

MINISTRY OF HEALTH OF UKRAINE  
ODESSA NATIONAL MEDICAL UNIVERSITY

Department of Pediatrics



APPROVED

Vice-rector for scientific and pedagogical work  
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" 01 " \_\_\_\_\_ 09 \_\_\_\_\_ 2025 yr

**WORKING PROGRAM FOR THE EDUCATIONAL DISCIPLINE "PEDIATRICS"**

**Level of higher education:** second (master's degree)

**Field of knowledge:** 22 "Health care"

**Specialty:** 222 "Medicine"

**Educational and professional program:** Medicine

2025



## 1. Description of the academic discipline :

Name of indicators	Field of knowledge, specialty, specialization, level of higher education	Characteristics of the academic discipline
Total number:	Field of knowledge 22 "Health care" Specialty 222 "Medicine"  Level of higher education second (master's )	<i>Full-time education</i>
Credits: 2.5		<i>Mandatory discipline</i>
Hours: 75		<i>Year of training: 5</i>
Content modules: 3		<i>Semesters IX - X</i>
		<i>Lectures (10 hours)</i>
		<i>Seminars (0 hours)</i>
		<i>Practical (40 hours)</i>
		<i>Laboratory (0 hours)</i>
		<i>Independent work (25 hours)</i>
		<i>including individual tasks</i>
	<i>Final control form - differentiated credit.</i>	

## 2. The purpose and tasks of the educational discipline, competences, program learning outcomes.

**Purpose :** Acquisition of higher education of knowledge and formation of elements of professional competences in the field of pediatrics, subdivisions: neonatology, pediatric endocrinology, pediatric hematology and improvement of skills and competencies acquired during the study of previous disciplines

### **Task:**

1. Formation of skills and professional competences of neonatology, pediatric endocrinology, pediatric hematology.
2. Improving interviewing skills, justifying clinical diagnosis, drawing up a plan for laboratory and instrumental research in neonatal, endocrine and hematological diseases in children.
3. Mastering the ability to determine tactics treatment and prevention of neonatal, endocrine and hematological diseases in children.

**The process of studying the discipline is aimed at forming elements of the following competencies:**

### **Integral competencies (IC)**

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

### **General competencies (GC):**

- GC 1 – Ability to abstract thinking, analysis and synthesis .
- GC 3 – Ability to learn and master modern knowledge .
- GC 4 – Knowledge and understanding of the subject area and understanding of professional activity .
- GC 5 – Ability to adapt and act in a new situation .
- GC 6 – Ability to make informed decisions .
- GC 7 – Ability to work in a team
- GC 8 – Ability to interpersonal interaction.

- **GC 11** – Ability to search, process and analyze information from various sources
- **GC 12** – Determination and perseverance regarding the assigned tasks and assumed responsibilities
- **GC 13** – Awareness of equal opportunities and gender issues

**Special competencies (SC):**

- **SC 1** – Ability to collect medical information about the patient and analyze clinical data.
- **SC 2** – Ability to determine the necessary list of laboratory and instrumental studies and evaluate their results.
- **SC 3** – Ability to establish a preliminary and clinical diagnosis of the disease.
- **SC 5** – Ability to determine the nature of nutrition in the treatment and prevention of diseases
- **SC 6** – Ability to determine the principles and nature of treatment and prevention of diseases
- **SC 7** – Ability to diagnose emergency conditions
- **SC 8** – Ability to determine tactics and provide emergency medical assistance.
- **SC10** – Ability to perform medical manipulations.
- **SC11** – The 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, including the system of early intervention.
- **SC13** – Ability to carry out sanitary and hygienic and preventive measures.
- **SC16** – Ability to maintain medical documentation, including electronic forms
- **SC24** – Compliance with ethical principles when working with patients and laboratory animals
- **SC26** –The ability to determine the management tactics of persons subject to dispensary supervision.

**Program learning outcomes (PLO):**

**PLO 1** To have thorough knowledge of 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.

**PLO 2** Understanding and knowledge of fundamental and clinical biomedical sciences, at a level sufficient for solving professional tasks in the field of health care

**PLO 3** Specialized conceptual knowledge that includes scientific achievements in the field of health care and is the basis for conducting research, critical understanding of problems in the field of medicine and related interdisciplinary problems, including the system of early intervention.

**PLO 4** Highlight and identify 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**)

**PLO 5** Collect complaints, anamnesis of life and diseases, evaluate the 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

**PLO 6** Establish the final clinical diagnosis by making a reasoned decision and analyzing the received subjective and objective data of clinical, additional examination, differential diagnosis, observing the relevant ethical and legal norms, under the control of the managing physician in the conditions of the health care institution (according to list **2**).

**PLO 7** Prescribe and analyze additional (mandatory and optional) examination methods (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**).

**PLO 8** Determine the main clinical syndrome or symptom that determines the severity of the condition of the victim/victim (according to list 3) by making a reasoned decision about the person's condition under any circumstances (in the conditions of a health care facility, outside its borders), including in conditions of emergency and hostilities, in field conditions, in conditions of lack of information and limited time.

**PLO 9** Determine the nature and principles of treatment (conservative, operative) of patients with diseases (according to list 2), taking into account the age of the patient, in the conditions of a health care institution, outside its borders and at the stages of medical evacuation, including in field conditions, on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes, in case of the need to expand the standard scheme, be able to justify personalized recommendations under the control of the head physician in the conditions of a medical institution.

**PLO 10** Determine the necessary mode of work, rest and nutrition based on the final clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.

**PLO 12** 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.

**PLO 13** Assess and monitor the child's physical and psychomotor development, provide recommendations on feeding and nutritional features depending on age, organize preventive vaccinations according to the calendar.

**PLO 14** Determine tactics and provide emergency medical care in emergency situations (according to list 3) in limited time conditions according to existing clinical protocols and treatment standards.

**PLO 17** Perform medical manipulations (according to list 5) in the conditions of a medical institution, at home or at work based on a previous clinical diagnosis and/or indicators of the patient's condition by making a reasoned decision, observing the relevant ethical and legal norms.

**PLO 18.** To determine the state of functioning and limitations of a person's vital activities and the duration of incapacity for work with the preparation of relevant documents, in the conditions of a health care institution, based on data about the disease and its course, peculiarities of the person's professional activity, etc. Maintain medical documentation regarding the patient and the contingent of the population on the basis of regulatory documents.

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

**PLO 29.** Plan, organize and carry out measures 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 immunoprophylaxis measures.

**PLO 30** Determine the management tactics of persons subject to dispensary supervision (children, pregnant women, workers whose professions require mandatory dispensary examination).

**As a result of studying the academic discipline, the applicant of higher education must:**

**Know:**

Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention of neonatal, endocrine, hematological diseases in children.

**Be able:**

- Communicate with the child and his parents, collect complaints, life history and diseases.

- To assess the physical and psychomotor development of children, to provide recommendations on feeding and nutritional features depending on age.
- Conduct clinical examination of children of different ages according to standard methods.
- Analyze the results of laboratory, functional and instrumental research.
- Carry out differential diagnosis and substantiate the clinical diagnosis.
- Determine the tactics and provide emergency medical care in emergency situations in children.
- To determine the nature and principles of treatment of sick children on the basis of a preliminary clinical diagnosis, observing the relevant ethical and legal norms, by making a reasoned decision according to existing algorithms and standard schemes.
- Perform medical manipulations (according to list 5) for neonatal, endocrine and hematological diseases in children.
- Keep medical records for common diseases in children.

### **3. Content of the academic discipline Neonatology, diseases of the blood system and endocrine system in children**

#### **Content module 1 . Neonatology**

##### **Topic 1. Organization of neonatal care in Ukraine .**

Organization of neonatal care in Ukraine. Issues of bioethics in modern neonatology. Medical care for a healthy newborn baby. Premature babies. Criteria for determining prematurity. Peculiarities of adaptation of prematurely born children. Etiological factors of prematurity. Anatomical and physiological features.

Classification of premature babies according to birth weight and the ratio of physical development and gestational age. Assessment of morphological and neuro-functional maturity of prematurely born children (according to the Ballard scale). Principles of raising premature babies. Peculiarities of feeding premature babies.

Intrauterine growth retardation: causes, postnatal diagnosis, features of early neonatal adaptation. Emergency care for the main emergency conditions in premature newborns: hypothermia, respiratory failure, hypoglycemia.

##### **Topic 2. Asphyxia of a newborn. Birth trauma**

Asphyxia of the newborn: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Primary resuscitation of newborns. Birth trauma: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

##### **Topic 3. Respiratory diseases**

Respiratory distress syndrome of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Pneumonia of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

##### **Topic 4. Hemolytic disease of newborns (HDN). Hemorrhagic disease of newborns .**

Hemolytic disease of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

Hemorrhagic disease of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

##### **Topic 5. Intrauterine infections. Bacterial infections and neonatal sepsis**

TORCH-infections of newborns: etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Purulent-inflammatory diseases of the skin and subcutaneous fat of newborns, diseases of the umbilical cord, umbilical wound and umbilical vessels: classification, etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment,

prevention, prognosis. Neonatal sepsis: definition, classification, etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

## **Content module 2. Diseases of the blood system in children**

### **Topic 6. Anemia in children. Hemorrhagic diseases in children**

Anemias in children (deficiency, posthemorrhagic, hemolytic, due to impaired hematopoiesis): definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

Coagulopathies (hemophilia): in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Thrombocytopenia (thrombocytopenic idiopathic purpura) in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

Hemorrhagic vasculitis in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Emergency care for bleeding in children.

### **Topic 7. Leukemias and lymphomas in children.**

Leukemia in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis, palliative care.

Lymphomas in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis, palliative care.

## **Content module 3. Diseases of the endocrine system in children.**

### **Topic 8. Diabetes in children . Diseases of gonads and adrenal glands in children. Obesity in children.**

Diabetes in children: definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Acute and chronic complications of diabetes in children. Hyperglycemic ketoacidotic and hypoglycemic coma in children: causes, pathogenesis, clinic, diagnosis, differential diagnosis, emergency care, prevention.

Diseases of gonads (delay and acceleration of sexual development, undetermined gender) and adrenal glands in children (adreno-genital syndrome, chronic adrenal insufficiency). Etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

Obesity in children. Definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

### **Topic 9. Diseases of the thyroid gland and hypothalamic-pituitary system, in children.**

Classification of diseases of the thyroid gland in children. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention and prognosis of diffuse toxic goiter, hypothyroidism, autoimmune thyroiditis, endemic goiter in children. Emergency care for thyrotoxic crisis in children. Diseases of the hypothalamic-pituitary system in children. Etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

## **4. The structure of the academic discipline**

Names of topics	Number of hours				
	In total	including			
		lectures	seminars	practical	laboratory

<b>Content module 1.</b>						
<b>Neonatology</b>						
Topic 1 <b>Organization of neonatal care in Ukraine.</b> Premature babies. Children with intrauterine growth retardation.	8	2	0	4	0	2
Topic 2. <b>Asphyxia of a newborn. Birth injury.</b>	6	0	0	4	0	2
Topic 3. <b>Respiratory diseases in newborn children .</b>	6	0	0	4	0	2
Topic 4. <b>Hemolytic disease of newborns (HCN). Hemorrhagic disease of newborns.</b>	8	2	0	4	0	2
Topic 5. <b>Intrauterine infections. Bacterial infections and neonatal sepsis</b>	8	2	0	4	0	2
<i>Medical history of the newborn</i>	5	0	0	0	0	5
<i>Together according to content module 1</i>	41	6	0	20	0	15
<b>Content module 2.</b>						
<b>Diseases of the blood system in children</b>						
Topic 6. <b>Anemia and hemorrhagic diseases in children .</b>	8	2	0	4	0	2
Topic 7. <b>Leukemias and lymphomas in children .</b>	9	0	0	6	0	3
<i>Together according to content module 2</i>	17	2	0	10	0	5
<b>Content module 3.</b>						
<b>Diseases of the endocrine system in children</b>						
Topic 8. <b>Diabetes in children . Diseases of gonads and adrenal glands in children. Obesity in children</b>	8	2	0	4	0	2
Topic 9. <b>Diseases of the thyroid gland, hypothalamic-pituitary system in children. Differentiated credit.</b>	9	0	0	6	0	3
<i>Together according to content module 3</i>	17	2	0	10	0	5
<b>Only hours</b>	75	10	0	40	0	25

##### 5. Topics of lectures / seminars / practical / laboratory classes

### 5.1. Topics of lectures

	Topic	The number of hours
1.	Organization of neonatal care in Ukraine. Medical care for a healthy newborn baby. Premature babies. Peculiarities of feeding and raising premature babies. Children with intrauterine growth retardation. Emergency care for the main emergency conditions in premature newborns: hypothermia, respiratory failure, hypoglycemia. Issues of bioethics in modern neonatology.	2
2.	Hemolytic and hemorrhagic diseases of newborns.	2
3.	Intrauterine infections. Bacterial infections and sepsis of newborns	2
4.	Anemia in children.	2
5.	Diabetes in children.	2
	In total	10

### 5.2. Topics of seminar classes

Seminar classes are not provided.

### 5.3. Topics of practical classes

No	Topic name	How many hours?
1.	Practical lesson 1. Topic 1. <b>Organization of neonatal care in Ukraine .</b> Medical care for a healthy newborn baby. Premature babies. Criteria for determining prematurity. Peculiarities of adaptation of prematurely born children. Etiological factors of prematurity. Anatomical and physiological features. Classification of premature babies according to birth weight and the ratio of physical development and gestational age. Assessment of morphological and neuro-functional maturity of prematurely born children (according to the Ballard scale). Principles of raising premature babies. Peculiarities of feeding premature babies. Emergency care for the main emergency conditions in premature newborns: hypothermia, respiratory failure, hypoglycemia.	2
2.	Practical lesson 2. Topic 1. Intrauterine growth retardation: causes, postnatal diagnosis, features of early neonatal adaptation.	2
3.	Practical lesson 3. Topic 2. Asphyxia of a newborn: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis... Asphyxia of a newborn. Primary resuscitation of newborns	2

4.	Practical lesson 4. Topic 2. Birth trauma: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.	2
5.	Practical lesson 5. Topic 3. Respiratory diseases in newborn children . Respiratory distress syndrome of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.	2
6.	Practical lesson 6. Topic 3. Diseases of respiratory organs in newborn children. Pneumonia of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.	2
7.	Practical lesson 7. Topic 4. Hemolytic disease of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.	2
8.	Practical lesson 8. Topic 4. Hemorrhagic disease of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.	2
9.	Practical lesson 9. Topic 5. Intrauterine infections. TORCH-infections of newborns: etiology, pathogenesis, clinical diagnosis, differential diagnosis. Treatment, prevention, prognosis.	2
10.	Practical lesson 10. Topic 5. Bacterial infections of newborns. Purulent-inflammatory diseases of skin and subcutaneous fat, umbilical cord, umbilical wound and umbilical vessels of newborns, classification, etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Neonatal sepsis: definition, classification, etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis	2
11.	Practical lesson 11. Topic 6. Anemia and hemorrhagic diseases in children. Anemias in children (deficiency, posthemorrhagic, hemolytic, due to a violation of hematopoiesis definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.	2
12.	Practical lesson 12. Topic 6. Coagulopathies (hemophilia) in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Thrombocytopenia (thrombocytopenic idiopathic purpura) in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Hemorrhagic vasculitis in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Emergency care for bleeding in children	2
13.	Practical lesson 13. Topic 7. Leukemias and lymphomas in children. Leukemia in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis.	2
14.	Practical lesson 14. Topic 7. Leukemia in children: treatment, prevention, prognosis, palliative care	2
15.	Practical class 15. Topic 7. Leukemias and lymphomas in children. Lymphomas in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis, palliative care.	2
16.	Practical lesson 16. Topic 8. Diabetes in children. Diabetes in children: definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Chronic complications of diabetes in children. Diabetes in children: Acute complications Hyperglycemic ketoacidotic and hypoglycemic coma in children: causes, pathogenesis, clinic, diagnosis, differential diagnosis, emergency care,	2

	prevention Diseases of gonads and adrenal glands in children.	
17.	Practical session 17. Topic 8. Diseases of the gonads (delay and acceleration of sexual development, indeterminate sex) and adrenal glands in children (adrenogenital syndrome, chronic adrenal insufficiency). Etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Obesity in children.	2
18.	Practical session 18. Topic 9. Diseases of the thyroid gland in children. Classification of diseases of the thyroid gland in children. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis of diffuse toxic goiter, hypothyroidism, autoimmune thyroiditis, endemic goiter in children	2
19.	Practical lesson 19. Topic 9. Treatment, prevention and prognosis of diffuse toxic goiter, hypothyroidism, autoimmune thyroiditis, endemic goiter in children. Emergency care for thyrotoxic crisis in children.	2
20.	Practical lesson 20. Topic 9. Diseases of the hypothalamic-pituitary system in children. Etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Differentiated credit.	2
	<b>In Total</b>	<b>40</b>

#### 5.4. Laboratory topics classes

Laboratory classes are not provided.

#### 6. Self-make work of the applicant of higher education

No	Title of the topic / types of tasks	How many hours?
1.	Topic 1. Preparation for practical classes 1-2	2
2.	Topic 2. Preparation for practical classes 3 - 4	2
3.	Topic 3. Preparation for practical classes 5–6	2
4.	Topic 4. Preparation for practical classes 7-8	2
5.	Topic 5. Preparation for practical classes 9 - 10	2
6.	Topic 6. Preparation for practical classes 11 - 12	2
7.	Topic 7. Preparation for practical classes 13 - 15	3
8.	Topic 8. Preparation for practical classes 16-17	2
9.	Topic 9. Preparation for practical classes 18 - 20	3
10.	Writing and defending the medical history of a newborn	5
	<b>In Total</b>	<b>25</b>

## 7. FORMS AND METHODS OF TEACHING

**Practical classes:** conversation, solving clinical situational problems, practicing patient examination skills, demonstrating and practicing the skills of performing manipulations according to list 5, instruction and practicing skills on simulation dummies, training exercises on the diagnosis of neonatal, endocrine, hematological diseases in children.

**Self-make work:** independent self-make work with the textbook, self-make work with the bank of test tasks Step-2, self-make solution of clinical tasks, assessment of physical development of children, writing medical history of a newborn child.

### 8. Control methods and criteria for evaluating learning outcomes

**Current control:** oral survey, testing, assessment of performance of practical skills, solution of situational clinical tasks, assessment of activity in class.

**Final control:** Differentiated credit.

*The structure of the current evaluation in the practical lesson:*

1. Evaluation of theoretical knowledge on the subject of the lesson:
  - methods: survey, solution of a situational clinical problem, test tasks;
  - the maximum score is 5, the minimum score is 3, the unsatisfactory score is 2 .
2. Evaluation of practical skills and manipulations on the subject of the lesson:
  - methods: assessment of the correctness of the performance of practical skills
  - maximum score – 5, minimum score – 3, unsatisfactory score – 2 ;
3. Evaluation of work with a patient on the subject of the lesson:
  - methods: assessment of: a) communication skills of communication with the patient and his parents, b) clinical examination methods; c) the correctness of the appointment and evaluation of laboratory and instrumental studies, d) compliance with the differential diagnosis algorithm, e) justification of the clinical diagnosis, e) drawing up a treatment plan.
  - maximum score – 5, minimum score – 3, unsatisfactory score – 2 ;

The grade for the lesson is the arithmetic average of all components and can only have an integer value, namely 5, 4, 3, 2.

#### Current assessment criteria for practical training:

"5"	The applicant of higher education is fluent in the material, takes an active part in discussing and solving a situational clinical problem, test tasks, confidently demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data, expresses his opinion on the subject of the lesson, demonstrates clinical thinking .
"4"	The applicant of higher education has a good command of the material, participates in the discussion and solution of a situational clinical problem, test tasks, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with some errors, expresses his opinion on the topic of the lesson, demonstrates clinical thinking.
"3"	The applicant of higher education does not have sufficient knowledge of the material, is unsure of taking part in the discussion and solution of a situational clinical problem, test tasks, demonstrates practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data with significant errors.

"2"	The applicant of higher education does not master the material, does not take part in the discussion and solution of the situational clinical problem, test tasks, does not demonstrate practical skills during the examination of a sick child and the interpretation of clinical, laboratory and instrumental research data.
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***The structure of the assessment of independent, self-made work - the educational history of the illness of a newborn child :***

1. Evaluation of work with the patient:
  - a) communication skills of communication with the patient and his parents, b) the correctness of the algorithm of the clinical examination of a sick child, c) appointment and assessment of laboratory and instrumental studies, d) compliance with the algorithm of differential diagnosis, e) justification of the clinical diagnosis, e) preparation of a treatment and feeding plan child;
  - maximum score – 5, minimum score – 3, unsatisfactory score – 2 ;
2. Evaluation of medical documentation management: e) quality and consistency of the medical history of a newborn child
  - maximum score – 5, minimum score – 3, unsatisfactory score – 2 ;

The score for medical history is the arithmetic mean of all components and can only have an integer value, namely 5, 4, 3, 2.

**Criteria for the current assessment of individual independent work - educational medical history newborn baby:**

Rating	Structure
"5"	The applicant of higher education fully reflected the complaints, medical history and life history, data of the clinical examination of the child and correctly interpreted the data of clinical, laboratory and instrumental studies, made a complete plan of the examination of the child, demonstrated clinical thinking during the justification of the clinical diagnosis, made a treatment plan with the definition of the name of the drug, dose, duration of treatment.
"4"	The applicant of higher education reflected the complaints, medical and life history, data of the clinical examination of the child, interpreted the data of clinical, laboratory and instrumental studies, made a plan for the examination of the child, demonstrated clinical thinking during the justification of the clinical diagnosis, made a treatment plan with the definition of the name of the drug, dose, duration treatment, with some errors.
"3"	The applicant of higher education reflected the complaints, medical and life history, data of the child's clinical examination, interpreted the data of clinical, laboratory and instrumental studies, made a plan for the examination of the child, substantiated the clinical diagnosis, made a treatment plan, with significant errors.
"2"	The applicant of higher education did not reflect the complaints, medical history and life history, clinical examination data of the child, did not interpret the data of clinical, laboratory and instrumental studies, did not make a plan for the examination of the child, did not substantiate the clinical diagnosis, did not make a treatment plan, or did not write a

	medical history at all.
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**The medical history score is a component of the arithmetic mean score for the current activity.**

Only those students who have fulfilled the requirements of the academic program in the discipline, have no academic debts, and whose average grade for current academic activity in the discipline is at least 3.00 are allowed to take the final assessment in the form of a differentiated credit.

The differentiated credit is conducted as follows: during the last class (this session is designated as a separate control activity) after the end of classes and before the start of the examination period—for the linear (continuous) system of study; or during the final class of the educational component—for the modular (cyclical) system of study.

The methodology for conducting the final (semester) assessment of the educational component in the form of a differentiated credit is standardized and involves the use of unified forms.

**Assessment of applicants' learning outcomes during final control - differentiated credit:**

Rating	Structure
Perfectly	The higher education applicant correctly, accurately and completely completed all the tasks received, clearly and logically answered the questions posed. Thoroughly and comprehensively knows the content of theoretical questions, is fluent in professional and scientific terminology. Thinks logically and builds an answer, freely uses the acquired theoretical knowledge when analyzing practical tasks. When solving a clinical task, correctly interpreted the anamnesis data, the results of clinical, laboratory and instrumental studies, correctly answered all the questions posed and convincingly substantiated his point of view, could offer and justify an alternative solution to individual issues. When solving a practical task, correctly demonstrated the implementation of practical skills, accurately followed the algorithm for their implementation.
Good	The higher education applicant has sufficiently completed all the tasks received, clearly and logically answered the questions posed. He knows the content of theoretical questions sufficiently deeply and comprehensively, possesses professional and scientific terminology. He thinks logically and builds an answer, uses the acquired theoretical knowledge when analyzing practical tasks. However, when presenting some questions, he lacks sufficient depth and argumentation, and makes minor errors that are eliminated by the applicant himself when the teacher points them out. When solving a clinical task, he made minor errors or inaccuracies in the interpretation of the anamnesis data, the results of clinical, laboratory and instrumental studies, without significant errors, he answered all the questions posed, fully substantiated his point of view, however, the proposal of an alternative option caused difficulties. When solving a practical task, he made minor errors in the algorithm and technique of performing the skill, which were corrected according to the teacher's instructions.
Satisfactorily	The higher education applicant incompletely completed all the tasks received,

	the answers to additional and leading questions are unclear, vague in nature. Possesses the main volume of theoretical knowledge, inaccurately uses professional and scientific terminology. Experiences significant difficulties in constructing an independent logical answer, in applying theoretical knowledge when analyzing practical tasks. There are significant errors in the answers. When solving a clinical task, he incorrectly interpreted the anamnesis data, the results of clinical, laboratory and instrumental studies, did not know individual details, made inaccuracies in the answers to the questions, did not sufficiently justify his answers and interpret the wording, experienced difficulties in completing the tasks and offering alternative options. When solving a practical task, he made significant errors in the algorithm and technique of performing the skill.
Unsatisfactorily	The higher education applicant did not complete the task, in most cases did not answer additional and leading questions. Did not master the basic theoretical knowledge, showed a low level of mastery of professional and scientific terminology. The answers to the questions are fragmentary, inconsistent, illogical, cannot apply theoretical knowledge when analyzing practical tasks. The answers contain a significant number of gross errors. When solving a clinical task, he could not interpret the obtained anamnesis data, the results of clinical, laboratory and instrumental studies, answer the questions posed, or made significant errors in the answers; could not justify his decisions or did so unconvincingly. Did not offer alternative options. When solving a practical task, he did not demonstrate or made gross errors and errors in the algorithm and technique of performing the skill.

### 9. Distribution of points received by applicant of higher education

The grades for the academic discipline of students who have successfully completed the program are converted into the traditional four-point scale according to absolute criteria, as presented in the table below:

National grade for the discipline	Total score for the discipline
Excellent ("5")	185–200
Good ("4")	151–184
Satisfactory ("3")	120–150
Unsatisfactory ("2")	Below 120

The multigrade (200-point) scale reflects the actual academic performance of each student in mastering a given discipline.

Conversion from the traditional grade to the 200-point scale is carried out by the University's Information and Technical Department using the software "*Kontyngent*" according to the following formula: Average performance grade (current performance in the discipline)  $\times$  40.

According to the ECTS rating scale, students' achievements in a discipline are assessed within the same course and specialty, based on the points they have obtained, through ranking as follows:

Evaluation on the ECTS scale	Statistical indicator
A	The best 10% of higher education graduates
B	The next 25% of higher education graduates
C	The next 30% of higher education graduates
D	The next 25% of higher education graduates
E	The next 10% of higher education graduates

The ECTS scale determines a student's placement within a reference group of peers (faculty or specialty), that is, their ranking among the better or weaker performers. When converting from the multigrade scale, the boundaries between grades "A," "B," "C," "D," and "E" generally do not coincide with the boundaries of the traditional grades "5," "4," and "3." An "A" grade on the ECTS scale does not necessarily correspond to "excellent," nor does a "B" directly equal "good," and so on. Students who receive grades "FX" and "F" ("2") are not included in the list of ranked students. After retaking the assessment, such students automatically receive a grade of "E." The "FX" grade is assigned to students who have obtained the minimum number of points for current academic performance but did not pass the final assessment. The "F" grade is assigned to students who attended all scheduled classes in the discipline but failed to achieve the minimum average score (3.00) for current academic performance and, therefore, were not admitted to the final assessment.

#### 10. Methodological support:

- Working program of the academic discipline
- Syllabus of the academic discipline
- Textbooks:
  1. Nelson textbook of pediatrics, 2 volume set. Edition: 21st, 2019. PDF format.  
<http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>
  2. Adaptation of "Neonatology: textbook: in 3 volumes" / [Vol. K. Znamenska, Y. G. Antipkin, M. L. Aryaev, etc.] ; under the editorship T. K. Znamenskaya. – Lviv: Publisher Marchenko TV. 2020, T1. 407 s; T2 .455 p.; T3. 379 p
- Multimedia presentations
- Situational clinical tasks
- Methodical development of practical classes
- Electronic bank of test tasks by subdivisions of the discipline
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#### 11. Questions for Preparation for the Final Assessment:

1. Organization of neonatal care in Ukraine. Issues of bioethics in modern neonatology.
2. Medical care for a healthy newborn baby.
3. Premature babies. Criteria for determining prematurity. Peculiarities of adaptation of prematurely born children. Etiological factors of prematurity. Anatomical and physiological features. Classification of premature babies according to birth weight and the ratio of physical development and gestational age.
4. Premature babies. Assessment of morphological and neuro-functional maturity of prematurely born children (according to the Ballard scale).
5. Premature babies. Principles of raising premature babies. Peculiarities of feeding premature babies.
6. Emergency care for the main emergency conditions in premature newborns: hypothermia, respiratory failure, hypoglycemia.
7. Intrauterine development delay: causes, postnatal diagnosis, features of early neonatal adaptation.

8. Asphyxia of a newborn: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
9. Asphyxia of a newborn. Primary resuscitation of newborns.
10. Birth trauma: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
11. Respiratory distress syndrome of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
12. Pneumonia of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
13. Hemolytic disease of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
14. Hemorrhagic disease of newborns: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
15. TORCH-infections of newborns: etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
16. Bacterial infections of newborns. Purulent-inflammatory diseases of the skin and subcutaneous fat of newborns, diseases of the umbilical cord, umbilical wound and umbilical vessels: classification, etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
17. Bacterial infections of newborns. Neonatal sepsis: definition, classification, etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
18. Anemias in children (deficiency, posthemorrhagic, hemolytic, due to impaired hematopoiesis): definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
19. Hemorrhagic diseases in children. Coagulopathies (hemophilia): in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
20. Hemorrhagic diseases in children. Thrombocytopenia (thrombocytopenic idiopathic purpura) in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
21. Hemorrhagic diseases in children. Hemorrhagic vasculitis: in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Emergency care for bleeding in children.
22. Leukemia in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
23. Lymphomas in children: etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
24. Diabetes in children: definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis. Acute and chronic complications of diabetes in children.
25. Diabetes in children. Hyperglycemic ketoacidotic and hypoglycemic coma in children: causes, pathogenesis, clinic, diagnosis, differential diagnosis, emergency care, prevention.
26. Classification of diseases of the thyroid gland in children. Etiology, pathogenesis, clinic, diagnosis, differential diagnosis, treatment, prevention and prognosis of diffuse toxic goiter, hypothyroidism, autoimmune thyroiditis, endemic goiter in children. Emergency care for thyrotoxic crisis in children.
27. Diseases of the hypothalamic-pituitary system in children. Etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
28. Diseases of gonads and in children. Etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.
29. Diseases of the adrenal glands in children. Etiology, pathogenesis, classification, clinic,

30. Obesity in children. Definition, etiology, pathogenesis, classification, clinic, diagnosis, differential diagnosis, treatment, prevention, prognosis.

## 12. Recommended literature

### Main:

1. Nelson textbook of pediatrics, 2 volume set. Edition: 21st, 2019. PDF format.  
<http://pediacalls.com/e-books/nelson-textbook-of-pediatrics-21st-edition/>
2. Nelson Pediatric Antimicrobial therapy. 2022  
URL: <https://apps.apple.com/ru/app/nelson-pediatric-abx-2022/id1611269134>
3. Nelson textbook of pediatrics with access code 2 vol set 22ed (hb 2025) (25 April 2024); Elsevier
4. <https://www.amazon.in/NELSON-TEXTBOOK-PEDIATRICS-ACCESS-CODE/dp/0323883052>
5. Клінічна педіатрія : навчальний посібник: у 2 т. Т. 2 / М. Л. Аряєв, Л. І. Сеньківська, Н. Г. Лотиш та ін. – Одеса : Олді+, 2025. – 222 с
6. Клінічна педіатрія : навчальний посібник: у 2 т. Т. 1 / М. Л. Аряєв, Л. І. Сеньківська, Н. Г. Лотиш та ін. – Одеса : Олді+, 2025. – 620 с
7. Неонатологія: підручник: у 3 т. / [Т. К. Знаменська, Ю. Г. Антипкін, М. Л. Аряєв та ін.]; за ред. Т. К. Знаменської. – Львів: Видавець Марченко ТВ. 2020, Т1. 407 с; Т2 .455 с.; Т3. 379 с

### Additional

1. Aryayev M, Senkivska L and Lowe JB (2021) Psycho-Emotional and Behavioral Problems in Children With Growth Hormone Deficiency. Front. Pediatr. 9:707648. doi: 10.3389/fped.2021.707648, SCOPUS, Quartile Q1
2. Aryaev M. L., Senkivska L. I. Quality of life of children with growth hormone deficiency: the importance of clinical, psychoemotional and socio-demographic factors/ Aryaev M. L., Senkivska L. I. // Problems of endocrine pathology. – 2021. – No. 3 (T75). – pp. 7–13.  
<https://doi.org/10.21856/j-PEP.2021.3.01>, SCOPUS, Quartile Q4
3. Senkivska L, Aryayev M. Compliance and barriers to growth hormone therapy in children. *Pediatrics Polska - Polish Journal of Paediatrics*. 2021;96(3). - P.181-184. DOI: <https://doi.org/10.5114/polp.2021.109303> SCOPUS, Quartile Q4
4. Aryaev M. L., Senkivska L. I. Domestic and school violence against stunted children with growth hormone deficiency/ Aryaev M. L., Senkivska L. I. // *Medical perspectives*. – 2021. – No. 3 (T26). - pp. 125–131. DOI: <https://doi.org/10.26641/2307-0404.2021.3.242113> SCOPUS, Quartile Q 4
5. UK standards for Pediatric Endocrinology , January 2019.
6. Usenko DV, Aryayev ML. Effect of high-frequency chest wall oscillation on clinical indices of community-acquired pneumonia in children. *Wiad Lek*. 2022;75(12):3004-3009. DOI: <https://doi.org/10.36740/WLek202212119>
7. Feeding Guidelines for Infants and Young Toddlers: A Responsive Parenting Approach February 2017

## 13. Electronic information resources

1. <http://moz.gov.ua>– Ministry of Health of Ukraine
2. [www.ama-assn.org](http://www.ama-assn.org) – American Medical Association
3. [www.oapn.od.ua](http://www.oapn.od.ua)- "Odesa Association of Pediatricians and Neonatologists"
4. [www.who.int](http://www.who.int) – World Health Organization
5. [www.dec.gov.ua/mtd/home/](http://www.dec.gov.ua/mtd/home/) - State Expert Center of the Ministry of Health of Ukraine
6. <http://bma.org.uk>– British Medical Association

7. [www.gmc-uk.org](http://www.gmc-uk.org)- *General Medical Council (GMC)*
8. [www.bundesaerztekammer.de](http://www.bundesaerztekammer.de) – German Medical Association
9. [https://www.who.int/workforcealliance/members\\_partners/member\\_list/ipa/en/](https://www.who.int/workforcealliance/members_partners/member_list/ipa/en/) - International Pediatric Association (IPA).
10. [https://ginasthma.org/wp-content/uploads/2024/05/GINA-2024-Strategy-Report-24\\_05\\_22\\_WMS.pdf](https://ginasthma.org/wp-content/uploads/2024/05/GINA-2024-Strategy-Report-24_05_22_WMS.pdf) GINA Global Initiative For Asthma. 2024
11. [https://kdigo.org/wp-content/uploads/2017/02/KDIGO-2021-Glomerular-Diseases-Guideline\\_English\\_LN-2024-Update.pdf](https://kdigo.org/wp-content/uploads/2017/02/KDIGO-2021-Glomerular-Diseases-Guideline_English_LN-2024-Update.pdf) KDIGO 2021 Clinical Practice Guideline for the Management of Glomerular Diseases
12. <https://aamsmedacademy.com/> American Academy of Medical Sciences (AAMS)
13. <https://nam.edu/> The **National Academy of Medicine (NAM)**
14. <https://www.amazon.com/Averys-Neonatology-Pathophysiology-Management-Pathophysiology/dp/1451192681>