriptors is given in the form of the "Competence Matrix".

### **Competence matrix**

№	Competence	Knowledge	Skills	Communication	Autonomy and responsibility				
	Integral competence								
The	The ability to solve complex problems, including those of a research and innovation nature in the field of								
medi	icine. Ability to co	ontinue learning with a	high degree of autono	omy					
		G	eneral competencies						
1.	Ability to	Know the methods	Be able to analyze	Establish	To be responsible				
	abstract	of analysis,	information, make	appropriate	for the timely				
	thinking,	synthesis and	informed decisions,	connections to	acquisition of				
	analysis and	continued medical	be able to master	achieve goals	modern knowledge				
	synthesis	education	modern knowledge						
2.	Ability to learn and master modern knowledge	Know the current trends in the field 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	Responsible for making decisions in unusual conditions				
4.	Knowledge	Have deep	Be able to carry out	Ability to	To be responsible				

	and understanding of the subject area and understanding of professional activity	knowledge of the structure of professional activity	professional activities that require updating and integration of knowledge	effectively form a communication strategy in professional activities	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 result	Be responsible, timely use of self- regulation methods
6.	Ability to make an informed decision	Know the tactics and strategies of communication, laws 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, laws and ways of communicative behavior	Be able to choose ways and strategies of communication to ensure effective teamwork	Use communication strategies	Be responsible for the choice and tactics of communication
8.	Interpersonal interaction skills	Know the laws and methods of interpersonal interaction	Be able to choose ways and strategies of communication for interpersonal interaction	Use interpersonal skills	Be responsible for the choice and tactics of communication
9.	Ability to communicate in a foreign language	Have a basic knowledge of a foreign language	Be able to communicate in a foreign language.	Use a foreign language in professional activities	To be responsible for the development of professional knowledge with the use of a foreign language
10.	Skills in the use of information and communicatio n technologies	Have in-depth 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 information and communication technologies in professional activities	Be responsible for the development of professional knowledge and skills.
11.	Ability to search, process and analyze information from various	Have knowledge about searching and analysis of information from various sources	Be able to search, process and analyze information	Use and communicate obtained information and its analysis	Be responsible for searching, processing and analysis of information

	sources				
12.	Certainty and perseverance on the 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	Responsible for the quality of the tasks
13.	Awareness of equal opportunities and gender issues	Know about equal opportunities and gender issues	Be able to defines principles of equal opportunities and gender issues	Communicate awareness of equal opportunities and gender issues	Be responsible in implementation of principles of equal opportunities and 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	Know your social and community rights and responsibilities	To form one's civic awareness, to be able to act in accordance with it	Ability to convey one's public and social position	Be responsible for your social position and activities
15.	Ability to retain and develop moral, cultural, scientific values and achievements of society based on understanding 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,	Know about moral, cultural, scientific values and achievements of society the basics of ethics and deontology	Be able to develop moral, cultural, scientific values and achievements of society	Ability to convey moral, cultural, scientific values and achievements of society	Be responsible for implementation of moral, cultural, scientific values and achievements of society

	use various types of physical				
	activities for				
	recreation and				
	a healthy lifestyle				
	mestyle	Special (prof	essional, subject) con	npetencies	
1.	Ability to	Have specialized	Be able to conduct	Effectively	Be responsible for
	collect medical	knowledge about	a conversation with	develop a	the quality
	information	the child, organs	the child and / or	communication	collection of
	about the	and systems,	her parents	strategy when	information
	patient and	anatomical and	(guardians), based	communicating	obtained through
	analyze clinical data	physiological features of children	on algorithms and standards. Use the	with the patient and / or his	interviews,
	cillical data	of different ages,	principles of	parents	surveys, examinations,
		know the methods	communication	(guardians).	palpation,
		and standard	with parents of	Include	percussion of
		schemes of	children with	information about	organs and systems
		interviewing,	incurable diseases.	the child's health	and for timely
		taking genealogical	Using standard	or fetal	assessment of the
		information,	techniques to	development in the relevant	child's health,
		pedigree, physical examination of	conduct a physical examination of the	medical records	psychomotor and physical
		patients of different	patient. Be able to	incurcar records	development of the
		ages.	examine the		child and fetal
		Know the methods	psychomotor and		development and
		of assessing of	physical		for taking
		intrauterine fetal	development of the		appropriate
		development.	child.		measures
		Know the stages and methods of	Be able to assess the quality of care,		
		examination of	breastfeeding and		
		psychomotor and	child nutrition. Be		
		physical	able to conduct a		
		development of the	comprehensive		
		child	assessment of the		
	A1 91.	***	child's health	m 1 1	D 111 C
2.	Ability to determine the	Have specialized knowledge about	Be able to analyze the results of	To make and communicate to	Be responsible for deciding on the
	required list of	the child,	laboratory and	the patient and /	evaluation of
	laboratory and	peculiarities of	instrumental	or his/her parents	laboratory and
	instrumental	organs and	studies and on their	(guardians),	instrumental tests
	studies and	systems, standard	basis to evaluate	specialists	
	assess their	methods of	information about	conclusions on	
	results	laboratory and	the patient's	necessary	
		instrumental evaluation	diagnosis	laboratory and instrumental tests	
3.	The ability to	Have specialized	Be able to perform	On the basis of	Adhering to ethical
],	establish	knowledge about	a physical	normative	and legal norms, be
	preliminary and	the child, organs	examination of the	documents to keep	responsible for
	clinical	and systems;	patient; be able to	medical	making informed
	diagnosis	standard	make an informed	documentation of	decisions and

		examination methods; disease diagnosis algorithms; algorithms for discrimination of leading symptoms or syndromes; preliminary and final diagnoses; methods of laboratory and instrumental examination; knowledge of assessing the child's condition	decision about the selection of the leading clinical symptom or syndrome; be able to make a preliminary and clinical diagnosis); to order laboratory and instrumental tests	the patient (outpatient / inpatient records).	actions regarding the correctness of the established preliminary and clinical diagnosis
5.	Ability to prescribe an appropriate diet in treatment and prevention of diseases	Have specialized knowledge about the child, organs and systems, anatomical, physiological age-dependent characteristics; algorithms and standard schemes of nutrition for healthy children and during the treatment of diseases	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 diseases	Make and communicate to the patient and / or his parents (guardians), specialists conclusions on the nutrition of healthy children and in the treatment of diseases	Be responsible for the correct choice of nutrition for healthy and sick children
6.	Ability to determine the principles and type of treatment and prevention of diseases	Have specialized knowledge of algorithms and standard protocols for the treatment of diseases	Be able to make plan and particular treatment of the disease	Draw conclusions about treatment and inform the patient and / or his parents (guardians)	Be responsible for decisions regarding the treatment of the disease
7.	The ability to diagnose emergency conditions	Have a specialized knowledge about the child, his organs and systems, standard methods of pediatric examination (at home, on the street, in a health care facility) in the absence of information	Be able, in the absence of information, using standard techniques, by making an informed decision to assess the child's condition and determine the main clinical syndrome (or what causes the severity of the emergency)	Under any circumstances, adhering to the relevant ethical and legal issues to make an informed decision to assess the severity of the child's condition, diagnosis and organization of management depending on the child's condition;	Be responsible for the timeliness and effectiveness of medical measures to diagnose emergencies

				fill in the relevant	
				medical records	
8.	Ability to determine the tactics and implement emergency medical care	Know the legal framework for the provision of emergency medical care. Have specialized knowledge about urgent pediatric care.	Be able to identify emergencies; principles and tactics of emergency medical care; to carry out organizational and diagnostic measures aimed at saving child`s life.	Reasonable formulate and communicate to the patient or his / her legal representative the need for emergency care and obtain consent for medical intervention	Be responsible for the correct diagnosis of the emergency condition, severity and tactics of emergency medical care
10.	Skills to perform medical manipulations	Have specialized knowledge on pediatric anatomy and physiology; algorithms for Provision medical manipulation	Be able to perform medical manipulations	Reasonable formulate and communicate to the patient or his / her legal representative the need for medical manipulations and obtain consent for medical manipulations	Be responsible for the quality of medical manipulations
11.	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	Know how to solve medical problems in new or unfamiliar environments in the presence of incomplete or limited information	Be able 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	Communicate methods of solving of medical problems in new or unfamiliar environments in the presence of incomplete or limited information	Be responsible for solving medical problems in new or unfamiliar environments in the presence of incomplete or limited information
13.	Ability to carry out sanitary and hygienic and preventive measures	To know the system of hygienic and preventive measures among in the community. To know the principles of organization of medical follow-up of different age groups subject to dispensary supervision (newborns, children,	Be able to form groups of children for their medical follow-up. Be able to make a plan for medical follow-up of different groups. Have the skills to organize medical follow-ups of relevant contingents.	Based on the results of medical supervision and analysis of children's health, the state of industry and the environment to know the principles of submitting analytical information to	To be responsible for the timely and high-quality implementation of measures to assess the health of children, rehabilitation and improvement of the health of certain contingents, improving the environment,

		teenagers) and specific groups of patients; Know the indicators of evaluation of the organization and effectiveness of medical care. Know the methodological approaches to assess the state of the environment and the presence of factors that affect the health of the population in the environment. Know the principles of nutrition, water supply, mode of activity and recreation, the formation of a favorable working environment, primary prevention of disease and injury; principles and methods of promoting a healthy lifestyle	Have the skills to analyze the health status of groups of the population based on the results of medical follow-ups and the development of medical and preventive measures.  Have the skills to compile an analytical report on the health of children depending on the environment.  Be able to organize the promotion of a healthy lifestyle, primary prevention of diseases and injuries	local government and health; heads of industrial enterprises to take measures to eliminate harmful effects on children's health. Use the local press to publish health and environmental promotion activities, use radio, television, lectures and interviews	promoting a healthy lifestyle, primary prevention of disease and injury
14.	Ability to plan and carry out preventive and anti-epidemic measures regarding infectious diseases	To know the system of hygienic and preventive measures among the established contingent of the population	Have the skills to analyze the state of health of population groups and develop medical and preventive measures	Clearly and unambiguously to convey own knowledge about the need for preventive and anti-epidemic measures to specialists and non-specialists	Be responsible for the timely and high-quality implementation of preventive and anti-epidemic measures
16.	Ability to keep medical records, including electronic forms	Know the system of official document management in the work of a doctor, including modern computer information technology	Be able to determine the source and location of the required information depending on its type;	Obtain the necessary information from a specific source and on the basis of its analysis to form appropriate conclusions	Be responsible for the completeness and quality of the analysis of information and conclusions based on its analysis
21.	Clearly and unambiguously convey own	Critically consider problems in the field and on the	Ability to solve problems in new and unfamiliar	Use foreign languages in professional	Be responsible for contributing to professional

	knowledge, conclusions and arguments on health care and related issues to specialists and non-specialists, in particular to people who are studying	border of the fields of knowledge	environments in the presence of incomplete or limited information, taking into account aspects of social and ethnic responsibility	activities	knowledge and practice and/or evaluating outcomes
24.	Adherence to ethical principles when working with patients	To know the basic ethical and deontological principles necessary in professional activity	To be able to apply basic ethical considerations (motives) during the performance of professional duties	To comply with the requirements of ethics, bioethics and deontology in their professional activities	To be responsible for compliance with the requirements of ethics, bioethics and deontology in one's professional activity
25.	Adherence to professional and academic integrity, be responsible for the accuracy of scientific results	To know the basic ethical and deontological principles necessary in professional activity	Be able to implement professional, academic, and scientific integrity	Share information on professional, academic, and scientific integrity	Be responsible of professional and academic integrity, the accuracy of scientific results

#### **Program learning results (PLR)**

- PLR 1. Have a thorough knowledge of the structure of professional activity. Be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, ability to further professional training with a high level of autonomy.
- PLR 2. Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient to solve professional problems in the field of health care.
- PLR 3. Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for research, critical understanding of problems in the field of medicine and related interdisciplinary problems.
- PLR 4. Identify and identify the leading clinical symptoms and syndromes; according to standard methods, using preliminary data of the patient's anamnesis, data of the patient's examination, knowledge about the person, his organs and systems, to establish a preliminary clinical diagnosis of the disease.
- PLR 5. Collect complaints, life history and disease, assess the psychomotor and physical development of the patient, the state of organs and systems of the body, based on the results of laboratory and instrumental studies to assess information about the diagnosis, taking into account the patient's age.
- PLR 6. Establish a final clinical diagnosis by making an informed decision and analysis of the obtained subjective and objective data of clinical, additional examination, differential diagnosis, adhering to the relevant ethical and legal norms, under the supervision of a physician-manager in a health care institution.
- PLR 7. Order and analyze additional (mandatory and optional) examination methods (laboratory, functional and / or instrumental) for differential diagnosis of diseases.
- PLR 9. To determine the nature and principles of treatment of patients (conservative, operative), taking into account the age of the patient, in a health care facility, outside it and at the stages of medical evacuation, including in the field, on the basis of a preliminary clinical diagnosis, adhering to the relevant ethical and legal norms, by making an informed decision on existing algorithms and standard schemes. If necessary to

expand the standard scheme and justify personalized recommendations under the supervision of a physician.

- PLR 10. To determine the necessary mode of work, rest and nutrition based on the final clinical diagnosis, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.
- PLR 12. Assess the general condition of the newborn child by making an informed decision according to existing algorithms and standard schemes, adhering to the relevant ethical and legal norms.
- PLR 13. Assess and monitor the child's development, provide recommendations for breastfeeding and nutrition depending on age, organize preventive vaccinations on the calendar.
- PLR 14. Define tactics and provide emergency medical care in emergencies for a limited time in accordance with existing clinical protocols and treatment standards.
- PLR 17. Perform medical manipulations in a medical institution, at home or at work based on a previous clinical diagnosis and / or indicators of the patient's condition by making an informed decision, adhering to the relevant ethical and legal norms.
- PLR 18. Evaluate the state of functioning and restrictions of life of the person and the duration of disability with the registration of relevant documents at health care institution on the basis of data on illness and its course, features of human professional activity, etc. Keep a medical document on the patient and a certain contingent of the population on the basis of regulatory documents.
- PLR 20. Analyze the epidemiological condition and take measures of mass and individual, general and local prevention of infectious diseases.
- PLR 21. Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.
- PLR 24. Organize the necessary level of individual safety (own and care persons) in the event of typical dangerous situations in the individual field of activity.
- PLR 25. Clearly and unambiguously communicate knowledge, conclusions and arguments on health issues and related issues to professionals and non-specialists.
- PLR 29. Plan, organize and conduct activities for the specific prevention of infectious diseases, including in accordance with the National Calendar of preventive vaccinations, both mandatory and recommended. Manage vaccine residues; organize additional vaccination campaigns, including immune-prophylaxis measures.

#### **Learning outcomes for Discipline:**

- To assess information on the diagnosis at the conditions of health care, its unit, using knowledge of the laws of development and the occurrence of diseases in children, based on the results of examination of the patient and results of laboratory and instrumental investigations.
- To make differential diagnosis of disease.
- Prescribe treatment.
- To determine the prognosis of the disease.

#### 2. Information volume of academic discipline

6 Credits ECTS 180 hours are allocated for studying a discipline.

#### **Thematic chapters:**

- 1. Differential diagnosis of the most common diseases of the neonatal period.
- 2. Differential diagnosis of the most common diseases in young and older children.

### <u>Thematic chapter 1.</u> Differential diagnosis of the most common diseases of the neonatal period.

#### Topic 1. Medical care for healthy newborn in the maternity hospital.

Peculiarities and main principles of healthy newborn medical care. Monitoring the baby's condition during the first two hours of life. The initial assessment and physical neonatal examination. Basic preventive measures: prevention of infections, hemorrhagic disease, neonatal screening, vaccination. Warm chain. Breastfeeding. Home discharge rules. The most important transitional conditions.

# Topic 2. Neonatal asphyxia and perinatal injury of the central nervous system: prevention, differential diagnosis, and principles of treatment.

Differential diagnosis of hypoxic-ischemic encephalopathy and neonatal encephalopathy (central nervous system (CNS) lesions of different etiologies). Severity classification of perinatal CNS lesions. Neonatal seizures. Features of CNS damage in premature infants: intraventricular hemorrhage and periventricular leukomalacia. Prevention. Perinatal neuroprotection. Principles of treatment. Therapeutic hypothermia. Prognosis.

#### Topic 3. Resuscitation of a newborn

Basic principles of newborn resuscitation. Indications for resuscitation. Anticipation of resuscitation need. Initial steps. Temperature control, clearing the airway, assessment of oxygen need and administration of oxygen, pulse oximetry, administration of supplementary oxygen, positive-pressure ventilation, initial breaths and assisted ventilation, end-expiratory pressure, assisted-ventilation devices, endotracheal tube placement, chest compressions, medications. Withholding and discontinuing resuscitation.

### Topic 4. Differential diagnosis of the most common birth traumas in newborns.

Differential diagnosis of birth traumas in newborns. Intracranial birth traumas: epidemiology and diagnosis of the most common intracranial hemorrhages. The spinal cord and peripheral nervous system traumas. Other types of birth traumas in newborns. Principles of treatment. Prognosis.

#### Topic 5. Seizures in newborns: differential diagnosis and principles of treatment.

Causes of neonatal seizures, clinical symptoms, diagnostic search, therapeutic approach.

#### Topic 6. Nursing of premature and low-birth weight babies. Modern priorities.

Features of postnatal adaptation of preterm infants. The main obstetric interventions are aimed at improving the final results of the premature infant's care. Medical care approaches for babies born extremely prematurely (at "the threshold of viability" 23-25 weeks). Clinical features of late premature infants (35-36 weeks). Modern principles of premature babies nursing. Intrauterine growth restriction (IUGR) causes, diagnosis, treatment, prevention. The main clinical problems: etiology, risk factors, diagnosis, treatment, prevention, and prognosis. Feeding and nutrition of premature infants. Emergency care.

# Topic 7. Creating an optimal environment for the care of premature children. The Kangaroo method is a family-oriented assistance.

Practical aspects of the introduction of the Kangaroo method, the advantages of the method, its main components.

#### Topic 8. Differential diagnosis and treatment of lung diseases in newborns

Epidemiology. Type detection and severity evaluation of respiratory disorders. Differential diagnosis. The main complications. Modern approaches to treatment. Antenatal prevention.

#### Topic 9. Methods of respiratory support of newborns.

Contemporary recommendations for respiratory support of newborns.

**Topic 10. The most common congenital anomalies in newborns: differential diagnosis and principles of treatment**. Congenital abnormalities of respiratory, digestive and urinary systems in newborns. Teratomas and other formations. Differential diagnosis, the most optimal postpartum care. Multidisciplinary approaches to treatment.

#### Topic 11. Critical congenital heart defects - diagnosis and management.

Modern opportunities of prenatal and early postnatal diagnosis of critical heart defects. Methods of correction, prognosis.

# Topic 12. Intrauterine and perinatal infections in newborns: differential diagnosis, treatment and prevention.

Differential diagnosis of intrauterine and perinatal infections in newborns. Antenatal prevention of early neonatal bacterial, viral and protozoal infections. Postnatal diagnosis, treatment and prognosis. Infections of skin, soft tissue, umbilical cord stump and umbilical vessels. Neonatal sepsis. A hospital-acquired or nosocomial infection in modern perinatal medicine. Differential diagnosis, treatment, prevention and prognosis.

#### Topic 13. Differential diagnosis of jaundice in newborns.

Etiology, classification and differential diagnosis of jaundice in newborns. Risk factors associated with neonatal jaundice and factors that can raise bilirubin toxicity. Dangerous jaundice. Hemolytic disease of the

fetus and newborn. Prevention, diagnosis, treatment and prognosis. Initial care approaches for a newborn with jaundice. Technique of exchange transfusion. Features of hyperbilirubinemia in premature infants.

#### Topic 14. Peculiarities of medical care for newborns born from multiple pregnancies.

Specific medical problems that can occur in newborns from multiple pregnancies. Significance of zygosity and chorionicity. Intrauterine growth discordance, feto-fetal (or twin-to-twin) transfusion syndrome, anemia-polycythemia sequence, developmental abnormalities associated with multiple births. Differential diagnosis, postpartum care approaches, prognosis.

# Topic 15. Therapeutic hypothermia (types of therapeutic hypothermia, indications and contraindications, methods, monitoring of the patient during therapeutic hypothermia, complications).

Current recommendations for the use of therapeutic hypothermia (LH). The protocols of LH in neonatal care facilities with multidisciplinary care teams and the availability of resources for close monitoring and treatment.

#### Topic 16. Modern aspects of HIV prevention in newborns.

The standard of medical care "Prevention of HIV transmission from mother to child". Antenatal fetus; pretest and post-test counseling; examination of pregnant women for HIV; antiretroviral prevention and treatment of pregnant women, maternity, woman in childbirth and newborn; safe childbirth, newborn examination; safe feeding.

# <u>Thematic chapter 2.</u> Differential diagnosis of the most common diseases in young and older children. Emergency care.

# Topic 17. Differential diagnosis of pneumonia in children. Acute respiratory disease COVID-19 in children. Current aspects of treatment. Complications of pneumonia

Leading clinical symptoms and syndromes in different clinical variants of pneumonia in children. Results of laboratory and instrumental studies in different clinical variants of pneumonia. Differential diagnosis of pneumonia, bronchitis, and bronchiolitis in children. Making a preliminary diagnosis. Treatment of patients with different clinical variants of pneumonia. Prevention of pneumonia and its complications in children. Clinical presentation and course of COVID-19. Updated diagnosis and management protocol. Prophylaxis

### Topic 18. Current aspects in antibiotic therapy in children.

Therapeutic range of antibiotic therapy. Types of antibacterial drugs. Types of antibiotic action modes. Pharmacokinetics, pharmacodynamics. Age-specific indications and contraindications and concomitant pathology.

# Topic 19. Differential diagnosis of bronchial obstruction in childhood. Differential Approach to the treatment of bronchial obstruction in children.

Leading clinical symptoms and syndromes in bronchial asthma, bronchiolitis and acute obstructive bronchitis in children. Peculiarities of asthma in children, depending on the severity and level of control. Results of laboratory and instrumental studies in bronchial asthma, bronchiolitis and acute obstructive bronchitis and its complications. Differential diagnosis of asthma and bronchial obstruction versus acute respiratory infections in children of all ages. Making the preliminary diagnosis. Treatment of patients with different clinical variants of obstructive syndrome and its complications in children. Prevention of asthma and bronchial obstruction syndrome against acute respiratory infections in children of all ages.

### Topic 20. Differential diagnosis of hereditary, congenital, and chronic broncho-pulmonary disease in children.

Leading clinical symptoms and syndromes in chronic bronchitis, bronchiectasis, hereditary and congenital diseases of respiratory system (cystic fibrosis, idiopathic pulmonary hemosiderosis, primary cilia dyskinesia, a syndrome of Wilms Campbell bronchomalacia, aplasia and hypoplasia of the lungs,  $\alpha$ 1-antitrypsin deficiency, bronchopulmonary dysplasia, sequestration lung) in children. The results of laboratory and instrumental studies in chronic bronchitis, bronchiectasis, hereditary and congenital diseases of the respiratory system and their complications. Differential diagnosis of chronic, hereditary, and congenital bronchopulmonary disease in children. Clinical management of patients with hereditary, congenital, and chronic bronchopulmonary diseases and their complications in children. Prevention of hereditary, congenital, and chronic bronchopulmonary diseases in children.

# Topic 21. Differential diagnosis of inflammatory and non-inflammatory disease of the heart in children. Treatment of chronic heart failure in children.

Leading clinical symptoms and syndromes of heart disease in children. Clinical variants and complications of myocarditis, endocarditis, pericarditis, cardiomyopathies, congenital and acquired heart defects in children. Data from laboratory and instrumental tests in myocarditis, endocarditis, pericarditis, cardiomyopathies, congenital and acquired heart defects in children. Clinical manifestations of heart failure in children of different ages. Differential diagnosis of inflammatory and non-inflammatory diseases of the circulatory system in children. Tactics of patient management in myocarditis, endocarditis, pericarditis, cardiomyopathies, congenital and acquired heart defects in children. Treatment and prevention of chronic heart failure.

### Topic 22. Differential diagnosis of systemic connective tissue disease and systemic vasculitis in children.

Leading clinical symptoms and syndromes in juvenile rheumatoid arthritis, systemic lupus erythematosus, acute rheumatic fever, dermatomyositis, scleroderma, Kawasaki disease, polyarteritis nodosa and other systemic vasculitis in children. Clinical variants of the course and complications of systemic connective tissue diseases and systemic vasculitis in children. The results 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. Clinical management of patients with systemic connective tissue diseases and systemic vasculitis in children. Primary and secondary prevention of acute rheumatic fever in children.

# Topic 23. Differential diagnosis of functional and organic disorders of the digestive system in children.

Leading clinical symptoms and syndromes in the functional and organic diseases of the digestive system in children. Clinical - instrumental investigations, differential diagnosis and management. Prevention of functional and organic diseases in children.

#### Topic 24. Differential diagnosis of malabsorption syndrome in children.

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

#### Topic 25. Helminthiasis in children.

The state of the art in helminthiasis in children. Prevalence, polymorphism of clinical manifestations. Modern opportunities for diagnosis. Management.

#### Topic 26. Food and drug allergy in children.

Leading clinical symptoms of food and drug allergies in children. Diagnostic algorithm: laboratory and instrumental methods of examination, consultations. Clinical management of children with food and drug allergies. Providing emergency care for hives, anaphylactic shock.

# Topic 27. Differential diagnosis of the diseases of urinary system in children. Emergency care in acute and chronic renal failure.

Leading clinical symptoms and syndromes in inflammatory diseases of the urinary system (urinary system infections, urethritis, cystitis, pyelonephritis) dysmetabolic nephropathy, hereditary tubulopathy (phosphate diabetes, Syndrome Debre-de Toni-Fanconi, renal diabetes insipidus, renal tubular acidosis) and interstitial nephritis in children. Clinical variants of the course and complications of infectious diseases of the urinary system, interstitial nephritis, nephropathy and hereditary dysmetabolic tubulopathy in children. The results of the laboratory and instrumental studies at the most common inflammatory diseases of the urinary system, interstitial nephritis, dysmetabolic nephropathy and hereditary tubulopathy in children. Differential diagnosis of the most common infectious diseases of the urinary system, interstitial nephritis, nephropathy and hereditary dysmetabolic tubulopathy in children. Clinical management of the sick child in the most common inflammatory diseases of the urinary system and their complications, with interstitial nephritis, with dysmetabolic nephropathy and hereditary tubulopathy in children. First aid in acute urinary retention. Preventing urethritis, cystitis, pyelonephritis. Clinical and morphological variants of primary glomerulonephritis in children. Differential diagnosis of acute post-streptococcal glomerulonephritis with hereditary Alport nephritis, rapidly progressive glomerulonephritis, Berger's disease. Nephrotic syndrome in children: Differential diagnosis, complications. Clinical variants of chronic glomerulonephritis in children. Indications for renal biopsy in children. Clinical management of the sick child in acute and

chronic glomerulonephritis. Tactics in treatment of acute and chronic glomerulonephritis in children. Clinical supervision of children with glomerulonephritis. Prevention of chronic kidney disease.

Acute kidney injury (acute renal failure) in children: etiology, pathogenesis, clinical and laboratory symptoms, Differential diagnosis. Emergency tactics of sick children. Chronic renal failure. Treatment approach. Prevention of progression of chronic renal failure.

### Topic 28. Anomalies of the urinary system accompanied by pathologic urodynamics in children.

Anomalies of development of the urinary system, which lead to impaired urodynamics and cause urinary retention. Complications, timely diagnosis and management.

#### Topic 29. Medical Supervision of children in the first three years of life in the polyclinic setting.

Procedure for obligatory preventive examinations of children under three years old. Efficient feeding and nutrition of the child under three years old. Evaluation of physical and psycho-motor development of children up to three years. Tactics of the general practitioner in violation of physical and neuropsychological development of children during the first three years of life. Principles of effective counseling. Differential diagnosis and prevention of the most common deficient states (rickets, iron deficiency) in infants. Prophylactic vaccination of children up to three years.

Topic 30. Nutrition of children of 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 life. Leading clinical symptoms and syndromes in insufficiencies of vitamins and trace elements. Diagnosis and principles of correction

#### 3. STRUCTURE OF THE EDUCATIONAL DISIPLINE PEDIATRICS

Topic	Lectures	Workshops	Independent work of
Til	1.	C 41	student
Thematic chapter 1. Differential diagnosis of the most common	n diseases (	of the neonata	i period
Topic 1. Medical care for healthy newborn in the maternity		6	3
hospital.		U	3
1			2
Topic 2. Neonatal asphyxia and perinatal injury of the central		6	3
nervous system: prevention, differential diagnosis, and			
principles of treatment.		6	3
Topic 3. Resuscitation of a newborn		6	3
Topic 4. Differential diagnosis of the most common birth traumas in newborns.		6	3
Topic 5. Seizures in newborns: differential diagnosis and			3
principles of treatment.			3
Topic 6. Nursing of premature and low-birth weight babies.		6	3
Modern priorities.			
Topic 7. Creating an optimal environment for the care of			3
premature children. The Kangaroo method is a family-oriented			
assistance.			
Topic 8. Differential diagnosis and treatment of lung diseases in		6	3
newborns			
Topic 9. Methods of respiratory support of newborns.			3
Topic 10. The most common congenital anomalies in			3
newborns: differential diagnosis and principles of treatment			
Topic 11. Critical congenital heart defects - diagnosis and			3
management.			
Topic 12. Intrauterine and perinatal infections in newborns:		6	3
differential diagnosis, treatment and prevention.			
Topic 13. Differential diagnosis of jaundice in newborns.		6	3

Topic 14. Peculiarities of medical care for newborns born from		3
multiple pregnancies.  Topic 15. Therapeutic hypothermia (types of therapeutic hypothermia, indications and contraindications, methods, monitoring of the patient during therapeutic hypothermia, complications).		3
Topic 16. Modern aspects of HIV prevention in newborns.		3
Thematic chapter 2. Differential diagnosis of the most common dise	ases in voung and	
children.	, , , , , , , , , , , , , , , , , , ,	
Topic 17. Differential diagnosis of pneumonia in children. Acute respiratory disease COVID-19 in children. Current aspects of treatment. Complications of pneumonia	6	3
Topic 18. Current aspects in antibiotic therapy in children.		3
Topic 19. Differential diagnosis of bronchial obstruction in childhood. Differential Approach to the treatment of bronchial obstruction in children.	6	3
Topic 20. Differential diagnosis of hereditary, congenital, and chronic broncho-pulmonary disease in children.		3
Topic 21. Differential diagnosis of inflammatory and non-inflammatory disease of the heart in children. Treatment of chronic heart failure in children.	6	3
Topic 22. Differential diagnosis of systemic connective tissue disease and systemic vasculitis in children.		3
Topic 23. Differential diagnosis of functional and organic disorders of the digestive system in children.	6	3
Topic 24. Differential diagnosis of malabsorption syndrome in children.		3
Topic 25. Helminthiasis in children.		3
Topic 26. Food and drug allergy in children.	6	3
Topic 27. Differential diagnosis of the diseases of urinary system in children. Emergency care in acute and chronic renal failure.	6	3
Topic 28. Anomalies of the urinary system accompanied by pathologic urodynamics in children.		3
Topic 29. Medical Supervision of children in the first three years of life in the polyclinic setting.	6	3
Topic 30. Nutrition of children of the first 3 years of life: intake of vitamins and macro- and micronutrients with food.		3
Final control	Credit	
Total credits in ECTS – 6; hours – 180; Classroom work 50%, self-work 50%	90	90

**4. The thematic plan of lectures -** the curriculum of lectures is not provided (Order No. 1053 -S of 24.03.2023).

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

№	Торіс	Hours
1.	Medical care for healthy newborn in the maternity hospital.	
2.	Neonatal asphyxia and perinatal injury of the central nervous system: prevention,	6
	differential diagnosis and principles of treatment	
3.	Resuscitation of a newborn	6

4.	Differential diagnosis of the most common birth traumas in newborns	6
5.	Nursing of premature and low-birth weight babies. Modern priorities.	6
6.	Differential diagnosis and treatment of lung diseases in newborns	6
7.	Intrauterine and perinatal infections in newborns: differential diagnosis, treatment and	6
	prevention	
8.	Differential diagnosis of jaundice in newborns	6
9.	Differential diagnosis of pneumonia in children. Acute respiratory disease COVID-19 in	6
	children. Current aspects of treatment. Complications of pneumonia	
10.	Differential diagnosis of bronchial obstruction in children. Differential approach to	6
	treatment of bronchial obstruction in children.	
11.	Differential diagnosis of inflammatory and non-inflammatory disease of the heart in	6
	children. Treatment of chronic heart failure in children.	
12.	Differential diagnosis of functional and organic disorders of the digestive system in	6
	children.	
13.	Food and drug allergy in children	6
14.	Differential diagnosis of the diseases of urinary system in children. Emergency care in	6
	acute and chronic renal failure.	
15.	Medical supervision of children in the first three years of life in the polyclinic setting.	6
Tota	hours	90

**Independent work of a student** - one of organizational forms of learning, regulated by the working curriculum and performed by the student independently outside the classroom. Possible types of independent work (self-work): preparation for workshops and study topics listed in self-learning schedule and study of additional literature, algorithms, structure, logic, writing cases, synopses, literature reviews. Organization of independent work in pediatric hospital departments must be ensured by teachers.

### 6. Thematical plan of independent work

No	Topic	Hours	Type of
			assessment
1	Seizures in newborns: differential diagnosis and principles of treatment.	3	On-going
2	Creating an optimal environment for the care of premature children. The	3	assessment
	Kangaroo method is a family-oriented assistance.		during
3	Methods of respiratory support of newborns.	3	workshops And before
4	The most common congenital anomalies in newborns: differential	3	the last
	diagnosis and principles of treatment.		
5	Critical congenital heart defects - diagnosis and management.	3	lesson
6	Peculiarities of medical care for newborns born from multiple	3	
	pregnancies.		
7	Therapeutic hypothermia (types of therapeutic hypothermia, indications	3	
	and contraindications, methods, monitoring of the patient during		
	therapeutic hypothermia, complications).		
8	Modern aspects of HIV prevention in newborns.	3	
9	Current aspects in antibiotic therapy in children.	3	
10	Differential diagnosis of hereditary, congenital, and chronic broncho-	3	
	pulmonary disease in children.		
11	Differential diagnosis of systemic connective tissue disease and systemic	3	
	vasculitis in children.		
12	Differential diagnosis of malabsorption syndrome in children.	3	
13	Helminthiasis in children.	3	
14	Anomalies of the urinary system accompanied by pathologic	3	
	urodynamics in children.		

15	Nutrition of children of the first 3 years of life: intake of vitamins and	3	
	macro- and micronutrients with food.		
16	Preparation for workshops.	45	
	Total hours	90	

### 7. Individual assignment

Not planned in this working program for academic year (order № 1053-z of 24.03.2023)

#### 8. Methods of teaching

Workshops are clinically oriented and directed to control theoretical material and development of practical skills and ability to analyze and apply knowledge to solve practical problems. Workshops mostly held in the children's departments of clinical facilities of the department.

- Each session begins with test control conducted to assess initial knowledge and determine the degree of readiness of students to workshop.
- The teacher identifies the purpose of lesson and creates a positive cognitive motivation; answers the students' questions that arose during learning of individual work.
- During the main stage, students personally examine their own pre-selected sick children, take medical
  history, examine children, and perform diagnostic manipulation and more. After that, the teacher
  performs clinical round, when students report about their patients and about the results of their
  independent work.
- Control of the main stage of the workshop conducts via evaluation of student practical skills, ability to solve typical case studies. The teacher discusses and gives an explanation highlights the features of the disease in the individual child, focuses on more efficient conduct of examination methods.
- On the final stage, to assess the level of mastering the topic, teacher offers to solve the case studies. The teacher sums up the lesson gives students tasks for independent work, points to key questions following topics and offers a list of recommended books for independent reading.
- During the workshop, the following educational technologies, modes of transmission and assimilation of knowledge and skills are used:
  - practical workshop
  - simulation technology
  - clinical practice session
  - interactive educational games
  - case methods
  - multimedia presentations
  - educational video.

#### 9. Methods of control

Types of monitoring and evaluation system implemented to comply with the discipline and instruction of the system of evaluation of educational activity of students in credit-transfer process, approved by Ministry of Health (reference MOH of Ukraine № 08.01-47/10395 of 15.04.2014)

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

- Types of control current
- Form of final control credit
- Evaluation criteria (current control, final control).
- 10. Current control is carried out during training sessions and aims to verify the assimilation of students' learning material.

Forms of current control:

- Test tasks (from the base "Step-2")

- Assessment of practical skills
- Complex situational tasks
- 10.1 Evaluation of current educational activities.

During the assessment of mastering each topic for the current educational activity of the student, grades are set on a 4-point (traditional) scale, taking into account the approved assessment criteria for the discipline. This takes into account all types of work provided by the curriculum. The student must receive a grade on each topic. The student must receive a grade from each topic for further conversion of grades into scores on a multi-point (200-point) scale.

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

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

- The student answers 10 tests (tests on the topic of the lesson, format A). Correct answer to 10-9 tests = 5 points; 8-7 points = 4 points; 6-5 tests = 3 points; 4 or less tests = 0 points.
- 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

#### Criteria of marks of current educational activity.

Excellent («5») – student answers correctly 90-100% MCQ tests (from database «Step-2»).

Correctly, accurately, and logically answers all the standardized questions of the current topic.

Closely links theory with practical knowledge and properly demonstrates practical skills. Analyzes the results of the lab/instrumental investigations without problems and has proper methods of examination of the patient. Performs differential diagnosis. Solves situational tasks with elevated level of difficulty and knows how to compile the material.

Good («4») – student correctly answers 70-89% MCQ tests (from database «Step-2»). Correctly answers all the standardized questions of the current topic. Demonstrates knowledge of practical skills. Correctly uses theoretical knowledge to solve practical tasks, Differential diagnosis.

Knows how to solve easy and of medium difficult situational tasks. Contains the necessary practical knowledge and techniques and their uses, in excess of the required minimum.

Satisfactory («3») - student correctly answers 50-69% MCQ tests (from database «Step-2»).

Incomplete, with the help of additional questions answers all the standardized questions on the current topic. Cannot independently form a clear logical answer. While the students is answering and demonstrating practical knowledge, he/she makes mistakes. Can solve only the easiest situational tasks. Has knowledge of only the minimum methods of investigations.

Unsatisfactory («2») – student correctly answers 50% of MCQ tests (from database «Step-2»).

Doesn't know the material of the current topic, cannot formulate a logical answer, cannot answer additional questions, doesn't understand the content of the topic. While the student is answering and demonstrating practical skills, makes significant mistakes.

**Evaluation of independent work** students in preparation for classroom workshops carried out during the current control topics at the classroom.

#### 11. Forms of final control of learning success

Form of the final control - credit

It consists of assessing the assimilation of students' learning material solely on the basis of the results of their implementation of the academic plan in the discipline of "Pediatrics".

Control methods are standardized and include control of theoretical and practical training.

Students are admitted to the 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.

For students who have missed classes, classes are allowed with the permission of the dean to work off academic debt until a certain date within the semester.

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

The credit is granted by teachers who conducted practical and other classes in the study group.

Students receive credit if the average score on the current performance during the semester is at least "3" (120 points on a 200-point scale).

The entry is made in the student's record book and credit-examination chart.

#### 12. Scheme of accrual and distribution of points received by students:

For disciplines to which the form of the final control is the credit:

*The maximum number of points* that a student can obtain for current educational activity at the study course is 200 points.

*The minimum number of points* that a student must collect for current educational activity for enrollment course is 120 points.

Calculation the number of points received is based on the traditional student ratings scale in the study disciplines during the semester, by calculating the arithmetic mean (AM), rounded to two decimal places. The resulting value is converted into points by multi-score scale as follows:

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

4-	200-
бальна	бальна
шкала	шкала
5	200
4.97	199
4.95	198
4.92	197
4.9	196
4.87	195
4.85	194
4.82	193
4.8	192
4.77	191
4.75	190
4.72	189
4.7	188
4.67	187
4.65	186
4.62	185
4.6	184
4.57	183
4.52	181
4.5	180
4.47	179

4-	200-
бальна	бальна
шкала	шкала
4.45	178
4.42	177
4.4	176
4.37	175
4.35	174
4.32	173
4.3	172
4.27	171
4.24	170
4.22	169
4.19	168
4.17	167
4.14	166
4.12	165
4.09	164
4.07	163
4.04	162
4.02	161
3.99	160
3.97	159
3.94	158

4-	200-
бальна	бальна
шкала	шкала
3.92	157
3.89	156
3.87	155
3.84	154
3.82	153
3.79	152
3.77	151
3.74	150
3.72	149
3.7	148
3.67	147
3.65	146
3.62	145
3.57	143
3.55	142
3.52	141
3.5	140
3.47	139
3.45	138
3.42	137
3.4	136

4-	200-
бальна	бальна
шкала	шкала
3.37	135
3.35	134
3.32	133
3.3	132
3.27	131
3.25	130
3.22	129
3.2	128
3.17	127
3.15	126
3.12	125
3.1	124
3.07	123
3.02	121
3	120
1/	Недос-
Менше	татньо
3	

Scores for discipline are converted regardless of discipline both in scale ECTS, and 4-point scale. Score scale ECTS 4-point scale not converted and vice versa.

The scores of students studying in one specialty, taking into account the number of scores earned in the discipline are ranked on the ECTS scale as follows:

Score ECTS	Statistical range
A	The best 10% students
В	Next 25% students

С	Next 30% students
D	Next 25% students
E	Next 10% students

Ranking on the assignment of grades "A", "B", "C", "D", "E" is conducted for students of this course who are studying in one specialty and have successfully completed the discipline. Students who receive an FX, F ("2") grade are not included in the list of ranked students. Students with an FX grade automatically receive an "E" after resumption.

Discipline scores for students who have successfully completed the program are converted into a traditional 4-point scale according to the absolute criteria listed below:

Scores in 200 scale	Score according to the four-point scale
From 170 to 200	5
From140 to 169	4
From 139 to minimum number of points, which the student should acquire in the	3
discipline	
Lower than the minimum number of points that the student should attain in the	2
discipline	

#### 13. Methodological aid

- Work program of discipline
- Lectures, practical classes and independent work of students
- Guidelines to practical training for students
- Instructions for teachers training
- Methodical materials, which ensure independent work of student
- Tests and control cases for practical classes
- Situational cases for practical classes
- The list of questions submitted to the final control
- The list of standardized methods for performing practical skills

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